

Valle, Honduras

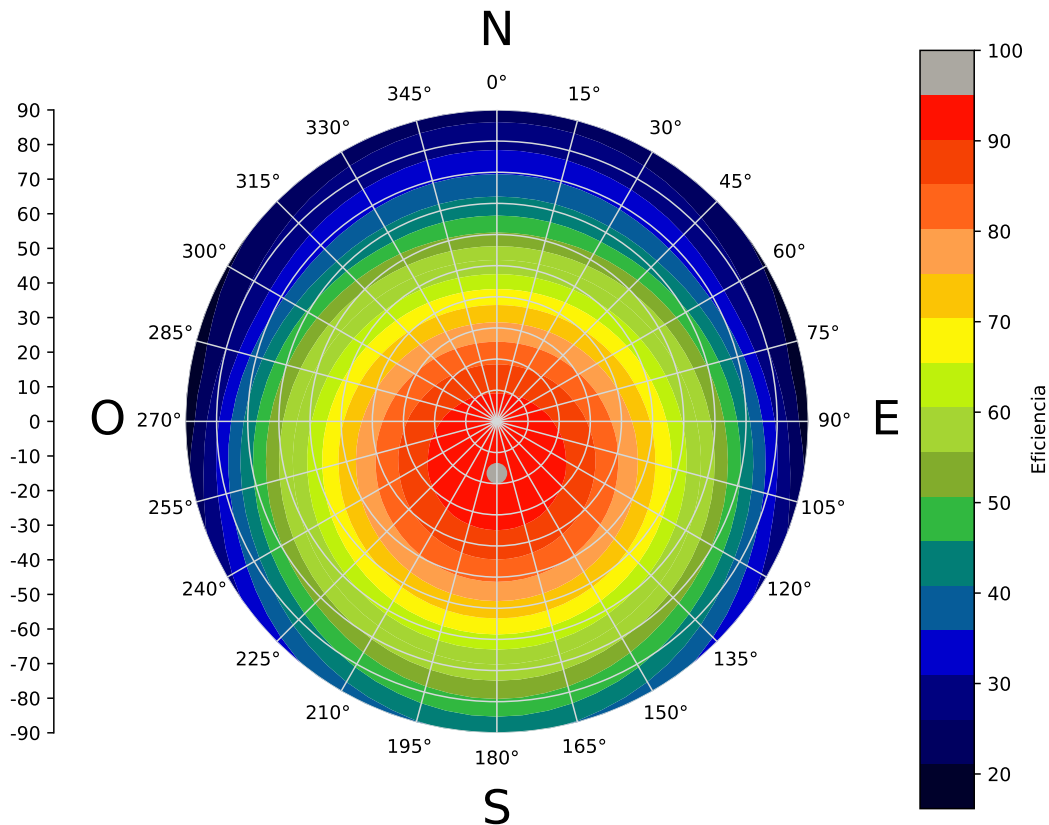
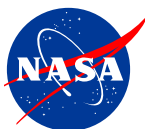


Tabla 1: Generalidades

Latitud	13.531121969047243
Longitud	-87.48794496059418
Modelo de declinación solar	Modelo de Cooper (1961)
Modelo de radiación promedio en superficies inclinadas	Modelo de Klein - Theilacker



Los datos fueron obtenidos de la National Aeronautics and Space Administration (NASA) Langley Research Center (LaRC) Prediction of Worldwide Energy Resource (POWER), Proyecto financiado a través del Programa de Ciencia/Tecnología Aplicada de la NASA.



Tabla 2: Promedios mensuales y anuales de irradiancia de onda corta (Γ), irradiancia UVA (β), índice de claridad de insolación del cielo (α), albedo (ρ), ángulo de declinación solar (δ) y ángulo de puesta del sol (θ).

