



REGIONE BASILICATA



**PARCO EOLICO SERRA GAGLIARDI
GENZANO DI LUCANIA (PZ)**

ELABORATO DI PROGETTO



Em./Rev.	Data	Red./Dis.	Verificato	Approvato	Descrizione
2					
1					
0					

Redazione: **SKYWIND S.r.l.** via Marconi, 6, 04024 Gaeta (LT)

Titolo dell'allegato:

Studio sugli effetti Shadow-Flickering



Allegato:

A.8.

Pagine:

1 di 37

Committente:



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1- Introduzione

Un impianto eolico produce impatti di varia natura. Uno di questi riguarda l'ombreggiamento e ancor più l'effetto shadow-flickering. Perché si quantifichi l'impatto di un impianto eolico nel contesto in cui si vuole progettare, è importante calcolare il tempo in cui i recettori sensibili, quali le aree abitate o gli edifici che sorgono nei dintorni dell'area parco, possano essere interessati dalle ombre generate da ciascun aerogeneratore. L'effetto ombreggiamento può ritenersi poco percettibile dall'uomo se il parziale oscuramento della fonte luminosa sia lenta e graduale e segua il naturale moto del sole sull'orizzonte.

L'ombreggiamento diventa percettibile se invece l'ombreggiamento è di tipo intermittente, come avviene quando il recettore è interessato dalle ombre generate dalle pale dell'aerogeneratore in pieno funzionamento. L'effetto, detto di shadow-flickering, riduce la sua percettibilità quando il livello di intensità luminosa si riduce: alba e tramonto.

Le modalità di calcolo scelte nel presente elaborato partono dallo scenario più gravoso che consta nel considerare tutti i giorni dell'anno come soleggiati (astronomical maximum shadow) e nel calcolare le ombre valutando esclusivamente la posizione astronomica del sole rispetto agli aerogeneratori.

L'impatto da ombra può avvenire quando le pale dell'aerogeneratore oscurano i raggi del sole visti da uno specifico punto (es. una finestra di un edificio adiacente). L'impatto da ombra è quasi nullo nelle giornate di sole o quando la risorsa vento è assente, poiché il movimento dell'ombra risulta lento ed impercettibile.

Nel calcolo presente invece, si considerano anche queste situazioni come impattanti, ponendosi nel caso peggiorativo.

Il seguente elaborato considera l'effetto cumulato della presenza degli aerogeneratori che fanno parte del parco eolico di Genzano di Lucania.

Le fasi di lavoro sono state le seguenti:

1. Sopralluogo e report fotografico dei potenziali recettori;
2. Studio del layout proposto dalla committente;
3. Definizione del modello di aerogeneratore che si intende installare;
4. Definizione del modello di calcolo;
5. Risultati e definizione delle possibili misure di mitigazione.

2 - Sopralluogo e report fotografico dei potenziali recettori

Durante un attento sopralluogo, si sono individuate le aree sensibili all'impatto da ombra più vicine agli aerogeneratori e si sono fotografati i recettori.

I recettori che sono risultati interessati dall'impatto sono i seguenti:

Recettore **A**



Fg. 74 Part. 233

Recettore **B**



mass.conversano rocco

Recettore **C**



masseria menchise-cilla -guerriero

Recettore **D**



azienda agricola falanga pasquale

Recettore **D**



fabbricato rurale cilumbriello

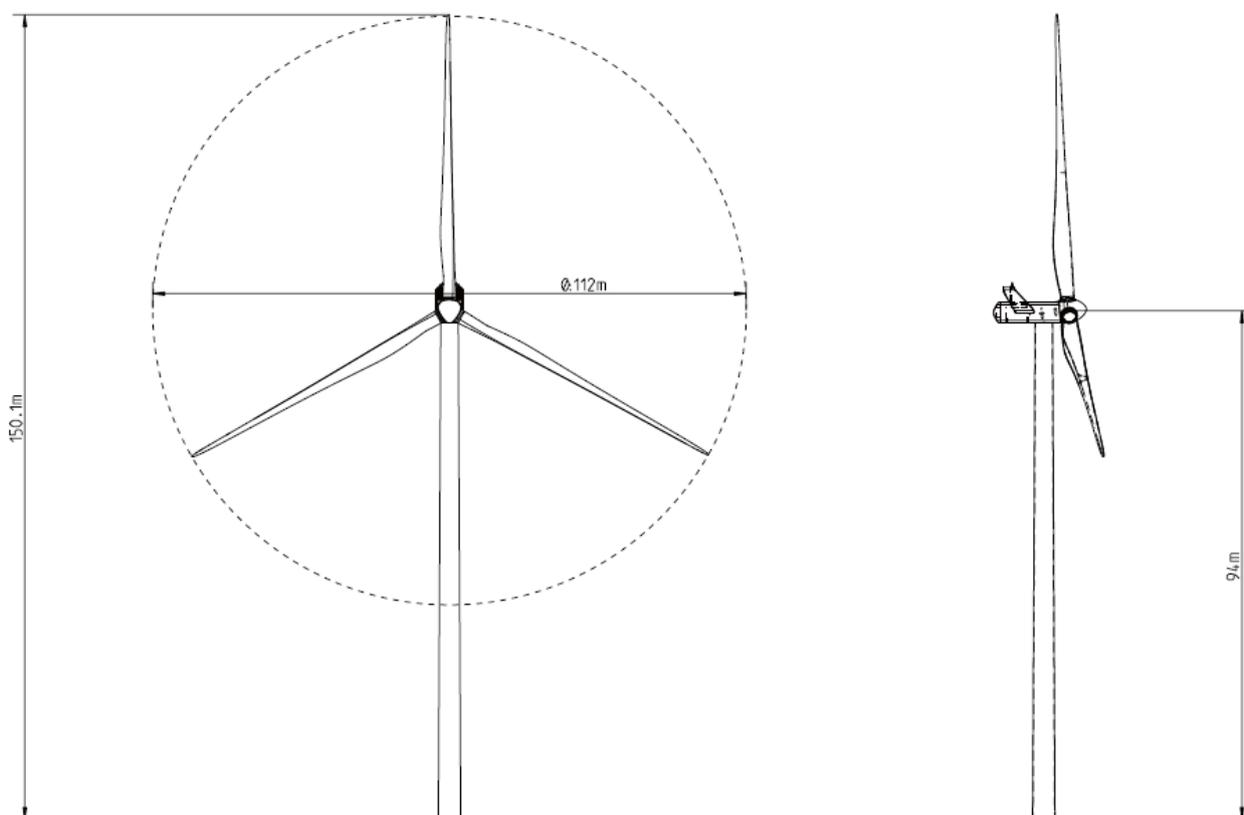
3 - Studio del layout proposto dalla committente

Gli aerogeneratori che si intendono installare e che costituiscono il progetto di parco eolico di Genzano di Lucania, sono stati posizionati nelle seguenti coordinate:

COORDINATE GEOGRAFICHE DEGLI AEROGENERATORI (riferimento GAUSS-BOAGA Fuso Est Roma 40)		
AEROGENERAT.	LATITUDINE	LONGITUDINE
TR1	4519583.08 N	2612753.96 E
TR2	4519398.52 N	2613036.77 E
TR3	4519060.70 N	2613695.40 E
TR4	4518902.82 N	2614000.53 E
TR5	4518782.26 N	2614322.22 E
TR6	4518525.21 N	2614554.20 E
TR7	4518028.07 N	2615112.72 E
TR8	4517822.36 N	2615404.83 E
TR9	4517594.78 N	2615655.76 E
TR10	4518662.01 N	2610069.43 E
TR11	4518915.65 N	2609432.34 E
TR12	4518249.32 N	2609706.87 E
TR13	4517983.06 N	2609972.82 E
TR14	4517490.53 N	2610138.65 E

4 - Definizione del modello di aerogeneratore che si intende installare

La società intende installare un aerogeneratore di potenza nominale pari a 3 MW modello Vestas V112.



Le dimensioni massime sono:

- Altezza del mozzo = 119 m
- Diametro del rotore = 112 m.

5 - Definizione del modello di calcolo

L'unico paese europeo che ha regolato l'impatto delle ombre sulle aree limitrofe sensibili è la Germania ("Hinweise zur Ermittlung und Beurteilung der optischen Immissionen von Windnergianlagen" – WEA - Schattenwurf-Hinweise). Secondo quanto riportato nella normativa tedesca, i limiti d'ombra sono calcolati considerando due importanti considerazioni:

- L'angolo minimo sopra l'orizzonte del sole deve essere pari a 3°;
- La pala dell'aerogeneratore deve essere coperta almeno per il 20% dal sole.

L'impatto massimo per un punto sensibile, secondo le linee guida tedesche, è:

- Massimo 30 ore annue d'ombra così come calcolato nelle condizioni peggiorative (astronomical maximum shadow);
- Massimo 30 minuti nel giorno più ombrato come da calcolo peggiorativo;
- Se si prevede una regolazione degli aerogeneratori durante il loro funzionamento, limitare ad 8 ore annue l'ombra massima.

In Svezia e in Danimarca invece, non esistono linee guida definite. La tacita metodologia progettuale e valutativa adottata prevede un impatto massimo da ombra calcolato sul caso reale e quindi includendo i giorni poco nuvolosi, di 10 ore e di 8 ore per la Danimarca e per la Svezia rispettivamente.

L'intervallo di tempo del giorno in cui l'impatto da ombra è definito critico, varia a seconda delle destinazione d'uso dell'edificio. Un ufficio infatti, avrà impatto zero se l'ombra si verifica dopo le 8 ore lavorative oppure lo stesso può essere critico sugli edifici abitati in cui i membri della famiglia non occupano lo stabile durante le ore lavorative. La valutazione dell'impatto quindi va valutata in funzione di un attento studio delle abitudini dei frequentatori più assidui delle aree sensibili individuate nell'intorno dei punti di installazione di ciascun aerogeneratore.

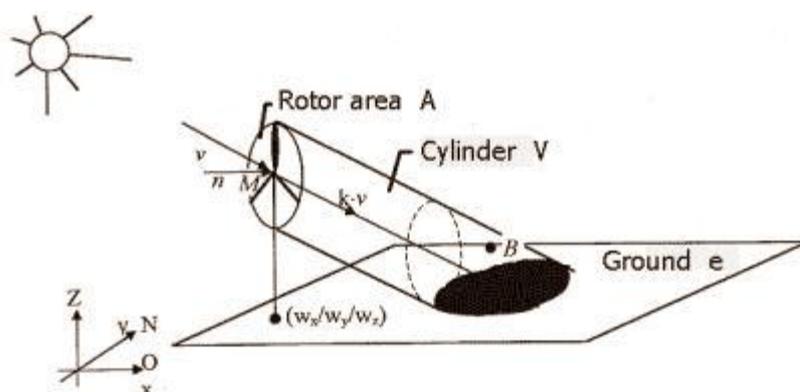
L'impatto da ombra può essere interpretato in modo differente. Può essere ritenuto impattante la presenza di ombra in un giardino di una casa, oppure, in

modo più realistico, può essere considerato impattante l'ombra su un recettore definito, come una finestra. Infine l'impatto dipende strettamente dalle

condizioni meteorologiche tipiche del sito di installazione. Per esempio i nostri inverni sono ben più nuvolosi che le estati e quindi se l'impatto si verifica in inverno, il peso di quest'ultimo risulta ridotto. Diverso è se l'ombra influisce sul recettore quando molto probabilmente non si presenteranno situazioni che possano ridurre l'impatto.

5.1 Il metodo di calcolo dell'impatto da Shadow-Flickering

Il metodo di calcolo adottato nel presente elaborato considera il rotore dell'aerogeneratore come un disco pieno e il calcolo definisce i minuti in cui il ricettore, in questo caso una finestra, viene anche parzialmente ombreggiata.



Durante il calcolo si è considerata una superficie ricettrice di dimensioni standard pari 1x1x1 esposta su tutte le possibili direzioni. Le considerazioni che seguiranno verranno poi adeguate all'orientamento effettivo di ciascun recettore e alla posizione reale di eventuali superfici captanti.

5.2 Il modello di calcolo

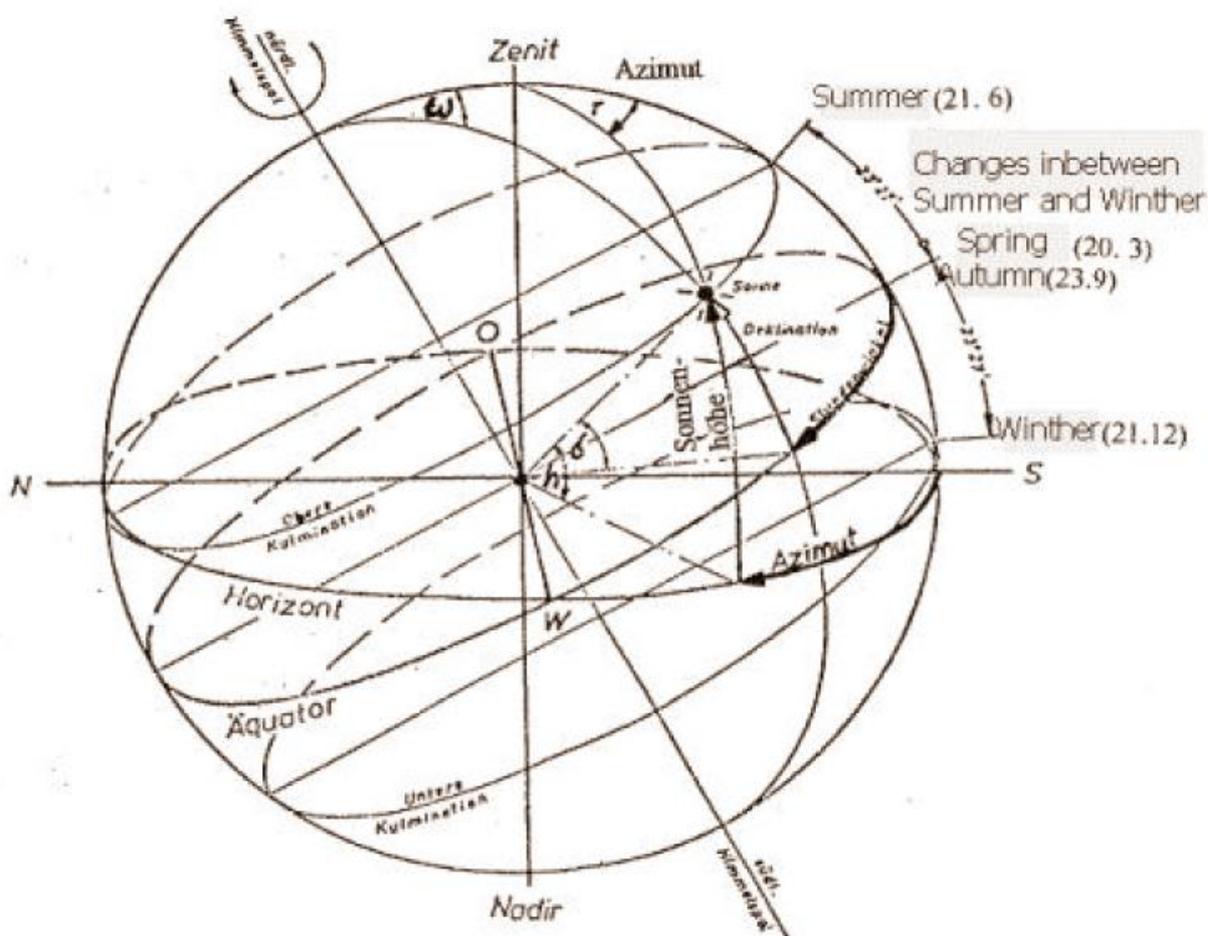
Per calcolare la propagazione dell'ombra dietro il disco del rotore, si considerano i seguenti fattori:

- Diametro del sole: $D: 1,390,000 \text{ km}$;
- Distanza del sole: $d: 150,000,000 \text{ km}$;

- Angolo d'attacco: 0.531 gradi.

Teoricamente questi dati potrebbero permettere di calcolare l'ombra fino a 4,8 km dietro un diametro di 45 m. In realtà le ombre non raggiungono mai il massimo teorico poiché bisogna considerare le condizioni ottiche imposte dall'atmosfera.

Quando il sole è molto basso sull'orizzonte, le distanze teoriche diventano elevate ma in realtà le ombre si dissipano prima di raggiungere terra o il recettore. Per tale motivo le linee guida tedesche prevedono una distanza massima oltre ciascun aerogeneratore pari a 2 km.



Il calcolo eseguito dallo scrivente parte dalle seguenti ipotesi:

- L'angolo minimo sopra l'orizzonte del sole deve essere pari a 3°;

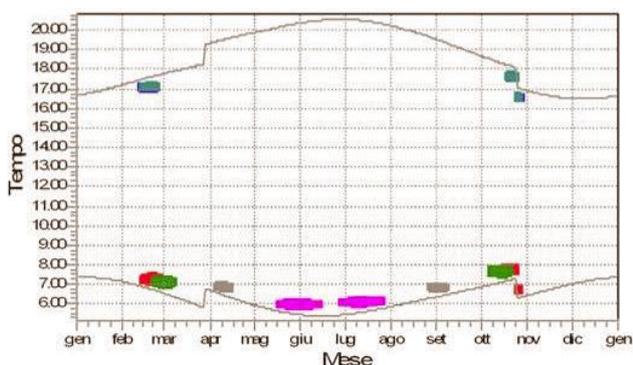
- La pala dell'aerogeneratore può essere coperta anche per meno del 20% dal sole (cautelativo);
- Distanza massima di propagazione dell'ombra pari a 2 km;
- Giorno solare sempre soleggiato;
- Aerogeneratore sempre orientato in modo perpendicolare alla direzione dei raggi solari.

6 - Risultati e definizione delle possibili misure di mitigazione

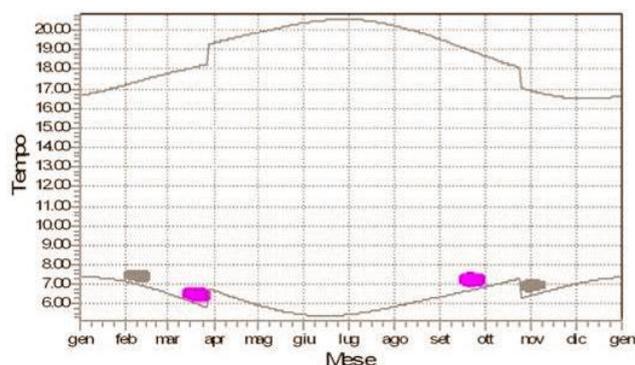
Si riportano i risultati ottenuti applicando il modello descritto.

