

City:	LANDER													
State:	WY													
WBAN No:	24021													
Lat(N):	42.82													
Long(W):	108.73													
Elev(m):	1696													
Pres(mb):	829													
Stn Type:	Primary													
SOLAR RADIATION FOR FLAT-PLATE COLLECTORS FACING SOUTH AT A FIXED-TILT (kWh/m2/day), Percentage Uncertainty = 9														
Tilt(deg)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
0	Average	2.2	3.2	4.4	5.6	6.4	7.1	7	6.3	5	3.6	2.3	1.9	4.6
	Minimum	1.9	2.7	3.7	4.9	5.3	6.1	6.2	5.6	4.2	3.1	2.1	1.7	4.3
	Maximum	2.4	3.6	4.8	6.5	7.1	7.9	7.6	6.7	5.7	3.9	2.6	2	4.8
Lat - 15	Average	3.7	4.8	5.7	6.2	6.5	7	7	6.8	6.1	5.1	3.8	3.4	5.5
	Minimum	3	3.9	4.5	5.4	5.4	6	6.2	6	4.8	4.2	3.2	2.7	5.1
	Maximum	4.3	5.4	6.3	7.4	7.2	7.7	7.6	7.2	7	5.6	4.3	3.9	5.8
Lat	Average	4.3	5.3	6	6.1	6.1	6.4	6.5	6.5	6.2	5.5	4.3	4	5.6
	Minimum	3.5	4.3	4.7	5.3	5.1	5.5	5.7	5.8	4.8	4.5	3.6	3.1	5.2
	Maximum	5.1	6.1	6.6	7.3	6.8	7.1	7	6.9	7.2	6.1	4.9	4.6	5.9
Lat + 15	Average	4.6	5.6	5.9	5.7	5.4	5.5	5.6	5.9	6	5.6	4.6	4.3	5.4
	Minimum	3.8	4.4	4.6	4.9	4.5	4.7	5	5.2	4.6	4.6	3.8	3.3	5
	Maximum	5.5	6.4	6.7	6.8	6	6	6.1	6.3	6.9	6.2	5.2	5	5.7
90	Average	4.5	5.1	4.8	4	3.2	2.9	3.1	3.6	4.3	4.7	4.3	4.3	4.1
	Minimum	3.7	3.8	3.7	3.3	2.7	2.7	2.8	3.3	3.3	3.8	3.5	3.3	3.7
	Maximum	5.4	6	5.8	5	3.5	3.1	3.3	3.8	5	5.2	5.1	4.9	4.3
SOLAR RADIATION FOR 1-AXIS TRACKING FLAT-PLATE COLLECTORS WITH A NORTH-SOUTH AXIS (kWh/m2/day), Percentage Uncertainty = 9														
Axis Tilt		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
0	Average	3.4	4.9	6.5	7.7	8.5	9.8	9.8	9	7.4	5.5	3.7	3	6.6
	Minimum	2.6	3.8	4.7	6.5	6.6	7.9	7.5	7.7	5.7	4.5	3	2.5	5.9
	Maximum	4.1	5.6	7.3	9.3	9.9	11.1	10.8	9.7	8.8	6.1	4.1	3.5	7
Lat - 15	Average	4.6	6.1	7.4	8.3	8.7	9.8	9.9	9.4	8.2	6.6	4.8	4.1	7.3
	Minimum	3.5	4.7	5.4	6.9	6.7	7.9	7.6	8.1	6.2	5.4	3.8	3.2	6.5
	Maximum	5.5	7.1	8.5	10	10.2	11.2	10.9	10.3	9.9	7.4	5.4	4.8	7.8
Lat	Average	5	6.5	7.6	8.3	8.5	9.4	9.5	9.3	8.3	6.9	5.2	4.6	7.4
	Minimum	3.9	5	5.5	6.8	6.5	7.6	7.3	7.9	6.2	5.7	4.2	3.5	6.6
	Maximum	6.1	7.6	8.7	10	9.9	10.8	10.6	10.1	10	7.8	5.8	5.4	7.9
Lat + 15	Average	5.3	6.7	7.6	8	8	8.8	9	8.8	8.1	7	5.4	4.9	7.3