	Γ	β	α	ρ	δ	θ
Enero	5.7405	12.8699	0.605	0.138	-20.8472	84.7372
Febrero	5.947	12.2333	0.6054	0.1312	-13.3253	86.7248
Marzo	6.4004	10.8402	0.6161	0.1448	-2.3892	89.4224
Abril	6.2206	10.351	0.6029	0.1471	9.4932	92.3138
Mayo	5.7886	9.798	0.577	0.1369	18.8058	94.708
Junio	5.8667	10.1982	0.5837	0.1354	23.0771	95.8854
Julio	6.04	10.4361	0.5964	0.1332	21.1015	95.3329
Agosto	5.9839	10.3884	0.5965	0.1362	13.296	93.2695
Septiembre	5.728	10.2951	0.6013	0.1463	1.9936	90.4818
Octubre	5.6628	10.4354	0.5822	0.1314	-9.8485	87.5975
Noviembre	5.4078	9.4197	0.608	0.1303	-19.0505	85.2266
Diciembre	5.4204	9.3306	0.6376	0.1329	-23.0956	84.1093
Promedio	5.8033	9.9549	0.5975	0.1331	—	89.9841

Tabla 3: Azimut de 0°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0119	0.9943	0.9753	0.956	0.9431	0.936	0.9387	0.9468	0.9651	0.9885	1.0064	1.0167	0.9733
10	1.0261	0.9914	0.9528	0.9141	0.8888	0.875	0.8802	0.8958	0.9319	0.9797	1.0154	1.0357	0.9489
15	1.0337	0.9825	0.9243	0.8664	0.8291	0.8086	0.8162	0.8388	0.8925	0.9648	1.0179	1.048	0.9186
20	1.0345	0.9676	0.8899	0.8134	0.7643	0.7373	0.7473	0.7764	0.847	0.944	1.014	1.0535	0.8824
25	1.0286	0.9469	0.8499	0.7554	0.695	0.6618	0.6739	0.7091	0.7959	0.9175	1.0036	1.0522	0.8408
30	1.0159	0.9205	0.8047	0.6928	0.6217	0.5824	0.5966	0.6373	0.7396	0.8854	0.9868	1.0441	0.794
35	0.9967	0.8887	0.7546	0.6262	0.5451	0.5	0.5161	0.5617	0.6784	0.8481	0.9639	1.0292	0.7424
40	0.971	0.8516	0.6999	0.5561	0.4656	0.415	0.4329	0.4827	0.6129	0.8057	0.9349	1.0076	0.6863
45	0.939	0.8096	0.6411	0.4829	0.3839	0.3283	0.3478	0.401	0.5435	0.7586	0.9	0.9796	0.6263
50	0.901	0.7629	0.5786	0.4074	0.3006	0.2404	0.2613	0.3173	0.4708	0.7072	0.8596	0.9453	0.5627
55	0.8573	0.7119	0.5129	0.3299	0.2165	0.1832	0.1779	0.2322	0.3953	0.6519	0.8139	0.9049	0.499
60	0.8081	0.6571	0.4446	0.2513	0.1858	0.181	0.1758	0.1464	0.3176	0.593	0.7633	0.8589	0.4486
65	0.754	0.5988	0.374	0.172	0.1833	0.1786	0.1736	0.1192	0.2383	0.531	0.7082	0.8075	0.4032
70	0.6952	0.5375	0.3018	0.1635	0.1806	0.1762	0.1713	0.1201	0.158	0.4665	0.649	0.7511	0.3642
75	0.6323	0.4736	0.2285	0.1625	0.1779	0.1736	0.169	0.1211	0.0953	0.3998	0.5861	0.6902	0.3258
80	0.5657	0.4076	0.1601	0.1615	0.1751	0.171	0.1665	0.1222	0.0987	0.3316	0.5201	0.6252	0.2921
85	0.4958	0.3401	0.159	0.1604	0.1723	0.1684	0.1641	0.1232	0.1022	0.2622	0.4513	0.5567	0.263
90	0.4234	0.2011	0.1578	0.1594	0.1695	0.1658	0.1616	0.1242	0.1057	0.1891	0.3805	0.485	0.2269