Di seguito si riporta il calendario grafico di ombreggiamento per ciascun aerogeneratore:

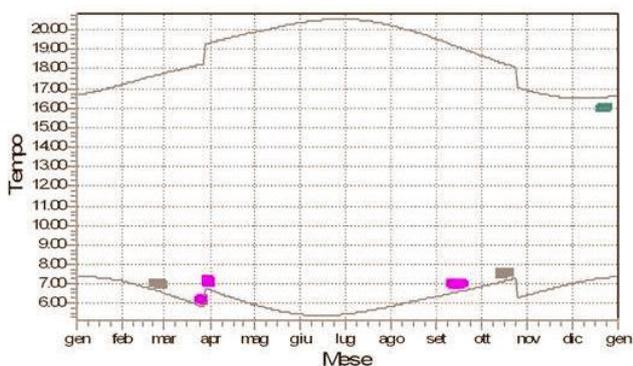
1: Vestas V112-3MW 84m(1)



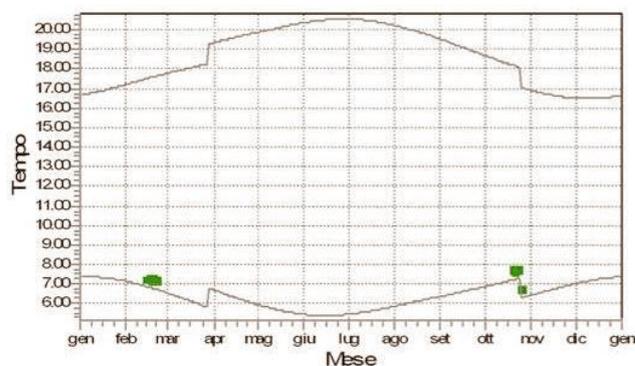
2: Vestas V112-3MW 119m(2)



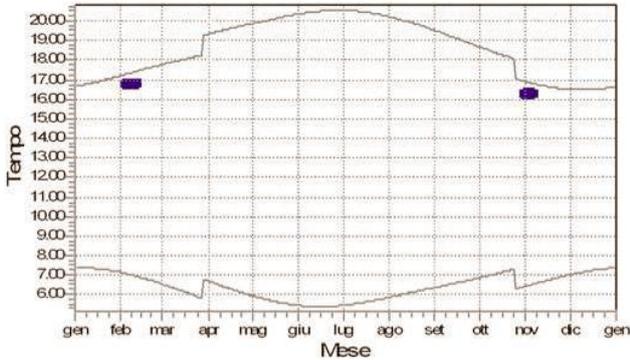
3: Vestas V112-3MW 84m(3)



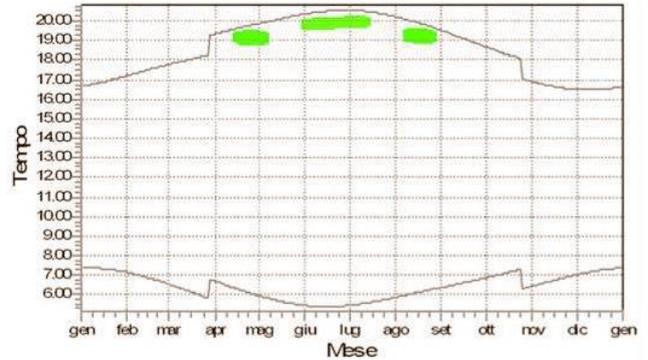
4: Vestas V112-3MW 119m(4)



5: Vestas V112-3MW 119m(5)



6: Vestas V112-3MW 119m(6)

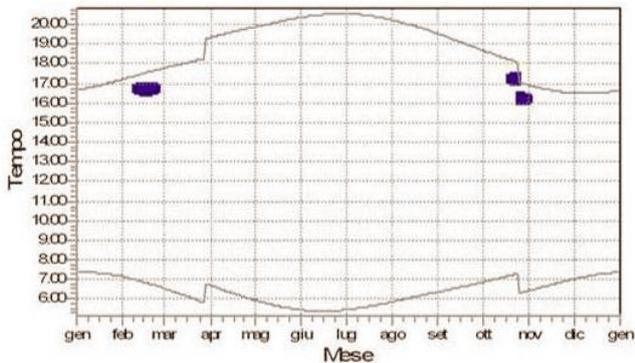


Recettore d'ombra

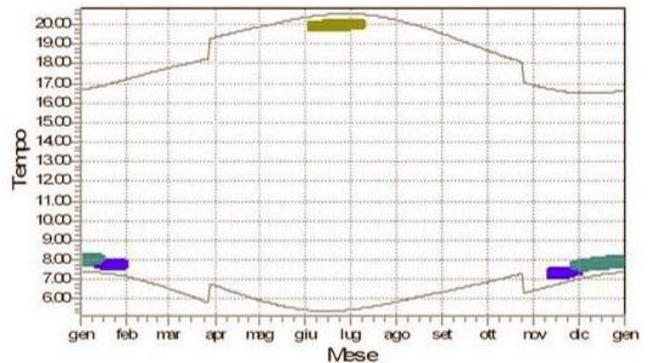
- A: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (2)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (8)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (10)
- U: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (21)

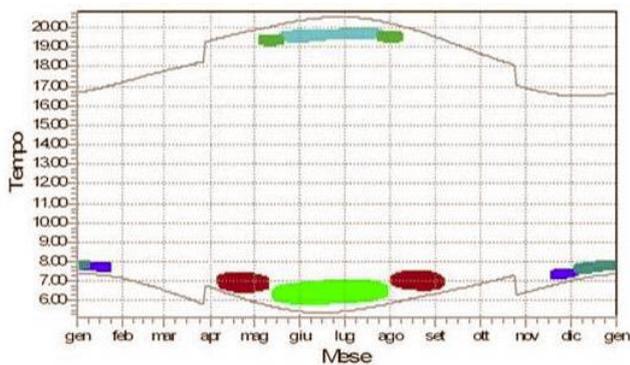
7: Vestas V112-3MW 119m(7)



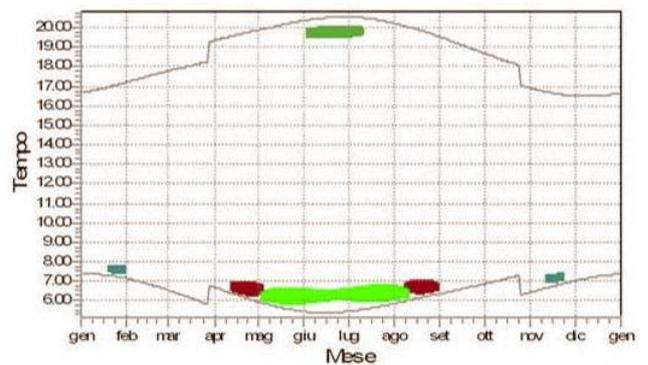
8: Vestas V112-3MW 119m(8)



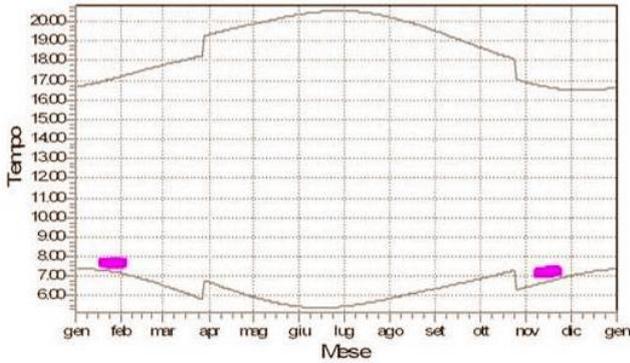
9: Vestas V112-3MW 119m(9)



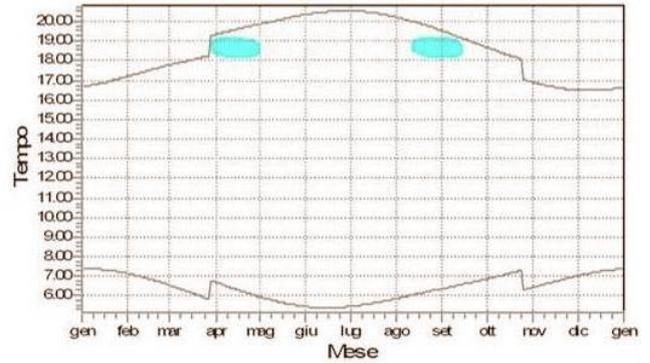
10: Vestas V112-3MW 119m(10)



11:Vestas V112-3MW 119m(11)



12:Vestas V112-3MW 119m(12)

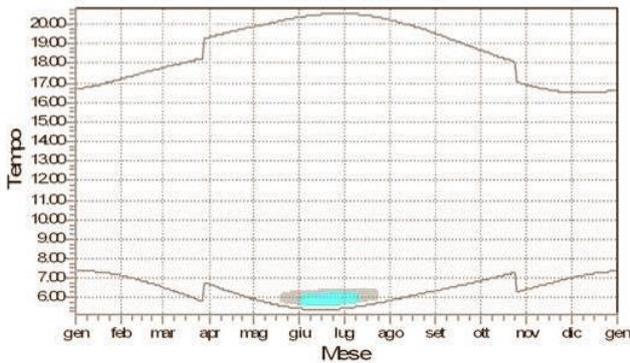


Recettore d'ombra

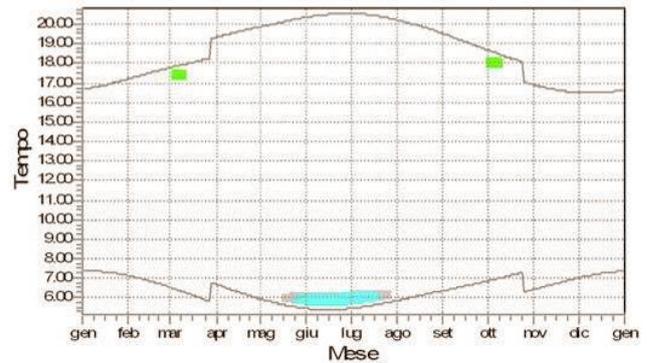
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (4)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (6)
- G: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (9)

- J: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (11)
- N: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (14)
- V: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (22)
- W: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (23)

13:Vestas V112-3MW 119m(13)



14:Vestas V112-3MW 94m(14)



- M: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (13)
- N: Shadow Receptor: 1,0 × 1,0 Azimuth: -180,0° Slope: 90,0° (14)

Calendario analitico di ombreggiamento per l'aerogeneratore n.1:

	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre
1	05.28 06.00-06.07/7 20.32	05.52 20.13	06.22 06.43-06.58/15 19.31	06.52 18.40	06.26 16.54	07.01 16.29
2	05.28 06.00-06.08/8 20.32	05.53 20.12	06.23 06.44-06.58/14 19.29	06.53 18.39	06.27 16.52	07.02 16.29
3	05.29 05.59-06.08/9 20.32	05.54 20.11	06.24 06.45-06.58/13 19.27	06.54 18.37	06.28 16.51	07.03 16.29
4	05.29 06.00-06.09/9 20.32	05.55 20.10	06.25 06.46-06.57/11 19.26	06.55 18.35	06.30 16.50	07.04 16.29
5	05.30 06.00-06.10/10 20.32	05.55 20.09	06.26 06.47-06.56/9 19.24	06.56 18.34	06.31 16.49	07.05 16.29
6	05.31 05.59-06.11/12 20.31	05.56 20.08	06.27 06.48-06.55/7 19.22	06.57 18.32	06.32 16.48	07.06 16.28
7	05.31 05.59-06.12/13 20.31	05.57 20.07	06.28 06.49-06.52/3 19.21	06.58 07.37-07.46/9 18.30	06.33 16.47	07.07 16.28
8	05.32 05.58-06.11/13 20.31	05.58 20.05	06.29 19.19	06.59 07.35-07.48/13 18.29	06.34 16.46	07.08 16.28
9	05.32 05.58-06.12/14 20.30	05.59 20.04	06.30 19.17	07.00 07.34-07.50/16 18.27	06.36 16.45	07.08 16.28
10	05.33 05.59-06.13/14 20.30	06.00 20.03	06.31 19.16	07.01 07.33-07.51/18 18.25	06.37 16.44	07.09 16.28
11	05.34 05.58-06.13/15 20.30	06.01 20.02	06.32 19.14	07.02 07.32-07.51/19 18.24	06.38 16.43	07.10 16.28
12	05.34 05.58-06.14/16 20.29	06.02 20.00	06.33 19.12	07.04 07.31-07.51/20 18.22	06.39 16.42	07.11 16.29
13	05.35 05.58-06.14/16 20.29	06.03 19.59	06.34 19.11	07.05 07.31-07.51/20 18.21	06.40 16.41	07.12 16.29
14	05.36 05.59-06.15/16 20.28	06.04 19.58	06.35 19.09	07.06 07.30-07.51/21 18.19	06.41 16.40	07.13 16.29
15	05.37 05.59-06.14/15 20.28	06.05 19.56	06.36 19.07	07.07 07.30-07.51/21 18.18	06.43 16.39	07.13 16.29
16	05.37 06.00-06.15/15 20.27	06.06 19.55	06.37 19.06	07.08 07.30-07.53/23 18.16	06.44 16.38	07.14 16.29
17	05.38 06.01-06.15/14 20.26	06.07 19.53	06.38 19.04	07.09 07.31-07.54/23 18.15	06.45 16.37	07.15 16.30
18	05.39 06.02-06.15/13 20.26	06.08 19.52	06.39 19.02	07.10 07.33-07.55/22 18.13	06.46 16.36	07.15 16.30
19	05.40 06.02-06.14/12 20.25	06.09 19.51	06.40 19.00	07.11 07.34-07.55/21 18.12	06.47 16.36	07.16 16.30
20	05.41 06.03-06.14/11 20.24	06.10 19.49	06.41 18.59	07.12 07.37-07.55/18 18.10	06.49 16.35	07.17 16.31
21	05.42 06.04-06.14/10 20.24	06.11 19.48	06.42 18.57	07.13 07.36-07.55/19 18.09	06.50 16.34	07.17 16.31
22	05.42 06.05-06.14/9 20.23	06.12 19.46	06.43 18.55	07.15 07.36-07.54/18 18.07	06.51 16.34	07.18 16.32
23	05.43 06.06-06.13/7 20.22	06.13 19.45	06.44 18.54	07.16 07.37-07.55/18 18.06	06.52 16.33	07.18 16.32
24	05.44 06.07-06.13/6 20.21	06.14 19.43	06.45 18.52	07.17 07.38-07.54/16 18.04	06.53 16.32	07.19 16.33
25	05.45 06.07-06.11/4 20.20	06.15 19.42	06.46 18.50	06.18 06.39-06.52/13 17.03	06.54 16.32	07.19 16.33
26	05.46 06.08-06.10/2 20.19	06.16 19.40	06.47 18.49	06.19 06.40-06.50/10 17.02	06.55 16.31	07.19 16.34
27	05.47 20.18	06.17 19.38	06.48 18.47	06.20 06.42-06.47/5 17.00	06.56 16.31	07.20 16.35
28	05.48 20.18	06.18 06.51-06.53/2 19.37	06.49 18.45	06.21 16.31-16.36/5 16.59	06.58 16.31	07.20 16.35
29	05.49 20.17	06.19 06.47-06.56/9 19.35	06.50 18.44	06.23 16.58	06.59 16.30	07.20 16.36
30	05.50 20.16	06.20 06.45-06.57/12 19.34	06.51 18.42	06.24 16.56	07.00 16.30	07.21 16.37
31	05.51 20.15	06.21 06.44-06.58/14 19.32		06.25 16.55		07.21 16.37
Ore potenziali di eliofanía	459	428	375	345	298	288
Somma dei minuti d'ombra	290	37	72	477	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.2:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre		
1	07.21	07.08	06.32	06.42	05.56	05.27	05.28	05.52	06.22	06.52	06.26	06.48-07.05/17	07.01	
1	16.39	17.13	17.47	19.20	19.52	20.21	20.32	20.13	19.31	18.40	16.54	06.49-07.05/16	07.02	
2	07.21	07.07	07.27-07.29/2	06.31	06.40	05.55	05.27	05.28	05.53	06.23	06.53	06.27	06.49-07.05/16	07.02
1	16.39	17.14	17.48	19.21	19.53	20.22	20.32	20.12	19.29	18.39	16.53	06.28	06.50-07.04/14	07.03
3	07.21	07.06	07.26-07.31/5	06.29	06.38	05.53	05.27	05.29	05.54	06.24	06.54	06.28	06.50-07.04/14	07.03
1	16.40	17.15	17.49	19.23	19.54	20.23	20.32	20.11	19.27	18.37	16.51	06.28	06.50-07.04/14	07.03
4	07.21	07.05	07.25-07.32/7	06.28	06.37	05.52	05.26	05.29	05.55	06.25	06.55	06.30	06.51-07.04/13	07.04
1	16.41	17.16	17.50	19.24	19.55	20.24	20.32	20.10	19.28	18.35	16.50	06.30	06.51-07.04/13	07.04
5	07.21	07.04	07.24-07.34/10	06.26	06.35	05.51	05.26	05.30	05.56	06.26	06.56	06.31	06.53-07.04/11	07.05
1	16.42	17.18	17.51	19.25	19.56	20.24	20.32	20.09	19.24	18.34	16.49	06.31	06.53-07.04/11	07.05
6	07.21	07.03	07.23-07.34/11	06.24	06.33	05.50	05.25	05.31	05.57	06.27	06.57	06.32	06.54-07.03/9	07.06
1	16.43	17.19	17.52	19.26	19.57	20.25	20.31	20.09	19.22	18.32	16.48	06.32	06.54-07.03/9	07.06
7	07.21	07.02	07.22-07.35/13	06.23	06.32	05.49	05.25	05.31	05.57	06.28	06.58	06.33	06.55-07.02/7	07.07
1	16.44	17.20	17.53	19.27	19.58	20.26	20.31	20.07	19.21	18.30	16.47	06.33	06.55-07.02/7	07.07
8	07.21	07.01	07.20-07.34/14	06.21	06.30	05.47	05.25	05.32	05.58	06.29	06.59	06.34	06.56-07.01/5	07.08
1	16.45	17.21	17.54	19.28	19.59	20.26	20.31	20.05	19.19	18.29	16.46	06.34	06.56-07.01/5	07.08
9	07.21	06.59	07.19-07.35/16	06.20	06.29	05.46	05.25	05.32	05.59	06.30	07.00	06.36	06.58-07.00/2	07.08
1	16.46	17.23	17.56	19.29	19.59	20.27	20.30	20.04	19.17	18.27	16.45	06.36	06.58-07.00/2	07.08
10	07.21	06.58	07.18-07.35/17	06.18	06.27	05.45	05.24	05.33	06.00	06.31	07.01	06.37	06.58-07.00/2	07.08
1	16.47	17.24	17.57	19.30	19.59	20.27	20.30	20.03	19.16	18.25	16.44	06.37	06.58-07.00/2	07.08
11	07.21	06.57	07.18-07.35/17	06.16	06.25	05.44	05.24	05.34	06.01	06.32	07.02	06.38	06.58-07.00/2	07.08
1	16.48	17.25	17.58	19.31	19.59	20.28	20.30	20.02	19.14	18.24	16.43	06.38	06.58-07.00/2	07.08
12	07.20	06.56	07.18-07.33/15	06.15	06.24	05.43	05.24	05.33	06.02	06.33	07.04	06.39	06.58-07.00/2	07.08
1	16.49	17.26	17.59	19.32	19.59	20.28	20.29	20.00	19.12	18.22	16.42	06.39	06.58-07.00/2	07.08
13	07.20	06.55	07.19-07.33/14	06.13	06.22	05.42	05.24	05.35	06.03	06.34	07.05	06.40	06.58-07.00/2	07.08
1	16.50	17.28	18.00	19.33	19.59	20.29	20.29	19.59	19.11	18.21	16.41	06.40	06.58-07.00/2	07.08
14	07.20	06.53	07.21-07.31/10	06.12	06.21	05.41	05.24	05.36	06.04	06.35	07.06	06.41	06.58-07.00/2	07.08
1	16.51	17.29	18.01	19.34	19.59	20.29	20.28	19.58	19.09	18.19	16.40	06.41	06.58-07.00/2	07.08
15	07.19	06.52	07.24-07.29/5	06.10	06.19	05.40	05.24	05.37	06.05	06.36	07.07	06.43	06.58-07.00/2	07.08
1	16.52	17.30	18.02	19.35	19.59	20.30	20.28	19.56	19.07	18.18	16.39	06.43	06.58-07.00/2	07.08
16	07.19	06.51	06.08	06.27-06.39/12	06.18	05.39	05.24	05.38	06.06	06.37	07.12-07.19/7	07.08	06.58-07.00/2	07.08
1	16.53	17.31	18.03	19.36	19.59	20.30	20.27	19.55	19.06	18.16	16.38	06.43	06.58-07.00/2	07.08
17	07.19	06.49	06.07	06.25-06.39/14	06.16	05.38	05.24	05.38	06.07	06.38	07.09-07.22/13	07.09	06.58-07.00/2	07.08
1	16.55	17.32	18.04	19.37	19.59	20.30	20.26	19.53	19.04	18.15	16.37	06.43	06.58-07.00/2	07.08
18	07.18	06.48	06.05	06.24-06.40/16	06.15	05.37	05.24	05.39	06.08	06.39	07.07-07.23/16	07.10	06.58-07.00/2	07.08
1	16.56	17.34	18.05	19.38	19.59	20.09	20.31	20.26	19.52	19.02	18.13	06.46	06.58-07.00/2	07.08
19	07.18	06.47	06.03	06.22-06.40/18	06.13	05.36	05.24	05.40	06.09	06.40	07.05-07.24/19	07.11	06.58-07.00/2	07.08
1	16.57	17.35	18.07	19.39	19.59	20.10	20.31	20.25	19.51	19.00	18.12	06.46	06.58-07.00/2	07.08
20	07.17	06.45	06.02	06.20-06.40/20	06.12	05.35	05.24	05.41	06.10	06.41	07.04-07.24/20	07.12	06.58-07.00/2	07.08
1	16.58	17.36	18.08	19.40	19.59	20.11	20.31	20.24	19.49	18.59	18.10	06.46	06.58-07.00/2	07.08
21	07.17	06.44	06.00	06.19-06.40/21	06.10	05.35	05.25	05.42	06.11	06.42	07.03-07.25/22	07.13	06.58-07.00/2	07.08
1	16.59	17.37	18.09	19.41	19.59	20.12	20.32	20.24	19.48	18.57	18.09	06.46	06.58-07.00/2	07.08
22	07.16	06.43	05.58	06.18-06.39/21	06.09	05.34	05.25	05.42	06.12	06.43	07.03-07.24/21	07.15	06.58-07.00/2	07.08
1	17.00	17.38	18.10	19.43	19.59	20.13	20.32	20.23	19.46	18.55	18.07	06.46	06.58-07.00/2	07.08
23	07.15	06.41	05.57	06.18-06.38/20	06.07	05.33	05.25	05.43	06.13	06.44	07.04-07.24/20	07.16	06.58-07.00/2	07.08
1	17.02	17.40	18.11	19.44	19.59	20.14	20.32	20.22	19.45	18.54	18.06	06.46	06.58-07.00/2	07.08
24	07.15	06.40	05.55	06.18-06.37/19	06.06	05.32	05.25	05.44	06.14	06.45	07.05-07.24/19	07.17	06.58-07.00/2	07.08
1	17.03	17.41	18.12	19.45	19.59	20.15	20.32	20.21	19.43	18.52	18.04	06.46	06.58-07.00/2	07.08
25	07.14	06.38	05.53	06.19-06.36/17	06.04	05.31	05.26	05.45	06.15	06.46	07.06-07.23/17	06.18	06.58-07.00/2	07.08
1	17.04	17.42	18.13	19.46	19.59	20.16	20.32	20.20	19.42	18.50	18.03	06.46	06.58-07.00/2	07.08
26	07.13	06.37	05.52	06.20-06.34/14	06.03	05.31	05.26	05.46	06.16	06.47	07.07-07.22/15	06.19	06.58-07.00/2	07.08
1	17.05	17.43	18.14	19.47	19.59	20.17	20.32	20.19	19.40	18.49	17.02	06.46	06.58-07.00/2	07.08
27	07.12	06.35	05.50	06.22-06.30/8	06.01	05.30	05.26	05.47	06.17	06.48	07.08-07.21/13	06.20	06.52-06.58/6	06.56
1	17.06	17.44	18.15	19.48	19.59	20.17	20.32	20.18	19.38	18.47	17.00	06.20	06.52-06.58/6	06.56
28	07.11	06.34	05.48	06.00	05.30	05.27	05.48	06.18	06.49	07.09-07.19/10	06.21	06.50-07.01/11	06.58	07.20
1	17.08	17.45	18.18	19.49	19.59	20.18	20.32	20.18	19.37	18.45	16.50	06.21	06.50-07.01/11	06.58
29	07.11		06.47	05.59	05.29	05.27	05.49	06.19	06.50	07.10-07.16/6	06.23	06.48-07.03/15	06.59	07.20
1	17.09		19.17	19.50	20.19	20.32	20.17	19.35	18.44	16.58	06.23	06.48-07.03/15	06.59	07.20
30	07.10		06.45	05.57	05.28	05.27	05.50	06.20	06.51	06.24	06.47-07.03/16	07.00	06.48-07.03/15	06.59
1	17.10		19.18	19.51	20.20	20.32	20.16	19.34	18.42	16.56	06.24	06.47-07.03/16	07.00	06.59
31	07.09		06.43		05.28		05.51	06.21		06.25	06.46-07.04/18		06.48-07.03/15	06.59
1	17.11		19.19		20.21		20.15	19.32		16.55			06.48-07.03/15	06.59
Ore potenziali di eliofanità	298	297	369	398	448	452	459	428	375	218	345	298	288	0
Somma dei minuti d'ombra	0	156	213	0	0	0	0	0	0	218	66	94	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno
1	07.21 16.39	07.08 17.13	06.32 17.47	06.42 19.20	05.56 19.52	05.27 20.21
2	07.21 16.39	07.07 17.14	06.31 17.48	06.40 19.21	05.55 19.53	05.27 20.22
3	07.21 16.40	07.06 17.15	06.29 17.49	06.38 19.22	05.53 19.54	05.26 20.23
4	07.21 16.41	07.05 17.16	06.28 17.50	06.37 19.24	05.52 19.55	05.26 20.24
5	07.21 16.42	07.04 17.18	06.26 17.51	06.35 19.25	05.51 19.56	05.26 20.24
6	07.21 16.43	07.03 17.19	06.24 17.52	06.33 19.26	05.50 19.57	05.25 20.25
7	07.21 16.44	07.02 17.20	06.23 17.53	06.32 19.27	05.49 19.58	05.25 20.26
8	07.21 16.45	07.01 17.21	06.21 17.54	06.30 19.28	05.47 19.59	05.25 20.26
9	07.21 16.46	06.59 17.23	06.20 17.56	06.29 19.29	05.46 20.00	05.25 20.27
10	07.21 16.47	06.58 17.24	06.18 17.57	06.27 19.30	05.45 20.01	05.24 20.27
11	07.21 16.48	06.57 17.25	06.16 17.58	06.25 19.31	05.44 20.02	05.24 20.28
12	07.20 16.49	06.56 17.26	06.15 17.59	06.24 19.32	05.43 20.03	05.24 20.28
13	07.20 16.50	06.55 17.28	06.13 18.00	06.22 19.33	05.42 20.04	05.24 20.29
14	07.20 16.51	06.53 17.29	06.12 18.01	06.21 19.34	05.41 20.05	05.24 20.29
15	07.19 16.52	06.52 17.30	06.10 18.02	06.19 19.35	05.40 20.06	05.24 20.30
16	07.19 16.53	06.51 17.31	06.08 18.03	06.18 19.36	05.39 20.07	05.24 20.30
17	07.19 16.55	06.49 17.32	06.07 18.04	06.16 19.37	05.38 20.08	05.24 20.30
18	07.18 16.56	06.48 17.34	06.05 18.05	06.15 19.38	05.37 20.09	05.24 20.31
19	07.18 16.57	06.47 17.35	06.03 18.07	06.13 19.39	05.36 20.10	05.24 20.31
20	07.17 16.58	06.45 17.36	06.02 18.08	06.11 19.40	05.35 20.11	05.24 20.31
21	07.17 16.59	06.44 17.37	06.00 18.09	06.10 19.41	05.34 20.12	05.25 20.32
22	07.16 17.00	06.43 17.38	05.58 18.10	06.09 19.43	05.34 20.13	05.25 20.32
23	07.15 17.02	06.41 17.40	05.57 18.11	06.07 19.44	05.33 20.14	05.25 20.32
24	07.15 17.03	06.40 17.41	05.55 18.12	06.06 19.45	05.32 20.15	05.25 20.32
25	07.14 17.04	06.38 17.42	05.53 18.13	06.04 19.46	05.31 20.16	05.26 20.32
26	07.13 17.05	06.37 17.43	05.52 18.14	06.03 19.47	05.31 20.17	05.26 20.32
27	07.12 17.06	06.35 17.44	05.50 18.15	06.01 19.48	05.30 20.17	05.26 20.32
28	07.11 17.08	06.34 17.45	05.48 18.16	06.00 19.49	05.30 20.18	05.27 20.32
29	07.11 17.09		06.47 19.17	07.05-07.18/13 19.50	05.29 20.19	05.27 20.32
30	07.10 17.10		06.45 19.18	07.03-07.17/14 19.51	05.28 20.20	05.27 20.32
31	07.09 17.11		06.43 19.19	07.03-07.16/13 19.51	05.28 20.21	
Ore potenziali di eliofanìa	298	297	369	398	448	452
Somma dei minuti d'ombra	0	62	86	18	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.3:

	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre
1	05.28 20.32	05.52 20.13	06.22 19.31	06.52 18.40	06.26 16.54	07.01 16.30
2	05.28 20.32	05.53 20.12	06.23 19.29	06.53 18.39	06.27 16.52	07.02 16.29
3	05.29 20.32	05.54 20.11	06.24 19.27	06.54 18.37	06.28 16.51	07.03 16.29
4	05.29 20.32	05.55 20.10	06.25 19.26	06.55 18.35	06.30 16.50	07.04 16.29
5	05.30 20.32	05.56 20.09	06.26 19.24	06.56 18.34	06.31 16.49	07.05 16.29
6	05.31 20.31	05.56 20.08	06.27 19.22	06.57 18.32	06.32 16.48	07.06 16.28
7	05.31 20.31	05.57 20.07	06.28 19.21	06.58 18.30	06.33 16.47	07.07 16.28
8	05.32 20.31	05.58 20.05	06.29 19.19	06.59 18.29	06.34 16.46	07.08 16.28
9	05.32 20.30	05.59 20.04	06.30 19.17	07.00 18.27	06.35 16.45	07.08 16.28
10	05.33 20.30	06.00 20.03	06.31 19.16	06.59-07.05/6 18.25	07.01 16.44	07.09 16.28
11	05.34 20.30	06.01 20.02	06.32 19.14	06.55-07.06/11 18.24	07.02 16.43	07.10 16.28
12	05.34 20.29	06.02 20.00	06.33 19.12	06.54-07.07/13 18.22	07.04 07.31-07.34/3 16.42	06.39 16.29
13	05.35 20.29	06.03 19.59	06.34 19.11	06.54-07.08/14 18.21	07.05 07.27-07.37/10 16.41	06.40 16.29
14	05.36 20.28	06.04 19.58	06.35 19.09	06.55-07.08/13 18.19	07.06 07.26-07.38/12 16.40	06.41 16.29
15	05.37 20.28	06.05 19.56	06.36 19.07	06.56-07.08/12 18.18	07.07 07.27-07.38/11 16.39	06.43 16.29
16	05.38 20.27	06.06 19.55	06.37 19.06	06.57-07.07/10 18.16	07.08 07.28-07.38/10 16.38	06.44 16.29
17	05.38 20.26	06.07 19.53	06.38 19.04	06.58-07.06/8 18.15	07.09 07.29-07.38/9 16.37	06.45 16.30
18	05.39 20.26	06.08 19.52	06.39 19.02	06.59-07.05/6 18.13	07.10 07.31-07.38/7 16.36	06.46 16.30
19	05.40 20.25	06.09 19.51	06.40 19.00	07.00-07.03/3 18.12	07.11 07.32-07.37/5 16.36	06.47 16.30
20	05.41 20.24	06.10 19.49	06.41 18.59	07.12 07.33-07.36/3 18.10	06.48 16.35	07.17 15.58-16.01/3 16.31
21	05.42 20.24	06.11 19.48	06.42 18.57	07.13 18.09	06.50 16.34	07.17 15.58-16.01/3 16.31
22	05.42 20.23	06.12 19.46	06.43 18.55	07.14 18.07	06.51 16.34	07.18 15.59-16.02/3 16.32
23	05.43 20.22	06.13 19.45	06.44 18.54	07.16 18.06	06.52 16.33	07.18 15.59-16.02/3 16.32
24	05.44 20.21	06.14 19.43	06.45 18.52	07.17 18.04	06.53 16.33	07.19 16.00-16.03/3 16.33
25	05.45 20.20	06.15 19.42	06.46 18.50	06.18 17.03	06.54 16.32	07.19 16.01-16.03/2 16.33
26	05.46 20.19	06.16 19.40	06.47 18.49	06.19 17.02	06.55 16.31	07.19 16.34
27	05.47 20.18	06.17 19.38	06.48 18.47	06.20 17.00	06.56 16.31	07.20 16.35
28	05.48 20.18	06.18 19.37	06.49 18.45	06.21 16.59	06.58 16.31	07.20 16.35
29	05.49 20.17	06.19 19.35	06.50 18.44	06.23 16.58	06.59 16.30	07.20 16.36
30	05.50 20.16	06.20 19.34	06.51 18.42	06.24 16.56	07.00 16.30	07.21 16.37
31	05.51 20.14	06.21 19.32		06.25 16.55		07.21 16.37
Ore potenziali di eliofania	459	428	375	345	298	288
Somma dei minuti d'ombra	0	0	96	70	0	19

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.4:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre
1	07.21	07.08	06.32	06.42	05.56	05.27	05.28	05.52	06.22	06.52	06.26	07.01
	16.39	17.13	17.46	19.20	19.52	20.21	20.32	20.13	19.31	18.40	16.54	16.29
2	07.21	07.07	06.31	06.40	05.55	05.27	05.28	05.53	06.23	06.53	06.27	07.02
	16.39	17.14	17.48	19.21	19.53	20.22	20.32	20.12	19.29	18.38	16.52	16.29
3	07.21	07.06	06.29	06.38	05.53	05.26	05.29	05.54	06.24	06.54	06.28	07.03
	16.40	17.15	17.49	19.22	19.54	20.23	20.32	20.11	19.27	18.37	16.51	16.29
4	07.21	07.05	06.28	06.37	05.52	05.26	05.29	05.54	06.25	06.55	06.30	07.04
	16.41	17.16	17.50	19.24	19.55	20.24	20.32	20.10	19.26	18.35	16.50	16.29
5	07.21	07.04	06.26	06.35	05.51	05.26	05.30	05.55	06.26	06.56	06.31	07.05
	16.42	17.18	17.51	19.25	19.56	20.24	20.32	20.09	19.24	18.34	16.49	16.29
6	07.21	07.03	06.24	06.33	05.50	05.25	05.30	05.56	06.27	06.57	06.32	07.06
	16.43	17.19	17.52	19.26	19.57	20.25	20.31	20.08	19.22	18.32	16.48	16.28
7	07.21	07.02	06.23	06.32	05.49	05.25	05.31	05.57	06.28	06.58	06.33	07.07
	16.44	17.20	17.53	19.27	19.58	20.25	20.31	20.07	19.21	18.30	16.47	16.28
8	07.21	07.01	06.21	06.30	05.47	05.25	05.32	05.58	06.29	06.59	06.34	07.08
	16.45	17.21	17.54	19.28	19.59	20.26	20.31	20.05	19.19	18.29	16.46	16.28
9	07.21	06.59	06.20	06.29	05.46	05.25	05.32	05.59	06.30	07.00	06.35	07.08
	16.46	17.23	17.56	19.29	20.00	20.27	20.30	20.04	19.17	18.27	16.45	16.28
10	07.21	06.58	06.18	06.27	05.45	05.24	05.33	06.00	06.31	07.01	06.37	07.09
	16.47	17.24	17.57	19.30	20.01	20.27	20.30	20.03	19.16	18.25	16.44	16.28
11	07.21	06.57	06.16	06.25	05.44	05.24	05.34	06.01	06.32	07.02	06.38	07.10
	16.48	17.25	17.58	19.31	20.02	20.28	20.30	20.02	19.14	18.24	16.43	16.28
12	07.20	06.56	06.15	06.24	05.43	05.24	05.34	06.02	06.33	07.03	06.39	07.11
	16.49	17.26	17.59	19.32	20.03	20.28	20.29	20.00	19.12	18.22	16.42	16.29
13	07.20	06.55	06.13	06.22	05.42	05.24	05.35	06.03	06.34	07.05	06.40	07.12
	16.50	17.27	18.00	19.33	20.04	20.29	20.29	19.59	19.11	18.21	16.41	16.29
14	07.20	06.53	06.12	06.21	05.41	05.24	05.36	06.04	06.35	07.06	06.41	07.13
	16.51	17.29	18.01	19.34	20.05	20.29	20.28	19.58	19.09	18.19	16.40	16.29
15	07.19	06.52	06.10	06.19	05.40	05.24	05.37	06.05	06.36	07.07	06.43	07.13
	16.52	17.30	18.02	19.35	20.06	20.30	20.28	19.56	19.07	18.18	16.39	16.29
16	07.19	06.51	06.08	06.18	05.39	05.24	05.37	06.06	06.37	07.08	06.44	07.14
	16.53	17.31	18.03	19.36	20.07	20.30	20.27	19.55	19.06	18.16	16.38	16.29
17	07.19	06.49	06.07	06.16	05.38	05.24	05.38	06.07	06.38	07.09	06.45	07.15
	16.55	17.32	18.04	19.37	20.08	20.30	20.26	19.53	19.04	18.14	16.37	16.30
18	07.18	06.48	06.05	06.14	05.37	05.24	05.39	06.08	06.39	07.10	06.46	07.15
	16.56	17.34	18.05	19.38	20.09	20.31	20.26	19.52	19.02	18.13	16.36	16.30
19	07.18	06.47	06.03	06.13	05.36	05.24	05.40	06.09	06.40	07.11	06.47	07.16
	16.57	17.35	18.07	19.39	20.10	20.31	20.25	19.50	19.00	18.11	16.36	16.30
20	07.17	06.45	06.02	06.11	05.35	05.24	05.41	06.10	06.41	07.12	06.48	07.17
	16.58	17.36	18.08	19.40	20.11	20.31	20.24	19.49	18.59	18.10	16.35	16.31
21	07.16	06.44	06.00	06.10	05.34	05.24	05.42	06.11	06.42	07.13	06.50	07.17
	16.59	17.37	18.09	19.41	20.12	20.32	20.24	19.48	18.57	18.09	16.34	16.31
22	07.16	06.43	05.58	06.09	05.34	05.25	05.42	06.12	06.43	07.14	06.51	07.18
	17.00	17.38	18.10	19.43	20.13	20.32	20.23	19.46	18.55	18.07	16.34	16.32
23	07.15	06.41	05.57	06.07	05.33	05.25	05.43	06.13	06.44	07.16	06.52	07.18
	17.02	17.40	18.11	19.44	20.14	20.32	20.22	19.45	18.54	18.06	16.33	16.32
24	07.15	06.40	05.55	06.06	05.32	05.25	05.44	06.14	06.45	07.17	06.53	07.19
	17.03	17.41	18.12	19.45	20.15	20.32	20.21	19.43	18.52	18.04	16.32	16.33
25	07.14	06.38	05.53	06.04	05.31	05.25	05.45	06.15	06.46	06.18	06.39	06.45/6
	17.04	17.42	18.13	19.46	20.16	20.32	20.20	19.42	18.50	17.03	16.32	16.33
26	07.13	06.37	05.52	06.03	05.31	05.26	05.46	06.16	06.47	06.19	06.40	06.44/4
	17.05	17.43	18.14	19.47	20.16	20.32	20.19	19.40	18.49	17.01	16.31	16.34
27	07.12	06.35	05.50	06.01	05.30	05.26	05.47	06.17	06.48	06.20	06.41	06.43/2
	17.06	17.44	18.15	19.48	20.17	20.32	20.18	19.38	18.47	17.00	16.31	16.35
28	07.11	06.34	05.48	06.00	05.29	05.27	05.48	06.18	06.49	06.21	06.57	07.20
	17.08	17.45	18.16	19.49	20.18	20.32	20.17	19.37	18.45	16.59	16.31	16.35
29	07.11		06.47	05.59	05.29	05.27	05.49	06.19	06.50	06.22	06.59	07.20
	17.09		19.17	19.50	20.19	20.32	20.17	19.35	18.43	16.57	16.30	16.36
30	07.10		06.45	05.57	05.28	05.27	05.50	06.20	06.51	06.24	07.00	07.21
	17.10		19.18	19.51	20.20	20.32	20.15	19.34	18.42	16.56	16.30	16.37
31	07.09		06.43		05.28		05.51	06.21		06.25		07.21
	17.11		19.19		20.21		20.14	19.32		16.55		16.37
Ore potenziali di eliofania	298	297	369	398	448	452	459	428	375	345	298	288
Somma dei minuti d'ombra	0	54	0	0	0	0	0	0	0	57	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.5:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre	
1	07.21 16.38	07.08 17.13	06.32 17.46	06.42 19.20	05.56 19.52	05.27 20.21	05.28 20.32	05.52 20.13	06.22 19.30	06.52 18.40	06.26 16.11-16.22/11	07.01 16.29	
2	07.21 16.39	07.07 17.14	06.31 17.48	06.40 19.21	05.55 19.53	05.27 20.22	05.28 20.32	05.53 20.12	06.23 19.29	06.53 18.38	06.27 16.11-16.24/13	07.02 16.29	
3	07.21 16.40	07.06 17.15	16.46-16.48/2	06.29 17.49	06.38 19.22	05.53 19.54	05.26 20.23	05.29 20.32	05.54 20.11	06.24 19.27	06.54 18.37	06.28 16.11-16.23/12	07.03 16.29
4	07.21 16.41	07.05 17.16	16.44-16.51/7	06.28 17.50	06.37 19.23	05.52 19.55	05.26 20.23	05.29 20.32	05.54 20.10	06.25 19.26	06.55 18.35	06.29 16.11-16.23/12	07.04 16.29
5	07.21 16.42	07.04 17.18	16.42-16.53/11	06.26 17.51	06.35 19.25	05.51 19.56	05.26 20.24	05.30 20.32	05.55 20.09	06.26 19.24	06.56 18.33	06.31 16.11-16.22/11	07.05 16.29
6	07.21 16.43	07.03 17.19	16.41-16.53/12	06.24 17.52	06.33 19.26	05.50 19.57	05.25 20.25	05.30 20.31	05.56 20.08	06.27 19.22	06.57 18.32	06.32 16.12-16.22/10	07.06 16.28
7	07.21 16.44	07.02 17.20	16.41-16.53/12	06.23 17.53	06.32 19.27	05.49 19.58	05.25 20.25	05.31 20.31	05.57 20.07	06.28 19.21	06.58 18.30	06.33 16.14-16.21/7	07.07 16.28
8	07.21 16.45	07.01 17.21	16.41-16.54/13	06.21 17.54	06.30 19.28	05.47 19.59	05.25 20.26	05.32 20.31	05.58 20.05	06.29 19.19	06.59 18.29	06.34 16.28	07.08 16.28
9	07.21 16.46	06.59 17.23	16.41-16.54/13	06.20 17.56	06.29 19.29	05.46 20.00	05.25 20.27	05.32 20.30	05.59 20.04	06.30 19.17	07.00 18.27	06.35 16.28	07.08 16.28
10	07.21 16.47	06.58 17.24	16.42-16.54/12	06.18 17.57	06.27 19.30	05.45 20.01	05.24 20.27	05.33 20.30	06.00 20.03	06.31 19.16	07.01 18.25	06.37 16.44	07.09 16.28
11	07.21 16.48	06.57 17.25	16.42-16.52/10	06.16 17.58	06.25 19.31	05.44 20.02	05.24 20.28	05.34 20.30	06.01 20.01	06.32 19.14	07.02 18.24	06.38 16.43	07.10 16.28
12	07.20 16.49	06.56 17.26	16.44-16.51/7	06.15 17.59	06.24 19.32	05.43 20.03	05.24 20.28	05.34 20.29	06.02 20.00	06.33 19.12	07.03 18.22	06.39 16.42	07.11 16.28
13	07.20 16.50	06.55 17.27		06.13 18.00	06.22 19.33	05.42 20.04	05.24 20.29	05.35 20.29	06.03 19.59	06.34 19.11	07.05 18.21	06.40 16.41	07.12 16.29
14	07.20 16.51	06.53 17.29		06.11 18.01	06.21 19.34	05.41 20.05	05.24 20.29	05.36 20.28	06.04 19.57	06.35 19.09	07.06 18.19	06.41 16.40	07.13 16.29
15	07.19 16.52	06.52 17.30		06.10 18.02	06.19 19.35	05.40 20.06	05.24 20.30	05.37 20.28	06.05 19.56	06.36 19.07	07.07 18.18	06.43 16.39	07.13 16.29
16	07.19 16.53	06.51 17.31		06.08 18.03	06.17 19.36	05.39 20.07	05.24 20.30	05.37 20.27	06.06 19.55	06.37 19.06	07.08 18.16	06.44 16.38	07.14 16.29
17	07.19 16.55	06.49 17.32		06.07 18.04	06.16 19.37	05.38 20.08	05.24 20.30	05.38 20.26	06.07 19.53	06.38 19.04	07.09 18.14	06.45 16.37	07.15 16.30
18	07.18 16.56	06.48 17.34		06.05 18.05	06.14 19.38	05.37 20.09	05.24 20.31	05.39 20.26	06.08 19.52	06.39 19.02	07.10 18.13	06.46 16.36	07.15 16.30
19	07.18 16.57	06.47 17.35		06.03 18.06	06.13 19.39	05.36 20.10	05.24 20.31	05.40 20.25	06.09 19.50	06.40 19.00	07.11 18.11	06.47 16.36	07.16 16.30
20	07.17 16.58	06.45 17.36		06.02 18.08	06.11 19.40	05.35 20.11	05.24 20.31	05.41 20.24	06.10 19.49	06.41 18.59	07.12 18.10	06.48 16.35	07.17 16.31
21	07.16 16.59	06.44 17.37		06.00 18.09	06.10 19.41	05.34 20.12	05.24 20.32	05.42 20.23	06.11 19.48	06.42 18.57	07.13 18.09	06.50 16.34	07.17 16.31
22	07.16 17.00	06.42 17.38		05.58 18.10	06.08 19.42	05.34 20.13	05.25 20.32	05.42 20.23	06.12 19.46	06.43 18.55	07.14 18.07	06.51 16.34	07.18 16.32
23	07.15 17.02	06.41 17.39		05.57 18.11	06.07 19.44	05.33 20.14	05.25 20.32	05.43 20.22	06.13 19.45	06.44 18.54	07.16 18.06	06.52 16.33	07.18 16.32
24	07.14 17.03	06.40 17.41		05.55 18.12	06.06 19.45	05.32 20.15	05.25 20.32	05.44 20.21	06.14 19.43	06.45 18.52	07.17 18.04	06.53 16.32	07.19 16.33
25	07.14 17.04	06.38 17.42		05.53 18.13	06.04 19.46	05.31 20.16	05.25 20.32	05.45 20.20	06.15 19.41	06.46 18.50	06.18 17.03	06.54 16.32	07.19 16.33
26	07.13 17.05	06.37 17.43		05.52 18.14	06.03 19.47	05.31 20.16	05.26 20.32	05.46 20.19	06.16 19.40	06.47 18.49	06.19 17.01	06.55 16.31	07.19 16.34
27	07.12 17.06	06.35 17.44		05.50 18.15	06.01 19.48	05.30 20.17	05.26 20.32	05.47 20.18	06.17 19.38	06.48 18.47	06.20 17.00	06.56 16.31	07.20 16.35
28	07.11 17.08	06.34 17.45		05.48 18.16	06.00 19.49	05.29 20.18	05.26 20.32	05.48 20.17	06.18 19.37	06.49 18.45	06.21 16.59	06.57 16.31	07.20 16.35
29	07.11 17.09			06.47 19.17	05.59 19.50	05.29 20.19	05.27 20.32	05.49 20.16	06.19 19.35	06.50 18.43	06.22 16.57	06.59 16.30	07.20 16.36
30	07.10 17.10			06.45 19.18	05.57 19.51	05.28 20.20	05.27 20.32	05.50 20.15	06.20 19.34	06.51 18.42	06.24 16.56	16.13-16.21/8	07.00 16.30
31	07.09 17.11			06.43 19.19		05.28 20.21		05.51 20.14	06.21 19.32		16.12-16.22/10	06.25 16.55	07.21 16.37
Ore potenziali di eliofania	298	297	369	398	448	452	459	428	375	345	298	288	
Somma dei minuti d'ombra	0	99	0	0	0	0	0	0	0	18	76	0	