	Minimum	4.2	5.1	5.4	6.5	6.1	7.1	6.8	7.6	6	5.7	4.3	3.7	6.5
	Maximum	6.5	7.8	8.7	9.6	9.4	10.1	9.9	9.6	9.8	7.9	6.1	5.7	7.8
SOLAR RADIATION FOR 2-AXIS TRACKING FLAT-PLATE COLLECTORS (kWh/m2/day), Percentage Uncertainty = 9														
Tracker		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2-Axis	Average	5.4	6.7	7.7	8.3	8.9	10	10.1	9.5	8.4	7	5.4	5	7.7
	Minimum	4.2	5.2	5.5	6.9	6.8	8.1	7.8	8.1	6.2	5.7	4.3	3.8	6.8
	Maximum	6.6	7.8	8.7	10	10.3	11.5	11.1	10.3	10	7.9	6.2	5.8	8.2
DIRECT BEAM SOLAR RADIATION FOR CONCENTRATING COLLECTORS (kWh/m2/day), Percentage Uncertainty = 8														
Tracker		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
1-X, E-W	Average	3.2	3.7	3.9	3.9	4.2	5.2	5.3	5	4.5	4.1	3.3	3.2	4.1
Hor Axis	Minimum	2.3	2.6	2.4	2.7	2.7	3.5	3.7	3.8	2.9	2.9	2.4	1.8	3.5
	Maximum	4.4	4.8	4.8	5.3	5.4	6.5	6.1	5.5	5.8	5.3	4	4	4.6
1-X, N-S	Average	2.2	3.2	4.3	5	5.6	7	7.1	6.6	5.5	4	2.5	2	4.6
Hor Axis	Minimum	1.5	2.1	2.5	3.5	3.5	4.7	4.6	4.9	3.5	2.8	1.8	1.1	3.8
	Maximum	3.1	4.2	5.4	6.9	7.3	8.7	8.2	7.5	7.2	5.2	3	2.6	5.1
1-X, N-S	Average	3.5	4.5	5.3	5.4	5.6	6.6	6.9	6.9	6.3	5.2	3.7	3.3	5.3
Tilt=Lat	Minimum	2.4	3	3	3.8	3.5	4.4	4.4	5.1	4	3.7	2.7	1.8	4.4
	Maximum	4.8	5.8	6.5	7.4	7.2	8.2	7.9	7.7	8.1	6.7	4.5	4.2	5.8
2-X	Average	3.8	4.6	5.3	5.5	5.9	7.2	7.4	7.1	6.3	5.3	3.9	3.6	5.5
	Minimum	2.6	3.1	3	3.8	3.7	4.8	4.8	5.3	4	3.7	2.8	2	4.5
	Maximum	5.2	6	6.6	7.6	7.6	8.9	8.5	7.9	8.2	6.8	4.8	4.6	6.1
AVERAGE CLIMATIC CONDITIONS														
Element		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temp.	(deg C)	-6.9	-3.7	1.1	6.3	11.7	17.3	21.7	20.5	14.6	8.2	-0.4	-6.2	7
Daily Min	(deg C)	-13.4	-10.2	-5.5	-0.7	4.4	9.3	13.3	12.1	6.8	0.9	-6.7	-12.6	-0.2
Daily Max	(deg C)	-0.4	2.8	7.6	13.2	18.9	25.2	30.1	28.8	22.4	15.4	5.8	0.1	14.2
Record Lo	(deg C)	-38.3	-33.3	-26.7	-18.9	-7.8	-3.9	3.9	1.7	-12.2	-19.4	-27.8	-38.3	-38.3
Record Hi	(deg C)	17.2	20	24.4	27.8	32.8	37.8	38.3	38.3	34.4	29.4	21.1	17.8	38.3
HDD,Base=	18.3C	784	616	536	362	209	76	5	21	137	313	563	761	4383
CDD,Base=	18.3C	0	0	0	0	0	44	108	88	25	0	0	0	266
Rel Hum	percent	64	62	56	52	50	45	40	40	46	52	62	65	53
Wind Spd.	(m/s)	2.4	2.5	3.1	3.5	3.6	3.4	3.4	3.3	3.1	2.7	2.5	2.5	3