Tabla 4: Azimut de 5°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0118	0.9943	0.9753	0.9561	0.9433	0.9362	0.9389	0.947	0.9652	0.9885	1.0064	1.0166	0.9733
10	1.026	0.9914	0.9529	0.9143	0.8892	0.8754	0.8806	0.8961	0.9321	0.9797	1.0153	1.0355	0.949
15	1.0334	0.9824	0.9244	0.8668	0.8296	0.8092	0.8168	0.8393	0.8927	0.9648	1.0177	1.0477	0.9187
20	1.0341	0.9675	0.8901	0.8139	0.765	0.7381	0.748	0.7771	0.8474	0.944	1.0137	1.0531	0.8827
25	1.0281	0.9468	0.8502	0.756	0.6958	0.6627	0.6748	0.7099	0.7964	0.9175	1.0032	1.0517	0.8411
30	1.0154	0.9204	0.805	0.6936	0.6227	0.5836	0.5977	0.6383	0.7401	0.8854	0.9864	1.0435	0.7943
35	0.9961	0.8885	0.7549	0.6271	0.5462	0.5013	0.5174	0.5627	0.679	0.8481	0.9634	1.0285	0.7428
40	0.9703	0.8514	0.7003	0.557	0.4669	0.4165	0.4344	0.4839	0.6136	0.8057	0.9343	1.0068	0.6868
45	0.9382	0.8094	0.6415	0.484	0.3853	0.3299	0.3493	0.4024	0.5443	0.7586	0.8994	0.9787	0.6268
50	0.9002	0.7627	0.5791	0.4085	0.3022	0.2422	0.263	0.3188	0.4717	0.7072	0.859	0.9443	0.5632
55	0.8564	0.7117	0.5134	0.3312	0.2182	0.1832	0.1779	0.2338	0.3963	0.6519	0.8133	0.9039	0.4993
60	0.8072	0.6569	0.445	0.2526	0.1858	0.181	0.1758	0.148	0.3187	0.593	0.7626	0.8578	0.4487
65	0.753	0.5986	0.3745	0.1734	0.1833	0.1786	0.1736	0.1192	0.2395	0.531	0.7075	0.8063	0.4032
70	0.6942	0.5372	0.3023	0.1635	0.1806	0.1762	0.1713	0.1201	0.1594	0.4665	0.6482	0.7499	0.3641
75	0.6313	0.4733	0.229	0.1625	0.1779	0.1736	0.169	0.1211	0.0953	0.3998	0.5854	0.689	0.3256
80	0.5646	0.4074	0.1603	0.1615	0.1751	0.171	0.1665	0.1222	0.099	0.3316	0.5193	0.624	0.2919
85	0.4948	0.3398	0.159	0.1604	0.1723	0.1684	0.1641	0.1232	0.1024	0.2622	0.4505	0.5554	0.2627
90	0.4223	0.2011	0.1578	0.1594	0.1695	0.1658	0.1616	0.1242	0.1059	0.1891	0.3797	0.4838	0.2267

Tabla 5: Azimut de 10°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0115	0.9942	0.9755	0.9565	0.9438	0.9368	0.9395	0.9475	0.9655	0.9885	1.0062	1.0162	0.9735
10	1.0254	0.9912	0.9532	0.9151	0.8902	0.8766	0.8817	0.897	0.9326	0.9797	1.0148	1.0348	0.9494
15	1.0326	0.9822	0.9248	0.8679	0.8311	0.811	0.8185	0.8407	0.8935	0.9648	1.0171	1.0467	0.9192
20	1.0331	0.9673	0.8907	0.8154	0.767	0.7405	0.7502	0.7789	0.8484	0.944	1.0129	1.0518	0.8833
25	1.0268	0.9465	0.8509	0.7578	0.6984	0.6656	0.6776	0.7122	0.7977	0.9175	1.0022	1.0501	0.8419
30	1.0138	0.92	0.8059	0.6958	0.6258	0.587	0.601	0.641	0.7417	0.8854	0.9852	1.0416	0.7954
35	0.9943	0.8881	0.7559	0.6296	0.5497	0.5053	0.5212	0.5659	0.6809	0.848	0.962	1.0263	0.7439
40	0.9683	0.8509	0.7014	0.5599	0.4708	0.421	0.4386	0.4875	0.6157	0.8057	0.9328	1.0044	0.6881
45	0.936	0.8088	0.6427	0.4872	0.3896	0.3348	0.354	0.4064	0.5467	0.7586	0.8977	0.976	0.6282
50	0.8978	0.7621	0.5804	0.412	0.3069	0.2475	0.268	0.3231	0.4743	0.7072	0.8571	0.9414	0.5648
55	0.8538	0.7111	0.5148	0.335	0.2231	0.1832	0.1814	0.2385	0.3991	0.6518	0.8113	0.9008	0.5003
60	0.8045	0.6562	0.4465	0.2566	0.1858	0.181	0.1758	0.153	0.3218	0.5929	0.7605	0.8545	0.4491
65	0.7502	0.5978	0.3761	0.1776	0.1833	0.1786	0.1736	0.1192	0.2429	0.531	0.7053	0.8029	0.4032
70	0.6913	0.5365	0.304	0.1635	0.1806	0.1762	0.1713	0.1201	0.163	0.4665	0.646	0.7464	0.3638
75	0.6282	0.4726	0.2309	0.1625	0.1779	0.1736	0.169	0.1211	0.0953	0.3998	0.583	0.6853	0.3249
80	0.5615	0.4066	0.1605	0.1615	0.1751	0.171	0.1665	0.1222	0.0997	0.3315	0.5169	0.6203	0.2911
85	0.4917	0.339	0.1592	0.1604	0.1723	0.1684	0.1641	0.1232	0.1031	0.2622	0.4481	0.5517	0.262
90	0.4192	0.2011	0.1579	0.1594	0.1695	0.1658	0.1616	0.1242	0.1065	0.1891	0.3772	0.48	0.226