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.6:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre				
1	07.21	07.08	06.32	06.42	05.56	18.57-19.18/21	05.27	19.46-19.54/8	05.28	19.48-20.02/14	05.52	06.22	06.52	06.26	07.01	
	16.38	17.13	17.46	19.20	19.52		20.21	20.32		20.13		19.30	18.40	16.54	16.29	
2	07.21	07.07	06.31	06.40	05.55	18.58-19.17/19	05.27	19.45-19.54/9	05.28	19.49-20.03/14	05.53	06.23	06.53	06.27	07.02	
	16.39	17.14	17.48	19.21	19.53		20.22	20.32		20.12		19.29	18.38	16.52	16.29	
3	07.21	07.06	06.29	06.38	05.53	19.00-19.16/16	05.26	19.45-19.55/10	05.29	19.49-20.03/14	05.53	06.24	06.54	06.28	07.03	
	16.40	17.15	17.49	19.22	19.54		20.23	20.32		20.11		19.27	18.37	16.51	16.29	
4	07.21	07.05	06.27	06.37	05.52	19.01-19.14/13	05.26	19.45-19.56/11	05.29	19.50-20.03/13	05.54	06.25	06.55	06.29	07.04	
	16.41	17.16	17.50	19.23	19.55		20.23	20.32		20.10		19.28	18.35	16.50	16.29	
5	07.21	07.04	06.26	06.35	05.51	19.03-19.11/8	05.26	19.44-19.56/12	05.30	19.49-20.03/14	05.55	06.26	06.56	06.31	07.05	
	16.42	17.18	17.51	19.25	19.56		20.24	20.32		20.09		19.24	18.33	16.49	16.29	
6	07.21	07.03	06.24	06.33	05.50		05.25	19.44-19.57/13	05.30	19.50-20.03/13	05.56	06.27	06.57	06.32	07.06	
	16.43	17.19	17.52	19.26	19.57		20.25	20.31		20.08		19.22	18.32	16.48	16.28	
7	07.21	07.02	06.23	06.32	05.49		05.25	19.44-19.57/13	05.31	19.51-20.03/12	05.57	06.28	06.58	06.33	07.07	
	16.44	17.20	17.53	19.27	19.58		20.25	20.31		20.06		19.21	18.30	16.47	16.28	
8	07.21	07.01	06.21	06.30	05.47		05.25	19.45-19.58/13	05.32	19.51-20.03/12	05.58	19.12-19.21/9	06.29	06.59	06.34	07.08
	16.45	17.21	17.54	19.28	19.59		20.26	20.31		20.05		19.19	18.29	16.46	16.28	
9	07.21	06.59	06.20	06.29	05.46		05.25	19.44-19.57/13	05.32	19.52-20.03/11	05.59	19.09-19.24/15	06.30	07.00	06.35	07.08
	16.46	17.23	17.56	19.29	20.00		20.27	20.30		20.04		19.17	18.27	16.45	16.28	
10	07.21	06.58	06.18	06.27	05.45		05.24	19.44-19.58/14	05.33	19.52-20.02/10	06.00	19.08-19.25/17	06.31	07.01	06.37	07.09
	16.47	17.24	17.57	19.30	20.01		20.27	20.30		20.03		19.16	18.25	16.43	16.28	
11	07.21	06.57	06.16	06.25	05.44		05.24	19.44-19.58/14	05.34	19.53-20.01/8	06.01	19.07-19.26/19	06.32	07.02	06.38	07.10
	16.48	17.25	17.58	19.31	20.02		20.28	20.30		20.01		19.14	18.24	16.43	16.28	
12	07.20	06.56	06.15	06.24	05.43		05.24	19.45-19.59/14	05.34	19.54-20.01/7	06.02	19.05-19.27/22	06.33	07.03	06.39	07.11
	16.49	17.26	17.59	19.32	20.03		20.28	20.29		20.00		19.12	18.22	16.42	16.28	
13	07.20	06.55	06.13	06.22	05.42		05.24	19.45-19.59/14	05.35	19.57-20.00/3	06.03	19.05-19.28/23	06.34	07.05	06.40	07.12
	16.50	17.27	18.00	19.33	20.04		20.29	20.29		19.59		19.11	18.21	16.41	16.29	
14	07.20	06.53	06.11	06.21	05.41		05.24	19.45-19.59/14	05.36		06.04	19.04-19.28/24	06.35	07.06	06.41	07.13
	16.51	17.29	18.01	19.34	20.05		20.29	20.28		19.57		19.09	18.19	16.40	16.29	
15	07.19	06.52	06.10	06.19	05.40		05.24	19.45-19.59/14	05.37		06.05	19.03-19.28/25	06.36	07.07	06.43	07.13
	16.52	17.30	18.02	19.35	20.06		20.30	20.27		19.56		19.07	18.17	16.39	16.29	
16	07.19	06.51	06.08	06.17	19.07-19.14/7	05.39	05.24	19.45-19.59/14	05.37		06.06	19.03-19.29/26	06.37	07.08	06.44	07.14
	16.53	17.31	18.03	19.36	20.07		20.30	20.27		19.55		19.05	18.16	16.38	16.29	
17	07.19	06.49	06.07	06.16	19.04-19.16/12	05.38	05.24	19.45-20.00/15	05.38		06.07	19.02-19.29/27	06.38	07.09	06.45	07.15
	16.54	17.32	18.04	19.37	20.08		20.30	20.26		19.53		19.04	18.14	16.37	16.30	
18	07.18	06.48	06.05	06.14	19.01-19.16/15	05.37	05.24	19.45-20.00/15	05.39		06.08	19.02-19.28/26	06.39	07.10	06.46	07.15
	16.56	17.34	18.05	19.38	20.09		20.31	20.26		19.52		19.02	18.13	16.36	16.30	
19	07.18	06.47	06.03	06.13	19.00-19.18/18	05.36	05.24	19.46-20.00/14	05.40		06.09	19.02-19.28/26	06.40	07.11	06.47	07.16
	16.57	17.35	18.06	19.39	20.10		20.31	20.25		19.50		19.00	18.11	16.36	16.30	
20	07.17	06.45	06.02	06.11	18.58-19.18/20	05.35	05.24	19.47-20.01/14	05.41		06.10	19.02-19.27/25	06.41	07.12	06.48	07.17
	16.58	17.36	18.08	19.40	20.11		20.31	20.24		19.49		18.59	18.10	16.35	16.31	
21	07.16	06.44	06.00	06.10	18.58-19.19/21	05.34	05.24	19.47-20.01/14	05.42		06.11	19.01-19.25/24	06.42	07.13	06.50	07.17
	16.59	17.37	18.09	19.41	20.12		20.32	20.23		19.48		18.57	18.08	16.34	16.31	
22	07.16	06.42	05.58	06.08	18.57-19.20/23	05.34	05.25	19.47-20.01/14	05.42		06.12	19.02-19.23/21	06.43	07.14	06.51	07.18
	17.00	17.38	18.10	19.42	20.13		20.32	20.23		19.46		18.55	18.07	16.34	16.32	
23	07.15	06.41	05.57	06.07	18.56-19.21/25	05.33	05.25	19.47-20.01/14	05.43		06.13	19.02-19.22/20	06.44	07.16	06.52	07.18
	17.02	17.39	18.11	19.44	20.14		20.32	20.22		19.45		18.54	18.06	16.33	16.32	
24	07.14	06.40	05.55	06.06	18.55-19.21/26	05.32	05.25	19.47-20.02/15	05.44		06.14	19.03-19.20/17	06.45	07.17	06.53	07.19
	17.03	17.41	18.12	19.45	20.15		20.32	20.21		19.43		18.52	18.04	16.32	16.33	
25	07.14	06.38	05.53	06.04	18.56-19.22/26	05.31	05.25	19.47-20.02/15	05.45		06.15	19.04-19.19/15	06.46	07.18	06.54	07.19
	17.04	17.42	18.13	19.46	20.16		20.32	20.20		19.41		18.50	17.03	16.32	16.33	
26	07.13	06.37	05.52	06.03	18.56-19.22/26	05.31	05.26	19.47-20.02/15	05.46		06.16	19.06-19.17/11	06.47	07.19	06.55	07.19
	17.05	17.43	18.14	19.47	20.16		20.32	20.19		19.40		18.49	17.01	16.31	16.34	
27	07.12	06.35	05.50	06.01	18.55-19.21/26	05.30	05.26	19.48-20.02/14	05.47		06.17	19.09-19.16/7	06.48	07.20	06.56	07.20
	17.06	17.44	18.15	19.48	20.17		20.32	20.18		19.38		18.47	17.00	16.31	16.35	
28	07.11	06.34	05.48	06.00	18.56-19.21/25	05.29	05.26	19.48-20.02/14	05.48		06.18	06.49	06.21	06.57	07.20	
	17.08	17.45	18.16	19.49	20.18		20.32	20.17		19.37		18.45	16.59	16.30	16.35	
29	07.11		06.47	05.59	18.56-19.20/24	05.29	05.27	19.48-20.02/14	05.49		06.19		06.50	06.22	06.59	07.20
	17.09		19.17	19.50	20.19		20.32	20.16		19.35		18.43	16.57	16.30	16.36	
30	07.10		06.45	05.57	18.56-19.19/23	05.28	05.27	19.49-20.03/14	05.50		06.20		06.51	06.24	07.00	07.21
	17.10		19.18	19.51	20.20		20.32	20.15		19.34		18.42	16.56	16.30	16.37	
31	07.09		06.43		19.47-19.52/5	05.28			05.51		06.21		06.25		07.21	
	17.11		19.19		20.21				20.14		19.32		16.55		16.37	
Ore potenziali di eliofania	298		369	398	448	452	459	428	375	345	298	288				
Somma dei minuti d'ombra	0	0	0	317	82	401	145	399	0	0	0	0				