Tabla 6: Azimut de 15°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0111	0.9941	0.9757	0.9571	0.9447	0.9378	0.9404	0.9483	0.9659	0.9885	1.0058	1.0157	0.9738
10	1.0245	0.991	0.9537	0.9163	0.8919	0.8786	0.8836	0.8986	0.9335	0.9796	1.0141	1.0337	0.9499
15	1.0313	0.9819	0.9256	0.8698	0.8337	0.8139	0.8213	0.8431	0.8949	0.9648	1.016	1.0451	0.9201
20	1.0313	0.9668	0.8916	0.8178	0.7704	0.7444	0.7539	0.7821	0.8502	0.944	1.0115	1.0497	0.8845
25	1.0246	0.9459	0.8521	0.7609	0.7026	0.6704	0.6822	0.7161	0.7999	0.9174	1.0005	1.0475	0.8433
30	1.0112	0.9193	0.8073	0.6994	0.6307	0.5927	0.6065	0.6456	0.7444	0.8854	0.9832	1.0385	0.797
35	0.9913	0.8873	0.7575	0.6338	0.5554	0.5118	0.5274	0.5713	0.684	0.848	0.9597	1.0227	0.7459
40	0.9649	0.8501	0.7032	0.5647	0.4772	0.4283	0.4456	0.4935	0.6192	0.8056	0.9302	1.0004	0.6903
45	0.9323	0.8079	0.6447	0.4925	0.3967	0.3429	0.3618	0.413	0.5506	0.7585	0.8949	0.9716	0.6306
50	0.8938	0.7611	0.5825	0.4178	0.3146	0.2562	0.2764	0.3304	0.4786	0.7071	0.8541	0.9366	0.5674
55	0.8496	0.71	0.5171	0.3412	0.2314	0.1832	0.1903	0.2462	0.4038	0.6518	0.808	0.8957	0.5024
60	0.8	0.655	0.449	0.2632	0.1858	0.181	0.1758	0.1612	0.3268	0.5929	0.7571	0.8491	0.4497
65	0.7455	0.5966	0.3787	0.1845	0.1833	0.1786	0.1736	0.1192	0.2481	0.5309	0.7017	0.7973	0.4032
70	0.6864	0.5352	0.3068	0.1635	0.1806	0.1762	0.1713	0.1201	0.1684	0.4664	0.6422	0.7405	0.3631
75	0.6232	0.4713	0.2338	0.1625	0.1779	0.1736	0.169	0.1211	0.0953	0.3997	0.5792	0.6793	0.3238
80	0.5564	0.4053	0.1606	0.1615	0.1751	0.171	0.1665	0.1222	0.1004	0.3315	0.513	0.6141	0.2898
85	0.4865	0.3377	0.1594	0.1604	0.1723	0.1684	0.1641	0.1232	0.1038	0.2621	0.4442	0.5455	0.2606
90	0.414	0.2011	0.1581	0.1594	0.1695	0.1658	0.1616	0.1242	0.1071	0.1891	0.3732	0.4738	0.2248