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.7:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre	
1	07.21	07.08	06.32	06.42	05.56	05.27	05.28	05.52	06.22	06.52	06.26	16.09-16.16/7	07.01
	16.38	17.13	17.46	19.20	19.52	20.21	20.32	20.13	19.30	18.40	16.54		16.29
2	07.21	07.07	06.31	06.40	05.55	05.27	05.28	05.53	06.23	06.53	06.27		07.02
	16.39	17.14	17.48	19.21	19.53	20.22	20.32	20.12	19.29	18.38	16.52		16.29
3	07.21	07.06	06.29	06.38	05.53	05.26	05.29	05.53	06.24	06.54	06.28		07.03
	16.40	17.15	17.49	19.22	19.54	20.23	20.32	20.11	19.27	18.37	16.51		16.29
4	07.21	07.05	06.27	06.37	05.52	05.26	05.29	05.54	06.25	06.55	06.29		07.04
	16.41	17.16	17.50	19.23	19.55	20.23	20.32	20.10	19.26	18.35	16.50		16.29
5	07.21	07.04	06.26	06.35	05.51	05.26	05.30	05.55	06.26	06.56	06.31		07.05
	16.42	17.18	17.51	19.25	19.56	20.24	20.32	20.09	19.24	18.33	16.49		16.29
6	07.21	07.03	06.24	06.33	05.50	05.25	05.30	05.56	06.27	06.57	06.32		07.06
	16.43	17.19	17.52	19.26	19.57	20.25	20.31	20.08	19.22	18.32	16.48		16.28
7	07.21	07.02	06.23	06.32	05.48	05.25	05.31	05.57	06.28	06.58	06.33		07.07
	16.44	17.20	17.53	19.27	19.58	20.25	20.31	20.06	19.21	18.30	16.47		16.28
8	07.21	07.01	06.21	06.30	05.47	05.25	05.32	05.58	06.29	06.59	06.34		07.07
	16.45	17.21	17.54	19.28	19.59	20.26	20.31	20.05	19.19	18.29	16.46		16.28
9	07.21	06.59	06.20	06.28	05.46	05.25	05.32	05.59	06.30	07.00	06.35		07.08
	16.46	17.22	17.56	19.29	20.00	20.27	20.30	20.04	19.17	18.27	16.45		16.28
10	07.21	06.58	16.39-16.48/9	06.18	06.27	05.45	05.24	05.33	06.00	06.31	07.01		07.09
	16.47	17.24	17.57	19.30	20.01	20.27	20.30	20.03	19.16	18.25	16.43		16.28
11	07.21	06.57	16.37-16.49/12	06.16	06.25	05.44	05.24	05.34	06.01	06.32	07.02		07.10
	16.48	17.25	17.58	19.31	20.02	20.28	20.30	20.01	19.14	18.24	16.42		16.28
12	07.20	06.56	16.35-16.51/16	06.15	06.24	05.43	05.24	05.34	06.02	06.33	07.03		07.11
	16.49	17.26	17.59	19.32	20.03	20.28	20.29	20.00	19.12	18.22	16.42		16.28
13	07.20	06.55	16.35-16.52/17	06.13	06.22	05.42	05.24	05.35	06.03	06.34	07.05		07.12
	16.50	17.27	18.00	19.33	20.04	20.29	20.29	19.59	19.11	18.21	16.41		16.29
14	07.20	06.53	16.34-16.53/19	06.11	06.21	05.41	05.24	05.36	06.04	06.35	07.06		07.13
	16.51	17.29	18.01	19.34	20.05	20.29	20.28	19.57	19.09	18.19	16.40		16.29
15	07.19	06.52	16.33-16.53/20	06.10	06.19	05.40	05.24	05.37	06.05	06.36	07.07		07.13
	16.52	17.30	18.02	19.35	20.06	20.30	20.27	19.56	19.07	18.17	16.39		16.29
16	07.19	06.51	16.33-16.53/20	06.08	06.17	05.39	05.24	05.37	06.06	06.37	07.08		07.14
	16.53	17.31	18.03	19.36	20.07	20.30	20.27	19.55	19.05	18.16	16.38		16.29
17	07.19	06.49	16.34-16.54/20	06.07	06.16	05.38	05.24	05.38	06.07	06.38	07.09		07.15
	16.54	17.32	18.04	19.37	20.08	20.30	20.26	19.53	19.04	18.14	16.37		16.30
18	07.18	06.48	16.33-16.53/20	06.05	06.14	05.37	05.24	05.39	06.08	06.39	07.10		07.15
	16.56	17.33	18.05	19.38	20.09	20.31	20.26	19.52	19.02	18.13	16.36		16.30
19	07.18	06.47	16.34-16.53/19	06.03	06.13	05.36	05.24	05.40	06.09	06.40	07.11	17.09-17.20/11	06.47
	16.57	17.35	18.06	19.39	20.10	20.31	20.25	19.50	19.00	18.11	16.36		07.16
20	07.17	06.45	16.34-16.52/18	06.02	06.11	05.35	05.24	05.41	06.10	06.41	07.12	17.07-17.21/14	06.48
	16.58	17.36	18.08	19.40	20.11	20.31	20.24	19.49	18.59	18.10	16.35		07.17
21	07.16	06.44	16.35-16.51/16	06.00	06.10	05.34	05.24	05.42	06.11	06.42	07.13	17.06-17.22/16	06.50
	16.59	17.37	18.09	19.41	20.12	20.32	20.23	19.48	18.57	18.08	16.34		07.17
22	07.16	06.42	16.37-16.50/13	05.58	06.08	05.34	05.25	05.42	06.12	06.43	07.14	17.04-17.23/19	06.51
	17.00	17.38	18.10	19.42	20.13	20.32	20.23	19.46	18.55	18.07	16.34		07.18
23	07.15	06.41	16.39-16.47/8	05.57	06.07	05.33	05.25	05.43	06.13	06.44	07.16	17.03-17.23/20	06.52
	17.02	17.39	18.11	19.44	20.14	20.32	20.22	19.45	18.54	18.06	16.33		07.18
24	07.14	06.40	05.55	06.06	05.32	05.25	05.44	06.14	06.45	07.17	17.04-17.24/20	06.53	07.19
	17.03	17.41	18.12	19.45	20.15	20.32	20.21	19.43	18.52	18.04	16.32		07.19
25	07.14	06.38	05.53	06.04	05.31	05.25	05.45	06.15	06.46	06.18	16.03-16.24/21	06.54	07.19
	17.04	17.42	18.13	19.46	20.16	20.32	20.20	19.41	18.50	17.03	16.32		07.19
26	07.13	06.37	05.52	06.03	05.31	05.26	05.46	06.16	06.47	06.19	16.03-16.23/20	06.55	07.19
	17.05	17.43	18.14	19.47	20.16	20.32	20.19	19.40	18.48	17.01	16.31		07.19
27	07.12	06.35	05.50	06.01	05.30	05.26	05.47	06.17	06.48	06.20	16.03-16.23/20	06.56	07.20
	17.06	17.44	18.15	19.48	20.17	20.32	20.18	19.38	18.47	17.00	16.31		07.20
28	07.11	06.34	05.48	06.00	05.29	05.26	05.48	06.18	06.49	06.21	16.03-16.22/19	06.57	07.20
	17.08	17.45	18.16	19.49	20.18	20.32	20.17	19.37	18.45	16.59	16.30		07.20
29	07.11		06.47	05.59	05.29	05.27	05.49	06.19	06.50	06.22	16.05-16.22/17	06.59	07.20
	17.09		19.17	19.50	20.19	20.32	20.16	19.35	18.43	16.57	16.30		07.20
30	07.10		06.45	05.57	05.28	05.27	05.50	06.20	06.51	06.24	16.05-16.20/15	07.00	07.21
	17.10		19.18	19.51	20.20	20.32	20.15	19.34	18.42	16.56	16.30		07.21
31	07.09		06.43		05.28		05.51	06.21		06.25	16.07-16.19/12		07.21
	17.11		19.19		20.21		20.14	19.32		16.55			07.21
Ore potenziali di eliofania	298	297	369	398	448	452	459	428	375	345	298		288
Somma dei minuti d'ombra	0	227	0	0	0	0	0	0	0	224	7	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.8:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre
1	07.21 07.47-08.08/21	07.08	06.32	06.42	05.56	05.27	05.28	19.53-20.06/13	05.52	06.22	06.52	06.26
	16.38	17.13	17.46	19.20	19.52	20.21	20.32	20.13	19.30	18.40	16.54	16.29
2	07.21 07.48-08.08/20	07.07	06.31	06.40	05.55	05.27	05.28	19.54-20.06/12	05.52	06.23	06.53	06.27
	16.39	17.14	17.48	19.21	19.53	20.22	20.32	20.12	19.29	18.38	16.52	16.29
3	07.21 07.48-08.09/21	07.06	06.29	06.38	05.53	05.26	05.29	19.54-20.06/12	05.53	06.24	06.54	06.28
	16.40	17.15	17.49	19.22	19.54	20.23	20.32	20.11	19.27	18.37	16.51	16.29
4	07.21 07.49-08.09/20	07.05	06.27	06.37	05.52	05.26	05.29	19.55-20.06/11	05.54	06.25	06.55	06.29
	16.41	17.16	17.50	19.23	19.55	20.23	20.32	20.10	19.26	18.35	16.50	16.29
5	07.21 07.49-08.08/19	07.04	06.26	06.35	05.51	05.26	05.30	19.55-20.05/10	05.55	06.26	06.56	06.31
	16.42	17.17	17.51	19.24	19.56	20.24	20.32	20.09	19.24	18.33	16.49	16.28
6	07.21 07.50-08.09/19	07.03	06.24	06.33	05.50	05.25	05.30	19.56-20.05/9	05.56	06.27	06.57	06.32
	16.43	17.19	17.52	19.26	19.57	20.25	20.31	20.08	19.22	18.32	16.48	16.28
7	07.21 07.50-08.09/19	07.02	06.23	06.32	05.48	05.25	05.31	19.57-20.05/8	05.57	06.28	06.58	06.33
	16.44	17.20	17.53	19.27	19.58	20.25	20.31	20.06	19.21	18.30	16.47	16.28
8	07.21 07.51-08.09/18	07.01	06.21	06.30	05.47	05.25	05.32	19.58-20.04/6	05.58	06.29	06.59	06.34
	16.45	17.21	17.54	19.28	19.59	20.26	20.31	20.05	19.19	18.29	16.46	16.28
9	07.21 07.52-08.09/17	06.59	06.20	06.28	05.46	05.25	05.32	20.00-20.03/2	05.59	06.30	07.00	06.35
	16.46	17.22	17.55	19.29	20.00	20.27	20.30	20.04	19.17	18.27	16.44	16.28
10	07.21 07.54-08.09/15	06.58	06.18	06.27	05.45	05.24	05.33	06.00	06.31	07.01	06.37	07.09
	16.47	17.24	17.57	19.30	20.01	20.27	20.30	20.03	19.16	18.25	16.43	16.28
11	07.21 07.54-08.08/14	06.57	06.16	06.25	05.44	05.24	05.34	06.01	06.32	07.02	06.38	07.10
	16.48	17.25	17.58	19.31	20.02	20.28	20.29	20.01	19.14	18.24	16.42	16.28
12	07.20 07.42-07.45/3	06.56	06.15	06.24	05.43	05.24	05.34	06.02	06.33	07.03	06.39	07.13-07.21/8
	16.49	17.26	17.59	19.32	20.03	20.28	20.29	20.00	19.12	18.22	16.41	16.28
13	07.20 07.42-07.47/5	06.55	06.13	06.22	05.42	05.24	05.35	06.03	06.34	07.04	06.40	07.12-07.24/12
	16.50	17.27	18.00	19.33	20.04	20.29	20.29	19.59	19.11	18.21	16.41	16.29
14	07.20 07.41-07.48/7	06.53	06.11	06.21	05.41	05.24	05.36	06.04	06.35	07.06	06.41	07.11-07.25/14
	16.51	17.29	18.01	19.34	20.05	20.29	20.28	19.57	19.09	18.19	16.40	16.29
15	07.19 07.41-07.49/8	06.52	06.10	06.19	05.40	05.24	05.37	06.05	06.36	07.07	06.43	07.10-07.26/16
	16.52	17.30	18.02	19.35	20.06	20.30	20.27	19.56	19.07	18.17	16.39	16.29
16	07.19 07.40-07.50/10	06.51	06.08	06.17	05.39	05.24	05.37	06.06	06.37	07.08	06.44	07.10-07.27/17
	16.53	17.31	18.03	19.36	20.07	20.30	20.27	19.55	19.05	18.16	16.38	16.29
17	07.19 07.40-07.51/11	06.49	06.06	06.16	05.38	05.24	05.38	06.07	06.38	07.09	06.45	07.10-07.28/18
	16.54	17.32	18.04	19.37	20.08	20.30	20.26	19.53	19.04	18.14	16.37	16.30
18	07.18 07.39-07.51/12	06.48	06.05	06.14	05.37	05.24	05.39	06.08	06.39	07.10	06.46	07.10-07.28/18
	16.56	17.33	18.05	19.38	20.09	20.31	20.26	19.52	19.02	18.13	16.36	16.30
19	07.18 07.38-07.52/14	06.47	06.03	06.13	05.36	05.24	05.40	06.09	06.40	07.11	06.47	07.10-07.28/18
	16.57	17.35	18.06	19.39	20.10	20.31	20.25	19.50	19.00	18.11	16.36	16.30
20	07.17 07.38-07.53/15	06.45	06.01	06.11	05.35	05.24	05.41	06.10	06.41	07.12	06.48	07.11-07.28/17
	16.58	17.36	18.08	19.40	20.11	20.31	20.24	19.49	18.59	18.10	16.35	16.31
21	07.16 07.37-07.53/16	06.44	06.00	06.10	05.34	05.24	05.41	06.11	06.42	07.13	06.50	07.13-07.29/16
	16.59	17.37	18.09	19.41	20.12	20.31	20.23	19.47	18.57	18.08	16.34	16.31
22	07.16 07.37-07.54/17	06.42	05.58	06.08	05.34	05.25	05.42	06.12	06.43	07.14	06.51	07.14-07.29/15
	17.00	17.38	18.10	19.42	20.13	20.32	20.23	19.46	18.55	18.07	16.34	16.32
23	07.15 07.36-07.54/18	06.41	05.56	06.07	05.33	05.25	05.43	06.13	06.44	07.16	06.52	07.15-07.29/14
	17.01	17.39	18.11	19.43	20.14	20.32	20.22	19.44	18.54	18.06	16.33	16.32
24	07.14 07.36-07.54/18	06.40	05.55	06.06	05.32	05.25	05.44	06.14	06.45	07.17	06.53	07.16-07.29/13
	17.03	17.41	18.12	19.45	20.15	20.32	20.21	19.43	18.52	18.04	16.32	16.33
25	07.14 07.36-07.54/18	06.38	05.53	06.04	05.31	05.25	05.45	06.15	06.46	06.18	06.54	07.17-07.28/11
	17.04	17.42	18.13	19.46	20.16	20.32	20.20	19.41	18.50	17.03	16.32	16.33
26	07.13 07.36-07.53/17	06.37	05.51	06.03	05.31	05.26	05.46	06.16	06.47	06.19	06.55	07.19-07.29/10
	17.05	17.43	18.14	19.47	20.16	20.32	20.19	19.40	18.48	17.01	16.31	16.34
27	07.12 07.38-07.54/16	06.35	05.50	06.01	05.30	05.26	05.47	06.17	06.48	06.20	06.56	07.20-07.28/8
	17.06	17.44	18.15	19.48	20.17	20.32	20.18	19.38	18.47	17.00	16.31	16.34
28	07.11 07.39-07.53/14	06.34	05.48	06.00	05.29	05.26	05.48	06.18	06.49	06.21	06.57	07.21-07.28/7
	17.08	17.45	18.16	19.49	20.18	20.32	20.17	19.37	18.45	16.59	16.30	07.39-07.46/7
29	07.11 07.40-07.52/12		06.46	05.59	05.29	05.27	05.49	06.19	06.50	06.22	06.59	07.22-07.27/5
	17.09		19.17	19.50	20.19	20.32	20.16	19.35	18.43	16.57	16.30	07.37-07.48/11
30	07.10 07.42-07.50/8		06.45	05.57	05.28	05.27	05.50	06.20	06.51	06.24	07.00	07.23-07.26/3
	17.10		19.18	19.51	20.20	20.32	20.15	19.34	18.42	16.56	16.30	07.37-07.49/12
31	07.09		06.43		05.28		05.51	06.21		06.25		07.21
	17.11		19.19		20.20		20.14	19.32		16.55		07.46-08.07/21
Ore potenziali di etofania	298		369	398	448	452	458	428	375	345	298	288
Somma dei minuti d'ombra	476	297	0	0	0	348	83	0	0	0	270	624

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.9:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno
1	07.21 07.45-07.57/12 16.38	07.08 17.12	06.32 17.46	06.42 19.20	05.56 06.37-07.12/35 19.52	05.27 05.58-06.47/49 20.21 19.25-19.43/18
2	07.21 07.46-07.57/11 16.39	07.07 17.14	06.31 17.48	06.40 19.21	05.55 06.38-07.11/33 19.53	05.27 05.57-06.47/50 20.22 19.25-19.42/17
3	07.21 07.47-07.57/10 16.40	07.06 17.15	06.29 17.49	06.38 19.22	05.53 06.39-07.10/31 19.54	05.26 05.57-06.47/50 20.23 19.26-19.43/17
4	07.21 07.48-07.57/9 16.41	07.05 17.16	06.27 17.50	06.37 19.23	05.52 06.41-07.09/28 19.55	05.26 05.58-06.48/50 20.23 19.25-19.42/17
5	07.21 07.48-07.56/8 16.42	07.04 17.17	06.26 17.51	06.35 19.24	05.51 06.41-07.07/26 19.56	05.26 05.57-06.48/51 20.24 19.26-19.42/16
6	07.21 07.49-07.55/6 16.43	07.03 17.19	06.24 17.52	06.33 19.26	05.50 06.43-07.06/23 19.57 19.18-19.26/8	05.25 05.57-06.48/51 20.25 19.26-19.43/17
7	07.21 07.51-07.54/3 16.44	07.02 17.20	06.23 17.53	06.32 19.27	05.48 06.45-07.04/19 19.58 19.16-19.27/11	05.25 05.57-06.49/52 20.25 19.27-19.43/16
8	07.21 07.43-07.45/2 16.45	07.00 17.21	06.21 17.54	06.30 06.58-07.05/7 19.28	05.47 06.47-07.01/14 19.59 19.15-19.28/13	05.25 05.58-06.50/52 20.26 19.27-19.42/15
9	07.21 07.43-07.45/2 16.46	06.59 17.22	06.20 17.55	06.28 06.52-07.09/17 19.29	05.46 06.52-06.57/5 20.00 19.15-19.29/14	05.25 05.57-06.49/52 20.27 19.27-19.42/15
10	07.21 07.43-07.46/3 16.47	06.58 17.24	06.18 17.57	06.27 06.48-07.11/23 19.30	05.45 19.14-19.29/15 20.01	05.24 05.57-06.50/53 20.27 19.28-19.42/14
11	07.21 07.42-07.46/4 16.48	06.57 17.25	06.16 17.58	06.25 06.47-07.13/26 19.31	05.44 19.14-19.29/15 20.02	05.24 05.57-06.50/53 20.28 19.28-19.42/14
12	07.20 07.42-07.47/5 16.49	06.56 17.26	06.15 17.59	06.24 06.44-07.14/30 19.32	05.43 19.14-19.29/15 20.03	05.24 05.57-06.50/53 20.28 19.29-19.42/13
13	07.20 07.42-07.48/6 16.50	06.54 17.27	06.13 18.00	06.22 06.43-07.16/33 19.33	05.42 19.14-19.29/15 20.04	05.24 05.57-06.51/54 20.29 19.29-19.43/14
14	07.20 07.41-07.48/7 16.51	06.53 17.29	06.11 18.01	06.21 06.41-07.16/35 19.34	05.41 19.14-19.29/15 20.05	05.24 05.58-06.51/53 20.29 19.30-19.43/13
15	07.19 07.41-07.49/8 16.52	06.52 17.30	06.10 18.02	06.19 06.41-07.17/36 19.35	05.40 06.18-06.23/5 20.06 19.15-19.28/13	05.24 05.58-06.51/53 20.30 19.30-19.43/13
16	07.19 07.40-07.49/9 16.53	06.51 17.31	06.08 18.03	06.17 06.39-07.17/38 19.36	05.39 06.13-06.28/15 20.07 19.15-19.27/12	05.24 05.58-06.52/54 20.30 19.30-19.43/13
17	07.18 07.40-07.49/9 16.54	06.49 17.32	06.06 18.04	06.16 06.39-07.18/39 19.37	05.38 06.10-06.31/21 20.08 19.16-19.26/10	05.24 05.58-06.52/54 20.30 19.31-19.43/12
18	07.18 07.39-07.49/10 16.56	06.48 17.33	06.05 18.05	06.14 06.38-07.18/40 19.38	05.37 06.08-06.33/25 20.09 19.17-19.25/8	05.24 05.58-06.52/54 20.31 19.31-19.43/12
19	07.18 07.38-07.48/10 16.57	06.47 17.35	06.03 18.06	06.13 06.37-07.18/41 19.39	05.36 06.07-06.36/29 20.10 19.19-19.23/4	05.24 05.58-06.52/54 20.31 19.31-19.43/12
20	07.17 07.39-07.48/9 16.58	06.45 17.36	06.01 18.07	06.11 06.36-07.18/42 19.40	05.35 06.05-06.37/32 20.11 19.30-19.35/5	05.24 05.59-06.53/54 20.31 19.32-19.43/11
21	07.16 07.40-07.47/7 16.59	06.44 17.37	06.00 18.09	06.10 06.36-07.18/42 19.41	05.34 06.04-06.38/34 20.12 19.28-19.37/9	05.24 05.59-06.53/54 20.31 19.32-19.43/11
22	07.16 07.44-07.46/2 17.00	06.42 17.38	05.58 18.10	06.08 06.36-07.18/42 19.42	05.34 06.03-06.39/36 20.13 19.27-19.38/11	05.25 05.59-06.53/54 20.32 19.32-19.43/11
23	07.15 17.01	06.41 17.39	05.56 18.11	06.07 06.36-07.18/42 19.43	05.33 06.02-06.41/39 20.14 19.26-19.39/13	05.25 05.59-06.53/54 20.32 19.32-19.44/12
24	07.14 17.03	06.40 17.41	05.55 18.12	06.06 06.35-07.17/42 19.45	05.32 06.01-06.41/40 20.15 19.26-19.40/14	05.25 06.00-06.54/54 20.32 19.32-19.44/12
25	07.14 17.04	06.38 17.42	05.53 18.13	06.04 06.35-07.17/42 19.46	05.31 06.00-06.42/42 20.16 19.25-19.40/15	05.25 06.00-06.54/54 20.32 19.33-19.45/12
26	07.13 17.05	06.37 17.43	05.51 18.14	06.03 06.36-07.17/41 19.47	05.31 06.00-06.43/43 20.16 19.25-19.41/16	05.26 06.00-06.54/54 20.32 19.32-19.45/13
27	07.12 17.06	06.35 17.44	05.50 18.15	06.01 06.35-07.15/40 19.48	05.30 05.59-06.43/44 20.17 19.25-19.41/16	05.26 06.01-06.54/53 20.32 19.32-19.45/13
28	07.11 17.08	06.34 17.45	05.48 18.16	06.00 06.36-07.15/39 19.49	05.29 05.58-06.44/46 20.18 19.24-19.41/17	05.26 06.01-06.54/53 20.32 19.33-19.46/13
29	07.11 17.09		06.46 19.17	05.59 06.37-07.14/37 19.50	05.29 05.59-06.45/46 20.19 19.25-19.42/17	05.27 06.00-06.54/54 20.32 19.32-19.46/14
30	07.10 17.10		06.45 19.18	05.57 06.37-07.13/36 19.51	05.28 05.58-06.45/47 20.20 19.24-19.42/18	05.27 06.01-06.55/54 20.32 19.33-19.47/14
31	07.09 17.11		06.43 19.19		05.28 05.58-06.46/48 20.20 19.25-19.42/17	
Ore potenziali di eliofania somma dei minuti d'ombra	298 152	297 0	369 0	398 810	448 1142	452 1998

legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre	
1	05.28 06.01-06.54/53 20.32 19.32-19.46/14	05.52 19.24-19.39/15 20.13	06.22 06.46-07.12/26 19.30	06.52 18.40	06.26 16.54	07.01 07.24-07.28/4 16.29	
2	05.28 06.02-06.55/53 20.32 19.33-19.47/14	05.52 19.24-19.39/15 20.12	06.23 06.47-07.10/23 19.29	06.53 18.38	06.27 16.52	07.02 07.25-07.28/3 16.29	
3	05.29 06.02-06.54/52 20.32 19.32-19.47/15	05.53 19.24-19.38/14 20.11	06.24 06.50-07.07/17 19.27	06.54 18.37	06.28 16.51	07.03 07.26-07.28/2 16.29	
4	05.29 06.03-06.55/52 20.32 19.33-19.48/15	05.54 06.59-07.08/9 20.10 19.25-19.38/13	06.25 06.54-07.02/8 19.26	06.55 18.35	06.29 16.50	07.04 07.27-07.29/2 16.29	
5	05.30 06.02-06.54/52 20.31 19.32-19.48/16	05.55 06.56-07.12/16 20.09 19.25-19.37/12	06.26 19.24	06.56 18.33	06.31 16.49	07.05 07.36-07.39/3 16.28	
6	05.30 06.03-06.55/52 20.31 19.33-19.49/16	05.56 06.54-07.14/20 20.08 19.26-19.36/10	06.27 19.22	06.57 18.32	06.32 16.48	07.06 07.35-07.41/6 16.28	
7	05.31 06.04-06.55/51 20.31 19.33-19.50/17	05.57 06.52-07.16/24 20.06 19.28-19.35/7	06.28 19.21	06.58 18.30	06.33 16.47	07.07 07.35-07.43/8 16.28	
8	05.32 06.04-06.54/50 20.31 19.32-19.49/17	05.58 06.50-07.17/27 20.05	06.29 19.19	06.59 18.29	06.34 16.46	07.07 07.35-07.44/9 16.28	
9	05.32 06.05-06.55/50 20.30 19.33-19.50/17	05.59 06.49-07.18/29 20.04	06.30 19.17	07.00 18.27	06.35 16.44	07.08 07.35-07.45/10 16.28	
10	05.33 06.05-06.55/50 20.30 19.32-19.49/17	06.00 06.48-07.19/31 20.03	06.31 19.16	07.01 18.25	06.37 16.43	07.09 07.35-07.46/11 16.28	
11	05.34 06.05-06.54/49 20.29 19.33-19.50/17	06.01 06.47-07.20/33 20.01	06.32 19.14	07.02 18.24	06.38 16.42	07.10 07.35-07.47/12 16.28	
12	05.34 06.06-06.54/48 20.29 19.33-19.50/17	06.02 06.46-07.21/35 20.00	06.33 19.12	07.03 18.22	06.39 16.41	07.11 07.36-07.47/11 16.28	
13	05.35 06.07-06.54/47 20.29 19.33-19.51/18	06.03 06.45-07.22/37 19.59	06.34 19.11	07.04 18.21	06.40 16.41	07.12 07.35-07.47/12 16.29	
14	05.36 06.07-06.53/46 20.28 19.33-19.50/17	06.04 06.44-07.22/38 19.57	06.35 19.09	07.06 18.19	06.41 16.40	07.12 07.36-07.48/12 16.29	
15	05.37 06.08-06.53/45 20.27 19.33-19.51/18	06.05 06.44-07.23/39 19.56	06.36 19.07	07.07 18.17	06.42 16.39	07.13 07.37-07.49/12 16.29	
16	05.37 06.08-06.53/45 20.27 19.34-19.51/17	06.06 06.43-07.23/40 19.55	06.37 19.05	07.08 18.16	06.44 16.38	07.14 07.38-07.50/12 16.29	
17	05.38 06.09-06.53/44 20.26 19.34-19.51/17	06.07 06.43-07.23/40 19.53	06.38 19.04	07.09 18.14	06.45 16.37	07.15 07.38-07.50/12 16.30	
18	05.39 06.09-06.51/42 20.26 19.34-19.50/16	06.08 06.42-07.23/41 19.52	06.39 19.02	07.10 18.13	06.46 16.36	07.15 07.39-07.51/12 16.30	
19	05.40 06.10-06.51/41 20.25 19.35-19.50/15	06.09 06.42-07.24/42 19.50	06.40 19.00	07.11 18.11	06.47 16.36	07.16 07.39-07.51/12 16.30	
20	05.41 06.11-06.50/39 20.24 19.36-19.49/13	06.10 06.42-07.23/41 19.49	06.41 18.59	07.12 18.10	06.48 07.18-07.20/2 16.35	07.16 07.40-07.52/12 16.31	
21	05.41 06.13-06.50/37 20.23 19.37-19.49/12	06.11 06.40-07.22/42 19.47	06.42 18.57	07.13 18.08	06.50 07.16-07.23/7 16.34	07.17 07.40-07.52/12 16.31	
22	05.42 06.14-06.49/35 20.23 19.38-19.48/10	06.12 06.40-07.22/42 19.46	06.43 18.55	07.14 18.07	06.51 07.15-07.24/9 16.34	07.18 07.41-07.53/12 16.32	
23	05.43 06.15-06.48/33 20.22 19.38-19.46/8	06.13 06.40-07.22/42 19.44	06.44 18.54	07.15 18.06	06.52 07.15-07.25/10 16.33	07.18 07.41-07.53/12 16.32	
24	05.44 06.16-06.46/30 20.21 19.42-19.44/2	06.14 06.40-07.21/41 19.43	06.45 18.52	07.17 18.04	06.53 07.16-07.26/10 16.32	07.19 07.42-07.54/12 16.33	
25	05.45 06.17-06.45/28 20.20 19.29-19.35/6	06.15 06.41-07.21/40 19.41	06.46 18.50	06.18 17.03	06.54 07.17-07.26/9 16.32	07.19 07.42-07.54/12 16.33	
26	05.46 06.19-06.43/24 20.19 19.27-19.36/9	06.16 06.41-07.20/39 19.40	06.47 18.48	06.19 17.01	06.55 07.19-07.28/9 16.31	07.19 07.42-07.54/12 16.34	
27	05.47 06.22-06.41/19 20.18 19.26-19.37/11	06.17 06.41-07.19/38 19.38	06.48 18.47	06.20 17.00	06.56 07.20-07.28/8 16.31	07.20 07.43-07.55/12 16.34	
28	05.48 06.25-06.37/12 20.17 19.26-19.38/12	06.18 06.42-07.18/36 19.37	06.49 18.45	06.21 16.59	06.57 07.21-07.28/7 16.30	07.20 07.43-07.55/12 16.35	
29	05.49 19.25-19.39/14 20.16	06.19 06.42-07.17/35 19.35	06.50 18.43	06.22 16.57	06.58 07.22-07.28/6 16.30	07.20 07.43-07.55/12 16.36	
30	05.50 19.25-19.39/14 20.15	06.20 06.43-07.16/33 19.34	06.51 18.42	06.24 16.56	07.00 07.23-07.28/5 16.30	07.21 07.43-07.55/12 16.37	
31	05.51 19.25-19.40/15 20.14	06.21 06.44-07.14/30 19.32		06.25 16.55		07.21 07.43-07.55/12 16.37	
	Ore potenziali di eliofania Somma dei minuti d'ombra	459 1615	428 1046	375 74	345 0	298 82	288 309

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.10:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno
1	07.21 16.38	07.08 17.12	06.32 17.46	06.41 19.20	05.56 19.52	06.28-06.43/15 20.21
2	07.21 16.39	07.07 17.14	06.31 17.48	06.40 19.21	05.55 19.53	06.30-06.41/11 20.22
3	07.21 16.40	07.06 17.15	06.29 17.49	06.38 19.22	05.53 19.54	06.01-06.26/25 20.23
4	07.21 16.41	07.05 17.16	06.27 17.50	06.37 19.23	05.52 19.55	06.02-06.26/24 20.23
5	07.21 16.42	07.04 17.17	06.26 17.51	06.35 19.24	05.51 19.56	06.10-06.17/7 20.24
6	07.21 16.43	07.03 17.19	06.24 17.52	06.33 19.26	05.50 19.57	06.09-06.20/11 20.25
7	07.21 16.44	07.02 17.20	06.23 17.53	06.32 19.27	05.48 19.58	06.08-06.21/13 20.25
8	07.21 16.45	07.00 17.21	06.21 17.54	06.30 19.28	05.47 19.59	06.07-06.23/16 20.26
9	07.21 16.46	06.59 17.22	06.20 17.55	06.28 19.29	05.46 20.00	06.06-06.24/18 20.27
10	07.21 16.47	06.58 17.24	06.18 17.57	06.27 19.30	05.45 20.01	06.05-06.25/20 20.27
11	07.21 16.48	06.57 17.25	06.16 17.58	06.25 19.31	05.44 20.02	06.04-06.26/22 20.28
12	07.20 16.49	06.56 17.26	06.15 17.59	06.24 19.32	05.43 20.03	06.03-06.26/23 20.28
13	07.20 16.50	06.54 17.27	06.13 18.00	06.22 19.33	05.42 20.04	06.02-06.27/25 20.29
14	07.20 16.51	06.53 17.29	06.11 18.01	06.21 19.34	05.41 20.05	06.01-06.27/26 20.29
15	07.19 16.52	06.52 17.30	06.10 18.02	06.19 19.35	05.40 20.06	06.00-06.27/27 20.30
16	07.19 16.53	06.51 17.31	06.08 18.03	06.17 19.36	05.39 20.07	05.59-06.28/29 20.30
17	07.18 16.54	06.49 17.32	06.06 18.04	06.16 19.37	05.38 20.08	05.58-06.28/30 20.30
18	07.18 16.56	06.48 17.33	06.05 18.05	06.14 19.38	05.37 20.09	05.57-06.28/31 20.31
19	07.17 16.57	06.47 17.35	06.03 18.06	06.13 19.39	05.36 20.10	05.57-06.29/32 20.31
20	07.17 16.58	06.45 17.36	06.01 18.07	06.11 19.40	05.35 20.11	05.56-06.28/32 20.31
21	07.16 16.59	06.44 17.37	06.00 18.09	06.10 19.41	05.34 20.12	05.56-06.28/32 20.31
22	07.16 17.00	06.42 17.38	05.58 18.10	06.08 19.42	05.34 20.13	05.56-06.28/32 20.32
23	07.15 17.01	06.41 17.39	05.56 18.11	06.07 19.43	05.33 20.14	05.57-06.28/31 20.32
24	07.14 17.03	06.40 17.41	05.55 18.12	06.05 19.44	05.32 20.15	05.57-06.28/31 20.32
25	07.14 17.04	06.38 17.42	05.53 18.13	06.04 19.46	05.31 20.16	05.57-06.28/31 20.32
26	07.13 17.05	06.37 17.43	05.51 18.14	06.03 19.47	05.31 20.16	05.58-06.28/30 20.32
27	07.12 17.06	06.35 17.44	05.50 18.15	06.01 19.48	05.30 20.17	05.57-06.27/30 20.32
28	07.11 17.08	06.34 17.45	05.48 18.16	06.00 19.49	05.29 20.18	05.57-06.27/30 20.32
29	07.10 17.09	06.32-07.39/7	05.46 19.17	05.59 19.50	05.29 20.19	05.58-06.27/29 20.32
30	07.10 17.10	06.31-07.38/6	05.45 19.18	05.57 19.51	05.28 20.20	05.58-06.26/28 20.32
31	07.09 17.11	06.30-07.37/5	05.43 19.19	05.55 19.52	05.28 20.20	05.59-06.26/27 20.32
Ore potenziali di eliofania	298	297	369	398	448	452
Somma dei minuti d'ombra	47	0	0	335	719	875

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre
1	05.28 06.11-06.27/16 20.32 19.41-19.55/14	05.51 06.14-06.37/23 20.13	06.22 19.30	06.52 18.40	06.26 16.54	07.01 16.29
2	05.28 06.11-06.28/17 20.32 19.42-19.56/14	05.52 06.14-06.35/21 20.12	06.23 19.29	06.53 18.38	06.27 16.52	07.02 16.29
3	05.29 06.10-06.28/18 20.32 19.42-19.55/13	05.53 06.15-06.34/19 20.11	06.24 19.27	06.54 18.37	06.28 16.51	07.03 16.29
4	05.29 06.10-06.30/20 20.32 19.43-19.55/12	05.54 06.16-06.33/17 20.10	06.25 19.26	06.55 18.35	06.29 16.50	07.04 16.29
5	05.30 06.09-06.30/21 20.31 19.43-19.54/11	05.55 06.17-06.32/15 20.09	06.26 19.24	06.56 18.33	06.31 16.49	07.05 16.28
6	05.30 06.09-06.31/22 20.31 19.44-19.54/10	05.56 06.18-06.31/13 20.08	06.27 19.22	06.57 18.32	06.32 16.48	07.06 16.28
7	05.31 06.10-06.32/22 20.31 19.45-19.53/8	05.57 06.19-06.28/9 20.06	06.28 19.21	06.58 18.30	06.33 16.47	07.07 16.28
8	05.32 06.09-06.32/23 20.31 19.46-19.53/7	05.58 06.20-06.25/5 20.05	06.29 19.19	06.59 18.29	06.34 16.45	07.07 16.28
9	05.32 06.09-06.33/24 20.30 19.49-19.51/2	05.59 20.04	06.30 19.17	07.00 18.27	06.35 16.44	07.08 16.28
10	05.33 06.09-06.34/25 20.30	06.00 06.42-06.47/5 20.03	06.31 19.16	07.01 18.25	06.37 16.43	07.09 16.28
11	05.34 06.08-06.34/26 20.29	06.01 06.38-06.50/12 20.01	06.32 19.14	07.02 18.24	06.38 16.42	07.10 16.28
12	05.34 06.08-06.35/27 20.29	06.02 06.36-06.52/16 20.00	06.33 19.12	07.03 18.22	06.39 16.41	07.11 16.28
13	05.35 06.08-06.35/27 20.29	06.03 06.35-06.54/19 19.59	06.34 19.11	07.04 18.21	06.40 16.41	07.04-07.10/6 16.29
14	05.36 06.07-06.35/28 20.28	06.04 06.33-06.55/22 19.57	06.35 19.09	07.06 18.19	06.41 16.40	07.04-07.11/7 16.29
15	05.37 06.07-06.36/29 20.27	06.05 06.32-06.55/23 19.56	06.36 19.07	07.07 18.17	06.42 16.39	07.05-07.12/7 16.29
16	05.37 06.07-06.37/30 20.27	06.06 06.32-06.56/24 19.55	06.37 19.05	07.08 18.16	06.44 16.38	07.06-07.13/7 16.29
17	05.38 06.07-06.37/30 20.26	06.07 06.31-06.56/25 19.53	06.38 19.04	07.09 18.14	06.45 16.37	07.08-07.14/6 16.29
18	05.39 06.06-06.37/31 20.26	06.08 06.30-06.57/27 19.52	06.39 19.02	07.10 18.13	06.46 16.36	07.09-07.14/5 16.30
19	05.40 06.06-06.37/31 20.25	06.09 06.31-06.57/26 19.50	06.40 19.00	07.11 18.11	06.47 16.36	07.10-07.14/4 16.30
20	05.41 06.06-06.38/32 20.24	06.10 06.32-06.57/25 19.49	06.41 18.59	07.12 18.10	06.48 16.35	07.11-07.14/3 16.31
21	05.41 06.06-06.38/32 20.23	06.11 06.32-06.55/23 19.47	06.42 18.57	07.13 18.08	06.50 16.34	07.13-07.15/2 16.31
22	05.42 06.06-06.38/32 20.23	06.12 06.33-06.55/22 19.46	06.43 18.55	07.14 18.07	06.51 16.34	16.32
23	05.43 06.07-06.39/32 20.22	06.13 06.34-06.55/21 19.44	06.44 18.54	07.15 18.06	06.52 16.33	07.18 16.32
24	05.44 06.06-06.38/32 20.21	06.14 06.35-06.54/19 19.43	06.45 18.52	07.17 18.04	06.53 16.32	07.19 16.33
25	05.45 06.07-06.38/31 20.20	06.15 06.36-06.53/17 19.41	06.46 18.50	06.18 17.03	06.54 16.32	07.19 16.33
26	05.46 06.08-06.38/30 20.19	06.16 06.37-06.52/15 19.40	06.47 18.48	06.19 17.01	06.55 16.31	07.19 16.34
27	05.47 06.09-06.38/29 20.18	06.17 06.38-06.51/13 19.38	06.48 18.47	06.20 17.00	06.56 16.31	07.20 16.34
28	05.48 06.10-06.38/28 20.17	06.18 06.39-06.49/10 19.37	06.49 18.45	06.21 16.59	06.57 16.30	07.20 16.35
29	05.49 06.11-06.38/27 20.16	06.19 06.40-06.46/6 19.35	06.50 18.43	06.22 16.57	06.58 16.30	07.20 16.36
30	05.50 06.12-06.38/26 20.15	06.20 19.34	06.51 18.42	06.24 16.56	07.00 16.30	07.21 16.37
31	05.51 06.13-06.37/24 20.14	06.21 19.32		06.25 16.55		07.21 16.37
Ore potenziali di eliofanìa	459	428	375	345	298	288
Somma dei minuti d'ombra	913	492	0	0	47	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.11:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre		
1	07.21	07.08	07.35-07.44/9	06.32	06.42	05.56	05.27	05.28	05.52	06.22	06.52	06.26	07.01	
	16.39	17.13		17.47	19.20	19.52	20.21	20.32	20.13	19.31	18.40	16.54	16.30	
2	07.21	07.07	07.38-07.42/4	06.31	06.40	05.55	05.27	05.28	05.53	06.23	06.53	06.27	07.02	
	16.39	17.14		17.48	19.21	19.53	20.22	20.32	20.12	19.29	18.39	16.53	16.29	
3	07.21	07.06		06.29	06.38	05.53	05.27	05.29	05.54	06.24	06.54	06.28	07.03	
	16.40	17.15		17.49	19.22	19.54	20.23	20.32	20.11	19.27	18.37	16.51	16.29	
4	07.21	07.05		06.28	06.37	05.52	05.26	05.29	05.55	06.25	06.55	06.30	07.04	
	16.41	17.16		17.50	19.24	19.55	20.24	20.32	20.10	19.26	18.35	16.50	16.29	
5	07.21	07.04		06.26	06.35	05.51	05.26	05.30	05.56	06.26	06.56	06.31	07.05	
	16.42	17.18		17.51	19.25	19.56	20.24	20.32	20.09	19.24	18.34	16.49	16.29	
6	07.21	07.03		06.24	06.33	05.50	05.25	05.31	05.57	06.27	06.57	06.32	07.06	
	16.43	17.19		17.52	19.26	19.57	20.25	20.31	20.08	19.22	18.32	16.48	16.29	
7	07.21	07.02		06.23	06.32	05.49	05.25	05.31	05.57	06.28	06.58	06.33	07.07	
	16.44	17.20		17.53	19.27	19.58	20.25	20.31	20.07	19.21	18.30	16.47	16.28	
8	07.21	07.01		06.21	06.30	05.47	05.25	05.32	05.58	06.29	06.59	06.34	07.08	
	16.45	17.21		17.54	19.28	19.59	20.26	20.31	20.05	19.19	18.29	16.46	16.28	
9	07.21	06.59		06.20	06.29	05.46	05.25	05.32	05.59	06.30	07.00	06.35	07.08-07.13/5	07.08
	16.46	17.23		17.56	19.29	20.00	20.27	20.30	20.04	19.17	18.27	16.45	16.28	
10	07.21	06.58		06.18	06.27	05.45	05.24	05.33	06.00	06.31	07.01	06.37	07.06-07.15/9	07.09
	16.47	17.24		17.57	19.30	20.01	20.27	20.30	20.03	19.16	18.25	16.44	16.28	
11	07.21	06.57		06.16	06.25	05.44	05.24	05.34	06.01	06.32	07.02	06.38	07.04-07.17/13	07.10
	16.48	17.25		17.58	19.31	20.02	20.28	20.30	20.02	19.14	18.24	16.43	16.28	
12	07.20	06.56		06.15	06.24	05.43	05.24	05.35	06.02	06.33	07.04	06.39	07.04-07.18/14	07.11
	16.49	17.26		17.59	19.32	20.03	20.28	20.29	20.00	19.12	18.22	16.42	16.29	
13	07.20	06.55		06.13	06.22	05.42	05.24	05.35	06.03	06.34	07.05	06.40	07.04-07.19/15	07.12
	16.50	17.28		18.00	19.33	20.04	20.29	20.29	19.59	19.11	18.21	16.41	16.29	
14	07.20	06.53		06.12	06.21	05.41	05.24	05.36	06.04	06.35	07.06	06.41	07.04-07.19/15	07.13
	16.51	17.29		18.01	19.34	20.05	20.29	20.28	19.58	19.09	18.19	16.40	16.29	
15	07.19	06.52		06.10	06.19	05.40	05.24	05.37	06.05	06.36	07.07	06.43	07.05-07.19/14	07.13
	16.52	17.30		18.02	19.35	20.06	20.30	20.28	19.56	19.07	18.18	16.39	16.29	
16	07.19	06.51		06.08	06.18	05.39	05.24	05.38	06.06	06.37	07.08	06.44	07.07-07.20/13	07.14
	16.53	17.31		18.03	19.36	20.07	20.30	20.27	19.55	19.06	18.16	16.38	16.29	
17	07.19	06.49		06.07	06.16	05.38	05.24	05.38	06.07	06.38	07.09	06.45	07.08-07.20/12	07.15
	16.55	17.32		18.04	19.37	20.08	20.30	20.26	19.53	19.04	18.15	16.37	16.30	
18	07.18	06.48		06.05	06.15	05.37	05.24	05.39	06.08	06.39	07.10	06.46	07.09-07.20/11	07.15
	16.56	17.34		18.05	19.38	20.09	20.31	20.26	19.52	19.02	18.13	16.36	16.30	
19	07.18	07.39-07.42/3	06.47	06.03	06.13	05.36	05.24	05.40	06.09	06.40	07.11	06.47	07.10-07.20/10	07.16
	16.57	17.35		18.07	19.39	20.10	20.31	20.25	19.51	19.00	18.12	16.36	16.30	
20	07.17	07.38-07.43/5	06.45	06.02	06.12	05.35	05.24	05.41	06.10	06.41	07.12	06.48	07.12-07.20/8	07.17
	16.58	17.36		18.08	19.40	20.11	20.31	20.24	19.49	18.59	18.10	16.35	16.31	
21	07.16	07.37-07.43/6	06.44	06.00	06.10	05.35	05.25	05.42	06.11	06.42	07.13	06.50	07.13-07.20/7	07.17
	16.59	17.37		18.09	19.41	20.12	20.32	20.24	19.48	18.57	18.09	16.34	16.31	
22	07.16	07.37-07.45/8	06.43	05.58	06.09	05.34	05.25	05.42	06.12	06.43	07.14	06.51	07.14-07.19/5	07.18
	17.00	17.38		18.10	19.43	20.13	20.32	20.23	19.46	18.55	18.07	16.34	16.32	
23	07.15	07.36-07.46/10	06.41	05.57	06.07	05.33	05.25	05.43	06.13	06.44	07.16	06.52	07.15-07.18/3	07.18
	17.02	17.40		18.11	19.44	20.14	20.32	20.22	19.45	18.54	18.06	16.33	16.32	
24	07.15	07.35-07.46/11	06.40	05.55	06.06	05.32	05.25	05.44	06.14	06.45	07.17	06.53	07.19	
	17.03	17.41		18.12	19.45	20.15	20.32	20.21	19.43	18.52	18.04	16.33	16.33	
25	07.14	07.34-07.46/12	06.38	05.53	06.04	05.31	05.26	05.45	06.15	06.46	07.18	06.54	07.19	
	17.04	17.42		18.13	19.46	20.16	20.32	20.20	19.42	18.50	17.03	16.32	16.33	
26	07.13	07.34-07.47/13	06.37	05.52	06.03	05.31	05.26	05.46	06.16	06.47	07.19	06.55	07.19	
	17.05	17.43		18.14	19.47	20.17	20.32	20.19	19.40	18.49	17.02	16.31	16.34	
27	07.12	07.33-07.47/14	06.35	05.50	06.01	05.30	05.26	05.47	06.17	06.48	07.20	06.56	07.20	
	17.06	17.44		18.15	19.48	20.17	20.32	20.18	19.38	18.47	17.00	16.31	16.35	
28	07.11	07.32-07.47/15	06.34	05.48	06.00	05.30	05.27	05.48	06.18	06.49	07.21	06.58	07.20	
	17.08	17.45		18.16	19.49	20.18	20.32	20.17	19.37	18.45	16.59	16.31	16.35	
29	07.11	07.32-07.47/15		06.47	05.59	05.29	05.27	05.49	06.19	06.50	07.22	06.59	07.20	
	17.09			19.17	19.50	20.19	20.32	20.17	19.35	18.44	16.58	16.30	16.36	
30	07.10	07.32-07.46/14		06.45	05.57	05.28	05.27	05.50	06.20	06.51	07.23	07.00	07.21	
	17.10			19.18	19.51	20.20	20.32	20.16	19.34	18.42	16.56	16.30	16.37	
31	07.09	07.33-07.46/13		06.43		05.28		05.51	06.21		06.25		07.21	
	17.11			19.19		20.21		20.14	19.32		16.55		16.38	
Ore potenziali di eliofania	298	297		369	398	448	452	459	428	375	345	298	288	
Somma dei minuti d'ombra	139	13	0	0	0	0	0	0	0	0	0	154	0	

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.12:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre	
1	07.21 16.39	07.08 17.13	06.32 17.47	06.42 18.32-18.52/20 19.20	05.56 19.52	05.27 20.21	05.28 20.32	05.52 20.13	06.22 18.17-19.00/43 19.31	06.52 18.40	06.26 16.54	07.01 16.30	
2	07.21 16.39	07.07 17.14	06.31 17.48	06.40 18.29-18.54/25 19.21	05.55 19.53	05.27 20.22	05.28 20.32	05.53 20.12	06.23 18.17-18.59/42 19.29	06.50 18.39	06.27 16.53	07.02 16.29	
3	07.21 16.40	07.06 17.15	06.29 17.49	06.38 18.28-18.57/29 19.22	05.54 19.54	05.27 20.23	05.29 20.32	05.54 20.11	06.24 18.17-18.59/42 19.27	06.54 18.37	06.28 16.51	07.03 16.29	
4	07.21 16.41	07.05 17.16	06.28 17.50	06.37 18.25-18.57/32 19.24	05.52 19.55	05.26 20.24	05.29 20.32	05.55 20.10	06.25 18.18-18.58/40 19.26	06.55 18.35	06.30 16.50	07.04 16.29	
5	07.21 16.42	07.04 17.18	06.26 17.51	06.35 18.23-18.58/35 19.25	05.51 19.56	05.26 20.24	05.30 20.32	05.56 20.09	06.26 18.18-18.57/39 19.24	06.56 18.34	06.31 16.49	07.05 16.29	
6	07.21 16.43	07.03 17.19	06.24 17.52	06.33 18.23-18.59/36 19.26	05.50 19.57	05.25 20.25	05.31 20.31	05.57 20.08	06.27 18.19-18.56/37 19.22	06.57 18.32	06.32 16.48	07.06 16.29	
7	07.21 16.44	07.02 17.20	06.23 17.53	06.32 18.21-19.00/39 19.27	05.49 19.58	05.25 20.25	05.31 20.31	05.58 20.07	06.28 18.19-18.54/35 19.21	06.58 18.30	06.33 16.47	07.07 16.28	
8	07.21 16.45	07.01 17.21	06.21 17.55	06.30 18.21-19.01/40 19.28	05.47 19.59	05.25 20.26	05.32 20.31	05.58 20.05	06.29 18.20-18.53/33 19.19	06.59 18.29	06.34 16.46	07.08 16.28	
9	07.21 16.46	06.59 17.23	06.20 17.56	06.29 18.19-19.01/42 19.29	05.46 20.00	05.25 20.27	05.32 20.30	05.59 20.04	06.30 18.22-18.51/29 19.17	07.00 18.27	06.35 16.45	07.08 16.28	
10	07.21 16.47	06.58 17.24	06.18 17.57	06.27 18.18-19.00/42 19.30	05.45 20.01	05.25 20.27	05.33 20.30	06.00 20.03	06.31 18.22-18.48/26 19.16	07.01 18.25	06.37 16.44	07.09 16.28	
11	07.21 16.48	06.57 17.25	06.16 17.58	06.25 18.18-19.01/43 19.31	05.44 20.02	05.24 20.28	05.34 20.30	06.01 20.02	06.32 18.24-18.45/21 19.14	07.02 18.24	06.38 16.43	07.10 16.29	
12	07.20 16.49	06.56 17.26	06.15 17.59	06.24 18.17-19.01/44 19.32	05.43 20.03	05.24 20.28	05.35 20.29	06.02 20.00	06.33 18.27-18.41/14 19.12	07.04 18.22	06.39 16.42	07.11 16.29	
13	07.20 16.50	06.55 17.28	06.13 18.00	06.22 18.18-19.01/43 19.33	05.42 20.04	05.24 20.29	05.35 20.29	06.03 19.59	06.34 19.11	07.05 18.21	06.40 16.41	07.12 16.29	
14	07.20 16.51	06.53 17.29	06.12 18.01	06.21 18.17-19.00/43 19.34	05.41 20.05	05.24 20.29	05.36 20.28	06.04 18.37-18.51/14 19.58	06.35 19.09	07.06 18.19	06.41 16.40	07.13 16.29	
15	07.19 16.52	06.52 17.30	06.10 18.02	06.19 18.17-19.00/43 19.35	05.40 20.06	05.24 20.30	05.37 20.28	06.05 18.34-18.54/20 19.56	06.36 19.07	07.07 18.18	06.43 16.39	07.13 16.29	
16	07.19 16.53	06.51 17.31	06.08 18.03	06.18 18.17-19.00/43 19.36	05.39 20.07	05.24 20.30	05.38 20.27	06.06 18.32-18.55/23 19.55	06.37 19.06	07.08 18.16	06.44 16.38	07.14 16.29	
17	07.19 16.55	06.49 17.32	06.07 18.04	06.16 18.17-19.00/43 19.37	05.38 20.08	05.24 20.30	05.38 20.26	06.07 18.30-18.57/27 19.53	06.38 19.04	07.09 18.15	06.45 16.37	07.15 16.30	
18	07.18 16.56	06.48 17.34	06.05 18.05	06.15 18.17-18.58/41 19.38	05.37 20.09	05.24 20.31	05.39 20.26	06.08 18.28-18.58/30 19.52	06.39 19.02	07.10 18.13	06.46 16.37	07.15 16.30	
19	07.18 16.57	06.47 17.35	06.03 18.07	06.13 18.18-18.58/40 19.39	05.36 20.10	05.24 20.31	05.40 20.25	06.09 18.27-18.59/32 19.51	06.40 19.00	07.11 18.12	06.47 16.36	07.16 16.30	
20	07.17 16.58	06.45 17.36	06.02 18.08	06.12 18.18-18.57/39 19.40	05.35 20.11	05.24 20.31	05.41 20.24	06.10 18.25-19.00/35 19.49	06.41 18.59	07.12 18.10	06.48 16.35	07.17 16.31	
21	07.16 16.59	06.44 17.37	06.00 18.09	06.10 18.18-18.57/39 19.41	05.35 20.12	05.25 20.32	05.42 20.24	06.11 18.24-19.01/37 19.48	06.42 18.57	07.13 18.09	06.50 16.34	07.17 16.31	
22	07.16 17.00	06.43 17.38	05.58 18.10	06.09 18.19-18.55/36 19.43	05.34 20.13	05.25 20.32	05.43 20.23	06.12 18.23-19.01/38 19.46	06.43 18.55	07.15 18.07	06.51 16.34	07.18 16.32	
23	07.15 17.02	06.41 17.40	05.57 18.11	06.07 18.20-18.54/34 19.44	05.33 20.14	05.25 20.32	05.43 20.22	06.13 18.21-19.01/40 19.45	06.44 18.54	07.16 18.06	06.52 16.33	07.18 16.32	
24	07.15 17.03	06.40 17.41	05.55 18.12	06.06 18.21-18.53/32 19.45	05.32 20.15	05.25 20.32	05.44 20.21	06.14 18.20-19.01/41 19.43	06.45 18.52	07.17 18.04	06.53 16.33	07.19 16.33	
25	07.14 17.04	06.38 17.42	05.53 18.13	06.04 18.22-18.51/29 19.46	05.32 20.16	05.26 20.32	05.45 20.20	06.15 18.20-19.01/41 19.42	06.46 18.50	07.18 18.03	06.54 16.32	07.19 16.33	
26	07.13 17.05	06.37 17.43	05.52 18.14	06.03 18.23-18.50/27 19.47	05.31 20.16	05.26 20.32	05.46 20.19	06.16 18.19-19.02/43 19.40	06.47 18.49	07.19 18.02	06.55 16.32	07.19 16.34	
27	07.12 17.07	06.35 17.44	05.50 18.15	06.01 18.24-18.47/23 19.48	05.30 20.17	05.26 20.32	05.47 20.18	06.17 18.19-19.02/43 19.38	06.48 18.47	07.20 18.01	06.56 16.31	07.20 16.35	
28	07.11 17.08	06.34 17.45	05.48 18.16	06.00 18.27-18.45/18 19.49	05.30 20.18	05.27 20.32	05.48 20.17	06.18 18.18-19.01/43 19.37	06.49 18.45	07.21 18.00	06.58 16.31	07.20 16.35	
29	07.11 17.09		06.47 19.17	05.59 18.30-18.42/12 19.50	05.29 20.19	05.27 20.32	05.49 20.17	06.19 18.18-19.01/43 19.35	06.50 18.44	07.22 18.00	06.59 16.30	07.20 16.36	
30	07.10 17.10		06.45 19.18	05.57 19.51	05.28 20.20	05.27 20.32	05.50 20.16	06.20 18.17-19.01/44 19.34	06.51 18.42	07.23 18.00	06.59 16.30	07.21 16.37	
31	07.09 17.11		06.43 19.19	18.37-18.49/12 19.51	05.28 20.21	05.28 20.32	05.51 20.14	06.21 18.17-19.00/43 19.32	06.52 18.42	07.24 18.00	06.59 16.30	07.21 16.38	
	Ore potenziali di eliofania Somma dei minuti d'ombra	298 0	297 0	369 12	398 1012	448 0	452 0	459 0	428 637	375 401	345 0	298 0	288 0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm)inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.13:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre	
1	07.21 16.39	07.08 17.13	06.32 17.47	06.42 19.20	05.56 19.52	05.27 20.21	05.49-06.12/23 20.32	05.28 20.13	05.50-06.19/29 20.13	06.22 19.30	06.52 18.40	06.26 16.54	07.01 16.30
2	07.21 16.39	07.07 17.14	06.31 17.48	06.40 19.21	05.55 19.53	05.27 20.22	05.48-06.12/24 20.32	05.28 20.12	05.51-06.19/28 20.12	06.23 19.29	06.53 18.38	06.27 16.52	07.02 16.29
3	07.21 16.40	07.06 17.15	06.29 17.49	06.38 19.22	05.53 19.54	05.26 20.23	05.48-06.13/25 20.32	05.29 20.11	05.51-06.19/28 20.11	06.24 19.27	06.54 18.37	06.28 16.51	07.03 16.29
4	07.21 16.41	07.05 17.16	06.28 17.50	06.37 19.23	05.52 19.55	05.26 20.23	05.48-06.13/25 20.32	05.29 20.10	05.52-06.20/28 20.10	06.25 19.26	06.55 18.35	06.29 16.50	07.04 16.29
5	07.21 16.42	07.04 17.18	06.26 17.51	06.35 19.25	05.51 19.56	05.26 20.24	05.47-06.13/26 20.32	05.30 20.09	05.53-06.20/27 20.09	06.26 19.24	06.56 18.34	06.31 16.49	07.05 16.29
6	07.21 16.43	07.03 17.19	06.24 17.52	06.33 19.26	05.50 19.57	05.25 20.25	05.47-06.13/26 20.31	05.31 20.08	05.53-06.20/27 20.08	06.27 19.22	06.57 18.32	06.32 16.48	07.06 16.28
7	07.21 16.44	07.02 17.20	06.23 17.53	06.32 19.27	05.49 19.58	05.25 20.25	05.47-06.14/27 20.31	05.31 20.07	05.54-06.20/26 20.07	06.28 19.21	06.58 18.30	06.33 16.47	07.07 16.28
8	07.21 16.45	07.01 17.21	06.21 17.54	06.30 19.28	05.47 19.59	05.25 20.26	05.47-06.14/27 20.31	05.32 20.05	05.54-06.20/26 20.05	06.29 19.19	06.59 18.29	06.34 16.46	07.08 16.28
9	07.21 16.46	06.59 17.23	06.20 17.56	06.29 19.29	05.46 20.00	05.25 20.27	05.47-06.15/28 20.30	05.32 20.04	05.55-06.20/25 20.04	06.30 19.17	07.00 18.27	06.35 16.45	07.08 16.28
10	07.21 16.47	06.58 17.24	06.18 17.57	06.27 19.30	05.45 20.01	05.24 20.27	05.46-06.14/28 20.30	05.33 20.03	05.56-06.20/24 20.03	06.00 19.16	07.01 18.25	06.37 16.44	07.09 16.28
11	07.21 16.48	06.57 17.25	06.16 17.58	06.25 19.31	05.44 20.02	05.24 20.28	05.46-06.14/28 20.30	05.34 20.01	05.56-06.20/24 20.01	06.01 19.14	07.02 18.24	06.38 16.43	07.10 16.28
12	07.20 16.49	06.56 17.26	06.15 17.59	06.24 19.32	05.43 20.03	05.24 20.28	05.46-06.15/29 20.29	05.34 20.00	05.57-06.20/23 20.00	06.02 19.12	07.03 18.22	06.39 16.42	07.11 16.29
13	07.20 16.50	06.55 17.27	06.13 18.00	06.22 19.33	05.42 20.04	05.24 20.29	05.46-06.15/29 20.29	05.35 20.00	05.58-06.20/22 19.59	06.03 19.11	07.04 18.21	06.40 16.41	07.12 16.29
14	07.20 16.51	06.53 17.29	06.11 18.01	06.21 19.34	05.41 20.05	05.24 20.29	05.46-06.15/29 20.28	05.36 20.00	05.58-06.19/21 19.57	06.04 19.09	07.05 18.19	06.41 16.40	07.13 16.29
15	07.19 16.52	06.52 17.30	06.10 18.02	06.19 19.35	05.40 20.06	05.24 20.30	05.46-06.15/29 20.27	05.37 20.00	05.59-06.19/20 19.56	06.05 19.07	07.06 18.18	06.43 16.39	07.13 16.29
16	07.19 16.53	06.51 17.31	06.08 18.03	06.18 19.36	05.39 20.07	05.24 20.30	05.46-06.16/30 20.27	05.37 20.00	06.00-06.19/19 19.55	06.06 19.06	07.07 18.16	06.44 16.38	07.14 16.29
17	07.19 16.55	06.49 17.32	06.07 18.04	06.16 19.37	05.38 20.08	05.24 20.30	05.46-06.16/30 20.26	05.38 20.00	06.01-06.18/17 19.53	06.07 19.04	07.08 18.14	06.45 16.37	07.15 16.30
18	07.18 16.56	06.48 17.34	06.05 18.05	06.14 19.38	05.37 20.09	05.24 20.31	05.46-06.16/30 20.26	05.39 20.00	06.02-06.18/16 19.52	06.08 19.02	07.09 18.13	06.46 16.36	07.15 16.30
19	07.18 16.57	06.47 17.35	06.03 18.06	06.13 19.39	05.36 20.10	05.24 20.31	05.47-06.17/30 20.25	05.40 20.00	06.02-06.16/14 19.50	06.09 19.00	07.10 18.11	06.47 16.36	07.16 16.30
20	07.17 16.58	06.45 17.36	06.02 18.08	06.11 19.40	05.35 20.11	05.24 20.31	05.47-06.17/30 20.24	05.41 20.00	06.03-06.16/13 19.49	06.10 18.59	07.11 18.10	06.48 16.35	07.17 16.31
21	07.16 16.59	06.44 17.37	06.00 18.09	06.10 19.41	05.34 20.12	05.25 20.32	05.47-06.17/30 20.23	05.42 20.00	06.04-06.15/11 19.48	06.11 18.57	07.12 18.09	06.50 16.34	07.17 16.31
22	07.16 17.00	06.42 17.38	05.58 18.10	06.09 19.42	05.33 20.13	05.25 20.32	05.47-06.17/30 20.23	05.42 20.00	06.05-06.13/8 19.46	06.12 18.55	07.13 18.07	06.51 16.34	07.18 16.32
23	07.15 17.02	06.41 17.40	05.57 18.11	06.07 19.44	05.33 20.14	05.25 20.32	05.47-06.17/30 20.22	05.43 20.00	06.05-06.13/8 19.45	06.13 18.54	07.14 18.06	06.52 16.33	07.18 16.32
24	07.14 17.03	06.40 17.41	05.55 18.12	06.06 19.45	05.32 20.15	05.25 20.32	05.48-06.18/30 20.21	05.44 20.00	06.05-06.13/8 19.43	06.14 18.52	07.15 18.04	06.53 16.32	07.19 16.33
25	07.14 17.04	06.38 17.42	05.53 18.13	06.04 19.46	05.31 20.16	05.26 20.32	05.48-06.18/30 20.20	05.45 20.00	06.05-06.13/8 19.42	06.15 18.50	07.16 17.03	06.54 16.32	07.19 16.33
26	07.13 17.05	06.37 17.43	05.52 18.14	06.03 19.47	05.30 20.16	05.26 20.32	05.48-06.18/30 20.19	05.46 20.00	06.05-06.13/8 19.40	06.16 18.49	07.17 17.02	06.55 16.31	07.19 16.34
27	07.12 17.06	06.35 17.44	05.50 18.15	06.01 19.48	05.29 20.17	05.26 20.32	05.49-06.19/30 20.18	05.47 20.00	06.05-06.13/8 19.38	06.17 18.47	07.18 17.00	06.56 16.31	07.20 16.35
28	07.11 17.08	06.34 17.45	05.48 18.16	06.00 19.49	05.28 20.18	05.27 20.32	05.49-06.18/29 20.17	05.48 20.00	06.05-06.13/8 19.37	06.18 18.45	07.19 16.59	06.57 16.31	07.20 16.35
29	07.11 17.09		06.47 19.17	05.59 19.50	05.29 20.19	05.27 20.32	05.50-06.19/29 20.16	05.49 20.00	06.05-06.13/8 19.35	06.19 18.43	07.20 16.58	06.58 16.30	07.20 16.36
30	07.10 17.10		06.45 19.18	05.57 19.51	05.28 20.20	05.27 20.32	05.50-06.19/29 20.15	05.50 20.00	06.05-06.13/8 19.34	06.20 18.42	07.21 16.56	06.59 16.30	07.21 16.37
31	07.09 17.11		06.43 19.19		05.28 20.21	05.27 20.32	05.49-06.11/22 20.14	05.51 20.00	06.05-06.13/8 19.32	06.21 18.42	07.22 16.55	07.00 16.30	07.21 16.37
Ore potenziali di eliofania	298	297	369	398	448	452	459	476	428	375	345	298	288
Somma dei minuti d'ombra	0	0	0	0	173	850	476	0	0	0	0	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Calendario analitico di ombreggiamento per l'aerogeneratore n.14:

	Gennaio	Febbraio	Marzo	Aprile	Maggio	Giugno	Luglio	Agosto	Settembre	Ottobre	Novembre	Dicembre
1	07.21	07.08	06.32	06.42	05.56	05.27 05.49-06.06/17	05.28 05.50-06.09/19	05.52	06.22	06.52	06.26	07.01
	16.39	17.13	17.46	19.20	19.52	20.21	20.32	20.13	19.30	18.40	16.54	16.29
2	07.21	07.07	06.31	06.40	05.55	05.27 05.48-06.05/17	05.28 05.51-06.10/19	05.53	06.23	06.53	06.27	07.02
	16.39	17.14	17.48	19.21	19.53	20.22	20.32	20.12	19.29	18.38	16.52	16.29
3	07.21	07.06	06.29	06.38	05.53	05.26 05.48-06.06/18	05.29 05.51-06.10/19	05.54	06.24	06.54 17.59-18.05/6	06.28	07.03
	16.40	17.15	17.49	19.22	19.54	20.23	20.32	20.11	19.27	18.37	16.51	16.29
4	07.21	07.05	06.28 17.23-17.28/5	06.37	05.52	05.26 05.48-06.06/18	05.29 05.52-06.11/19	05.54	06.25	06.55 17.57-18.06/9	06.29	07.04
	16.41	17.16	17.50	19.23	19.55	20.23	20.32	20.10	19.26	18.35	16.50	16.29
5	07.21	07.04	06.28 17.21-17.30/9	06.35	05.51	05.26 05.47-06.05/18	05.30 05.53-06.12/19	05.55	06.26	06.56 17.56-18.07/11	06.31	07.05
	16.42	17.18	17.51	19.25	19.56	20.24	20.32	20.09	19.24	18.33	16.49	16.29
6	07.21	07.03	06.24 17.20-17.30/10	06.33	05.50	05.25 05.47-06.05/18	05.31 05.53-06.12/19	05.56	06.27	06.57 17.55-18.07/12	06.32	07.06
	16.43	17.19	17.52	19.26	19.57	20.25	20.31	20.08	19.22	18.32	16.48	16.28
7	07.21	07.02	06.23 17.19-17.30/11	06.32	05.49	05.25 05.47-06.06/19	05.31 05.54-06.12/18	05.57	06.28	06.58 17.55-18.06/11	06.33	07.07
	16.44	17.20	17.53	19.27	19.58	20.25	20.31	20.06	19.21	18.30	16.47	16.28
8	07.21	07.01	06.21 17.19-17.30/11	06.30	05.47	05.25 05.47-06.06/19	05.32 05.54-06.12/18	05.58	06.29	06.59 17.55-18.05/10	06.34	07.07
	16.45	17.21	17.54	19.28	19.59	20.26	20.31	20.05	19.19	18.29	16.46	16.28
9	07.21	06.59	06.20 17.19-17.29/10	06.29	05.46	05.25 05.47-06.06/19	05.32 05.55-06.13/18	05.59	06.30	07.00 17.56-18.04/8	06.35	07.08
	16.46	17.23	17.56	19.29	20.00	20.25	20.30	20.04	19.17	18.27	16.45	16.28
10	07.21	06.58	06.18 17.21-17.28/7	06.27	05.45	05.24 05.46-06.05/19	05.33 05.56-06.14/18	06.00	06.31	07.01	06.37	07.09
	16.47	17.24	17.57	19.30	20.01	20.27	20.30	20.03	19.16	18.25	16.44	16.28
11	07.21	06.57	06.16	06.25	05.44	05.24 05.46-06.05/19	05.34 05.56-06.13/17	06.01	06.32	07.02	06.38	07.10
	16.48	17.25	17.58	19.31	20.02	20.28	20.30	20.01	19.14	18.24	16.43	16.28
12	07.20	06.56	06.15	06.24	05.43	05.24 05.46-06.05/19	05.34 05.57-06.14/17	06.02	06.33	07.03	06.39	07.11
	16.49	17.26	17.59	19.32	20.03	20.28	20.29	20.00	19.12	18.22	16.42	16.29
13	07.20	06.55	06.13	06.22	05.42	05.24 05.46-06.05/19	05.35 05.58-06.14/16	06.03	06.34	07.05	06.40	07.12
	16.50	17.27	18.00	19.33	20.04	20.29	20.29	19.59	19.11	18.21	16.41	16.29
14	07.20	06.53	06.11	06.21	05.41	05.24 05.46-06.05/19	05.36 05.58-06.14/16	06.04	06.35	07.06	06.41	07.12
	16.51	17.29	18.01	19.34	20.05	20.29	20.28	19.57	19.09	18.19	16.40	16.29
15	07.19	06.52	06.10	06.19	05.40	05.24 05.46-06.05/19	05.37 05.59-06.14/15	06.05	06.36	07.07	06.43	07.13
	16.52	17.30	18.02	19.35	20.06	20.30	20.27	19.56	19.07	18.18	16.39	16.29
16	07.19	06.51	06.08	06.18	05.39	05.24 05.46-06.04/18	05.37 06.00-06.15/15	06.06	06.37	07.08	06.44	07.14
	16.53	17.31	18.03	19.36	20.07	20.30	20.27	19.55	19.06	18.16	16.38	16.29
17	07.19	06.49	06.07	06.16	05.38	05.24 05.46-06.04/18	05.38 06.01-06.15/14	06.07	06.38	07.09	06.45	07.15
	16.55	17.32	18.04	19.37	20.08	20.30	20.26	19.53	19.04	18.14	16.37	16.30
18	07.18	06.48	06.05	06.14	05.37 05.57-05.59/2	05.24 05.46-06.04/18	05.39 06.02-06.15/13	06.08	06.39	07.10	06.46	07.15
	16.56	17.34	18.05	19.38	20.09	20.31	20.26	19.52	19.02	18.13	16.36	16.30
19	07.18	06.47	06.03	06.13	05.36 05.57-06.02/5	05.24 05.47-06.05/18	05.40 06.02-06.14/12	06.09	06.40	07.11	06.47	07.16
	16.57	17.35	18.06	19.39	20.10	20.31	20.25	19.50	19.00	18.11	16.36	16.30
20	07.17	06.45	06.02	06.11	05.35 05.56-06.02/6	05.24 05.47-06.05/18	05.41 06.03-06.14/11	06.10	06.41	07.12	06.48	07.17
	16.58	17.36	18.08	19.40	20.11	20.31	20.24	19.49	18.59	18.10	16.35	16.31
21	07.16	06.44	06.00	06.10	05.34 05.55-06.03/8	05.25 05.47-06.05/18	05.42 06.04-06.14/10	06.11	06.42	07.13	06.50	07.17
	16.59	17.37	18.09	19.41	20.12	20.32	20.23	19.48	18.57	18.09	16.34	16.31
22	07.16	06.42	05.58	06.09	05.34 05.54-06.03/9	05.25 05.47-06.05/18	05.42 06.05-06.14/9	06.12	06.43	07.14	06.51	07.18
	17.00	17.38	18.10	19.42	20.13	20.32	20.23	19.46	18.55	18.07	16.34	16.32
23	07.15	06.41	05.57	06.07	05.33 05.54-06.05/11	05.25 05.47-06.05/18	05.43 06.06-06.13/7	06.13	06.44	07.16	06.52	07.18
	17.02	17.39	18.11	19.44	20.14	20.32	20.22	19.45	18.54	18.06	16.33	16.32
24	07.14	06.40	05.55	06.06	05.32 05.53-06.05/12	05.25 05.48-06.06/18	05.44 06.07-06.13/6	06.14	06.45	07.17	06.53	07.19
	17.03	17.41	18.12	19.45	20.15	20.32	20.21	19.43	18.52	18.04	16.32	16.33
25	07.14	06.38	05.53	06.04	05.31 05.52-06.05/13	05.25 05.48-06.06/18	05.45 06.07-06.11/4	06.15	06.46	06.18	06.54	07.19
	17.04	17.42	18.13	19.46	20.16	20.32	20.20	19.41	18.50	17.03	16.32	16.33
26	07.13	06.37	05.52	06.03	05.31 05.52-06.05/13	05.26 05.48-06.06/18	05.46 06.08-06.10/2	06.16	06.47	06.19	06.55	07.19
	17.05	17.43	18.14	19.47	20.16	20.32	20.19	19.40	18.49	17.01	16.31	16.34
27	07.12	06.35	05.50	06.01	05.30 05.51-06.05/14	05.26 05.49-06.08/19	05.47	06.17	06.48	06.20	06.56	07.20
	17.06	17.44	18.15	19.48	20.17	20.32	20.18	19.38	18.47	17.00	16.31	16.35
28	07.11	06.34	05.48	06.00	05.29 05.51-06.06/15	05.27 05.49-06.08/19	05.48	06.18	06.49	06.21	06.57	07.20
	17.08	17.45	18.16	19.49	20.18	20.32	20.17	19.37	18.45	16.59	16.31	16.35
29	07.11	06.47	06.47	05.59	05.29 05.50-06.06/16	05.27 05.50-06.09/19	05.49	06.19	06.50	06.22	06.59	07.20
	17.09	18.11	19.17	19.50	20.19	20.32	20.16	19.35	18.43	16.57	16.30	16.36
30	07.10	06.45	06.45	05.57	05.28 05.50-06.06/16	05.27 05.50-06.09/19	05.50	06.20	06.51	06.24	07.00	07.21
	17.10	19.18	19.51	19.51	20.20	20.32	20.15	19.34	18.42	16.56	16.30	16.37
31	07.09	06.43	06.43	05.58	05.49-06.08/17	05.51	05.51	06.21	06.21	06.25	07.01	07.21
	17.11	19.19	19.51	19.51	20.21	20.32	20.14	19.32	18.41	16.55	16.30	16.37
Ore potenziali di eliofania	1298	297	369	398	448	452	459	428	375	345	298	288
Somma dei minuti d'ombra	0	0	63	0	157	551	370	0	0	67	0	0

Legenda della tabella:

Giorno del mese Alba (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra
 Tramonto (hh:mm) Inizio ombreggiamento (hh:mm)-Fine ombreggiamento (hh:mm)/Minuti d'ombra

Riassumendo:

Distanza massima di influenza	2.000 m
Altezza minima del sole sull'orizzonte	3 °
Passo giornaliero del calcolo	1 giorni
Passo temporale del calcolo	1 minuti

I tempi calcolati sono relativi al "caso peggiore", sulla base delle seguenti assunzioni:

Il sole splende tutto il dì, dall'alba al tramonto

Il piano del rotore è sempre perpendicolare alla linea tra WTG e sole

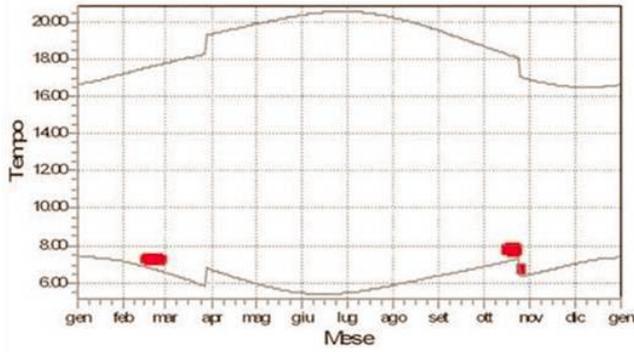
La turbina è costantemente operativa

Ombreggiamento totale sui recettori d'ombra causato da ciascuna WTG

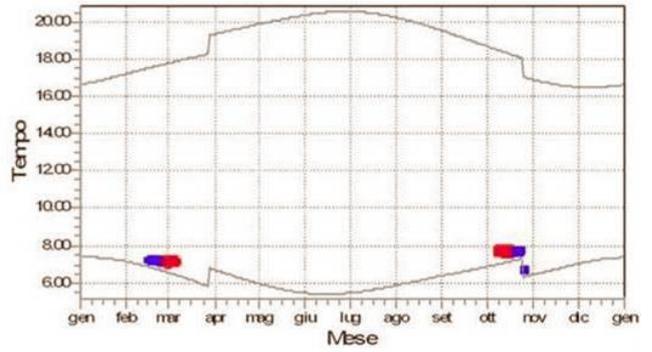
n.	Nome	Caso peggiore
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1	Vestas V112-3MW 84m (1)	29:16
2	Vestas V112-3MW 119m (2)	12:27
3	Vestas V112-3MW 84m (3)	5:51
4	Vestas V112-3MW 119m (4)	1:51
5	Vestas V112-3MW 119m (5)	3:13
6	Vestas V112-3MW 119m (6)	22:24
7	Vestas V112-3MW 119m (7)	7:38
8	Vestas V112-3MW 119m (8)	30:01
9	Vestas V112-3MW 119m (9)	120:28
10	Vestas V112-3MW 119m (10)	57:08
11	Vestas V112-3MW 119m (11)	5:06
12	Vestas V112-3MW 119m (12)	34:22
13	Vestas V112-3MW 119m (13)	24:59
14	Vestas V112-3MW 94m (14)	20:08

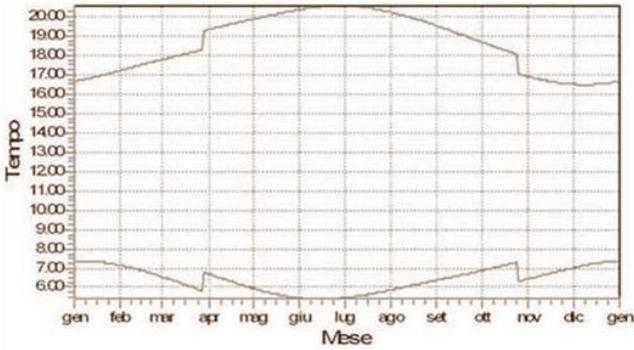
A: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



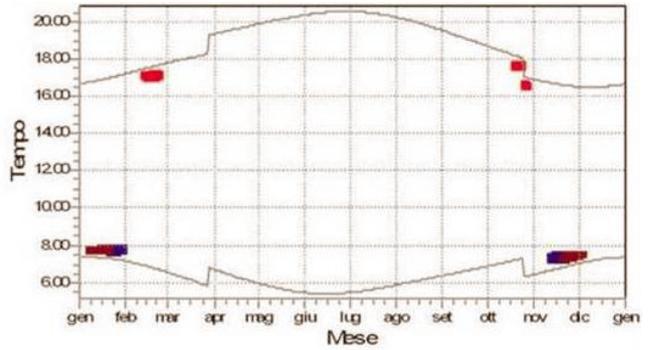
B: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



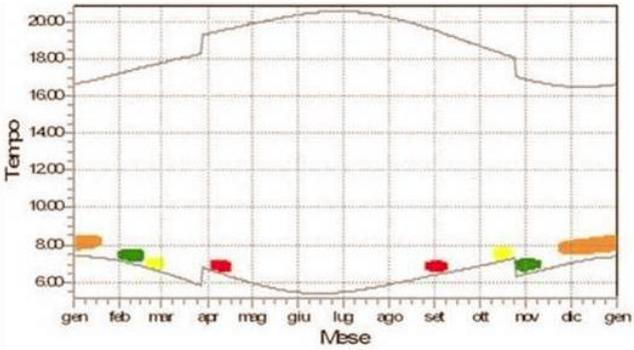
C: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



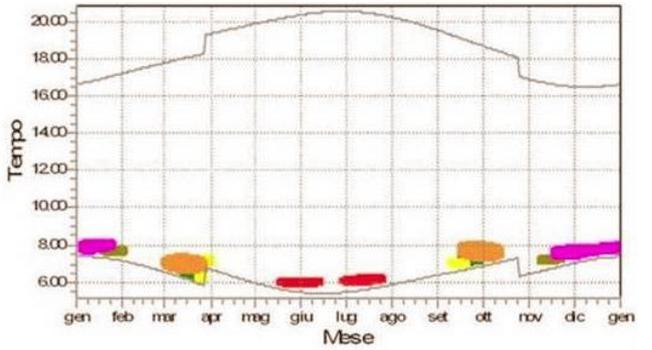
D: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



E: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°

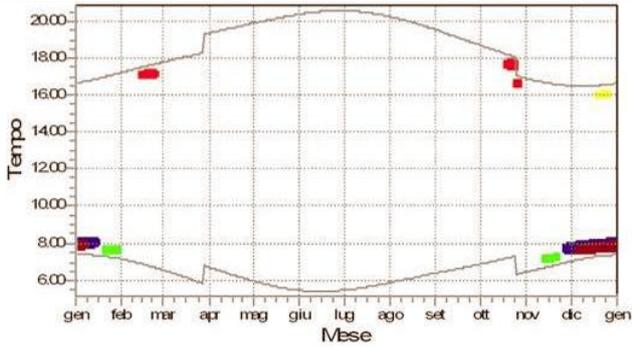


F: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°

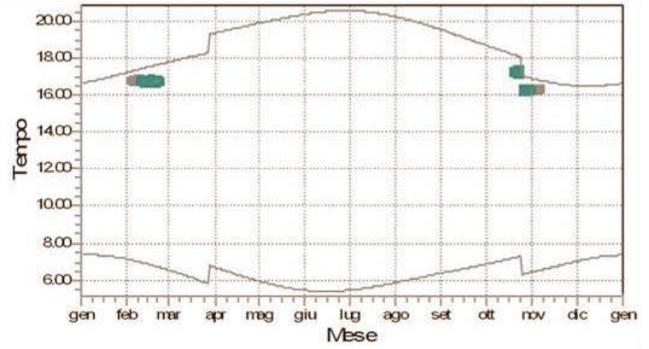


G: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°

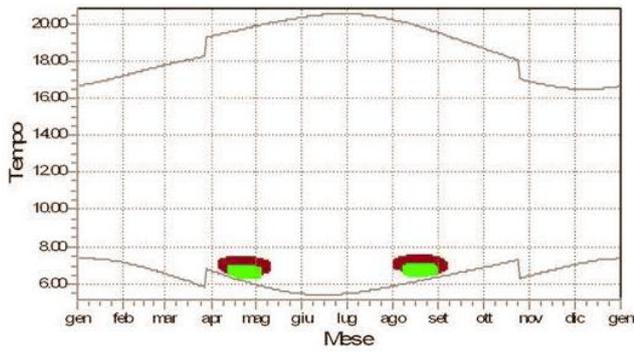
H: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



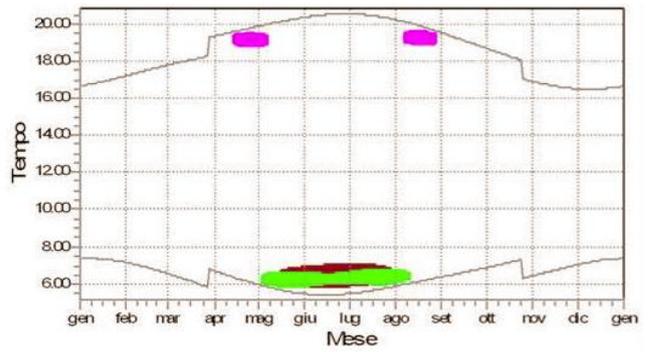
I: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



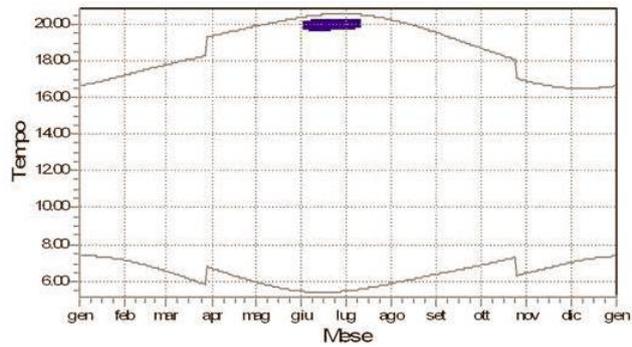
J: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



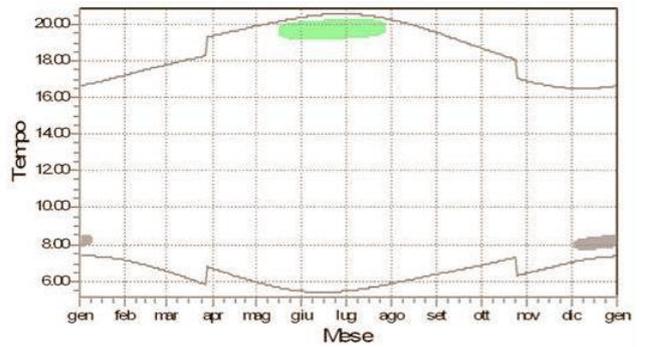
K: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



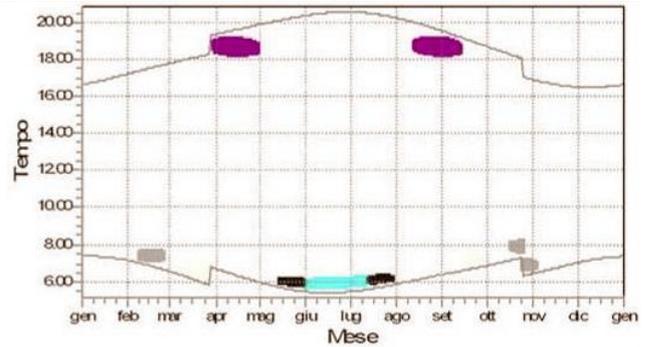
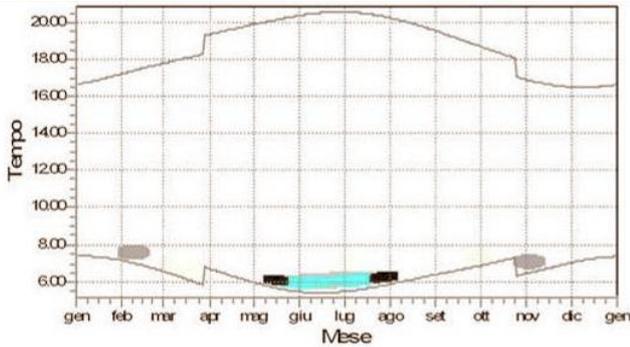
L: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



M: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



N: Shadow Receptor:10x10 Azimuth: 180° Slope: 90°



Riassumendo:

Recettore d'ombra

Ombra, caso peggiore

n. Ore d'ombra per anno Giorni con ombra Massima durata dell'ombra per giorno

	[ore/anno]	[giorni/anno]	[ore/giorno]
A	6:17	26	0:19
B	9:02	42	0:21
C	0:00	0	0:00
D	12:06	67	0:18
E	32:40	121	0:29
F	78:00	207	0:58
G	20:02	85	0:25
H	10:12	41	0:21
I	39:23	64	0:53
J	78:58	134	0:54
K	7:11	36	0:15
L	49:31	102	0:43
M	44:51	150	0:28
N	65:01	193	0:44

Secondo i criteri di valutazione del presente elaborato, meglio descritti nel paragrafo 5, e ponendosi nelle condizioni peggiorative di cui alle ipotesi di calcolo, risulta che i recettori sensibili all'impatto da shadowflickering sono i seguenti:

Recettori interessati per più di 30h/annue: E, F, I, J, L, M, N.

Recettori interessati per più di 30min nel giorno più ombroso: F, I, J, L, N.