Tabla 7: Azimut de 20°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0105	0.994	0.9761	0.958	0.9459	0.9392	0.9417	0.9494	0.9665	0.9885	1.0053	1.0149	0.9742
10	1.0233	0.9907	0.9544	0.918	0.8943	0.8813	0.8862	0.9008	0.9348	0.9796	1.0132	1.0322	0.9507
15	1.0294	0.9814	0.9266	0.8723	0.8372	0.818	0.8251	0.8463	0.8967	0.9647	1.0146	1.0429	0.9213
20	1.0288	0.9662	0.893	0.8212	0.7751	0.7498	0.7591	0.7864	0.8527	0.9439	1.0096	1.0467	0.886
25	1.0215	0.9451	0.8538	0.7651	0.7084	0.6771	0.6885	0.7215	0.803	0.9174	0.9982	1.0438	0.8453
30	1.0076	0.9184	0.8093	0.7044	0.6377	0.6007	0.614	0.652	0.748	0.8853	0.9805	1.0341	0.7993
35	0.9871	0.8863	0.7598	0.6397	0.5634	0.521	0.5361	0.5786	0.6882	0.848	0.9566	1.0178	0.7485
40	0.9603	0.8489	0.7057	0.5712	0.4862	0.4386	0.4554	0.5018	0.624	0.8056	0.9267	0.9948	0.6933
45	0.9272	0.8066	0.6475	0.4997	0.4066	0.3542	0.3725	0.4222	0.5559	0.7585	0.891	0.9655	0.634
50	0.8883	0.7596	0.5856	0.4257	0.3253	0.2685	0.2881	0.3403	0.4845	0.7071	0.8498	0.93	0.5711
55	0.8436	0.7085	0.5204	0.3497	0.2428	0.1832	0.2027	0.2569	0.4101	0.6517	0.8035	0.8886	0.5051
60	0.7937	0.6534	0.4525	0.2723	0.1858	0.181	0.1758	0.1725	0.3335	0.5928	0.7523	0.8416	0.4506
65	0.7389	0.595	0.3824	0.194	0.1833	0.1786	0.1736	0.1192	0.2551	0.5309	0.6966	0.7894	0.4031
70	0.6796	0.5335	0.3107	0.1635	0.1806	0.1762	0.1713	0.1201	0.1756	0.4663	0.637	0.7324	0.3622
75	0.6162	0.4695	0.2377	0.1625	0.1779	0.1736	0.169	0.1211	0.0954	0.3997	0.5738	0.671	0.3223
80	0.5493	0.4034	0.1608	0.1615	0.1751	0.171	0.1665	0.1222	0.1011	0.3314	0.5075	0.6056	0.288
85	0.4793	0.3359	0.1596	0.1604	0.1723	0.1684	0.1641	0.1232	0.1045	0.262	0.4386	0.5368	0.2588
90	0.4068	0.2011	0.1583	0.1594	0.1695	0.1658	0.1616	0.1242	0.1078	0.1891	0.3677	0.4651	0.223



Tabla 8: Azimut de 25°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0097	0.9938	0.9765	0.9591	0.9474	0.9409	0.9434	0.9508	0.9673	0.9885	1.0047	1.014	0.9747
10	1.0217	0.9903	0.9552	0.9202	0.8973	0.8848	0.8895	0.9036	0.9363	0.9796	1.012	1.0303	0.9517
15	1.027	0.9808	0.9279	0.8756	0.8418	0.8232	0.8301	0.8505	0.8991	0.9647	1.0128	1.04	0.9228
20	1.0257	0.9654	0.8947	0.8256	0.7811	0.7566	0.7656	0.7919	0.8558	0.9439	1.0072	1.043	0.888
25	1.0177	0.9441	0.8559	0.7705	0.7159	0.6857	0.6966	0.7283	0.8069	0.9174	0.9952	1.0392	0.8478
30	1.003	0.9172	0.8118	0.7109	0.6465	0.6108	0.6236	0.6602	0.7527	0.8853	0.9769	1.0286	0.8023
35	0.9819	0.8849	0.7627	0.6471	0.5735	0.5325	0.5471	0.588	0.6936	0.8479	0.9525	1.0115	0.7519
40	0.9544	0.8474	0.709	0.5796	0.4976	0.4516	0.4678	0.5123	0.6301	0.8055	0.9221	0.9878	0.6971
45	0.9207	0.8049	0.6511	0.509	0.4192	0.3686	0.3862	0.4338	0.5627	0.7584	0.886	0.9577	0.6382
50	0.8812	0.7578	0.5894	0.4357	0.3389	0.284	0.3029	0.353	0.4918	0.707	0.8444	0.9216	0.5756
55	0.8361	0.7065	0.5246	0.3605	0.2574	0.1985	0.2186	0.2705	0.4179	0.6516	0.7977	0.8796	0.51
60	0.7858	0.6514	0.457	0.2837	0.1858	0.181	0.1758	0.1869	0.3417	0.5927	0.7461	0.8321	0.4517
65	0.7306	0.5928	0.3871	0.206	0.1833	0.1786	0.1736	0.1192	0.2638	0.5308	0.6902	0.7794	0.403
70	0.6709	0.5313	0.3156	0.1635	0.1806	0.1762	0.1713	0.1201	0.1846	0.4662	0.6304	0.722	0.3611
75	0.6073	0.4672	0.2427	0.1625	0.1779	0.1736	0.169	0.1211	0.1047	0.3996	0.567	0.6603	0.3211
80	0.5402	0.4011	0.1609	0.1622	0.1751	0.171	0.1665	0.1222	0.1017	0.3313	0.5005	0.5948	0.2856
85	0.4701	0.3335	0.1598	0.161	0.1723	0.1684	0.1641	0.1232	0.1052	0.2619	0.4316	0.5258	0.2564
90	0.3976	0.2011	0.1585	0.1598	0.1695	0.1658	0.1616	0.1242	0.1085	0.1891	0.3606	0.4541	0.2209

Tabla 9: Azimut de 30°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0087	0.9935	0.977	0.9604	0.9492	0.943	0.9454	0.9524	0.9683	0.9885	1.004	1.0128	0.9753
10	1.0197	0.9898	0.9563	0.9229	0.901	0.889	0.8935	0.9069	0.9382	0.9796	1.0105	1.028	0.9529
15	1.0241	0.9801	0.9295	0.8796	0.8472	0.8294	0.836	0.8555	0.9019	0.9647	1.0106	1.0366	0.9246
20	1.0219	0.9644	0.8968	0.8308	0.7883	0.7649	0.7735	0.7986	0.8596	0.9439	1.0043	1.0384	0.8904
25	1.013	0.9429	0.8584	0.777	0.7248	0.6959	0.7064	0.7366	0.8116	0.9173	0.9916	1.0336	0.8508
30	0.9975	0.9158	0.8148	0.7186	0.6571	0.6229	0.6352	0.67	0.7583	0.8852	0.9727	1.022	0.8058
35	0.9755	0.8833	0.7661	0.656	0.5858	0.5465	0.5605	0.5993	0.7001	0.8478	0.9476	1.0038	0.756
40	0.9472	0.8455	0.7129	0.5896	0.5113	0.4673	0.4828	0.525	0.6374	0.8054	0.9166	0.9792	0.7017
45	0.9129	0.8029	0.6553	0.52	0.4343	0.3858	0.4027	0.4478	0.5707	0.7583	0.8799	0.9483	0.6433
50	0.8727	0.7557	0.5941	0.4478	0.3553	0.3027	0.3208	0.3682	0.5005	0.7069	0.8379	0.9114	0.5812
55	0.827	0.7042	0.5296	0.3734	0.275	0.2186	0.2377	0.2867	0.4273	0.6515	0.7907	0.8687	0.5159
60	0.7762	0.6489	0.4624	0.2974	0.1938	0.181	0.1758	0.2041	0.3516	0.5926	0.7388	0.8206	0.4536
65	0.7205	0.5903	0.3928	0.2203	0.1833	0.1786	0.1736	0.1208	0.2741	0.5307	0.6825	0.7674	0.4029
70	0.6605	0.5286	0.3214	0.1635	0.1806	0.1762	0.1713	0.1201	0.1952	0.4661	0.6223	0.7095	0.3596
75	0.5966	0.4645	0.2487	0.1625	0.1779	0.1736	0.169	0.1211	0.1156	0.3994	0.5587	0.6475	0.3196
80	0.5293	0.3983	0.1753	0.163	0.1751	0.171	0.1665	0.1222	0.1024	0.3312	0.4921	0.5817	0.284
85	0.4591	0.3307	0.1599	0.1618	0.1723	0.1684	0.1641	0.1232	0.1058	0.2618	0.4231	0.5126	0.2536
90	0.3865	0.2011	0.1587	0.1606	0.1695	0.1658	0.1616	0.1242	0.1092	0.1891	0.3521	0.4408	0.2183



Tabla 10: Azimut de 35°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0076	0.9932	0.9777	0.9619	0.9514	0.9455	0.9477	0.9544	0.9693	0.9885	1.0031	1.0115	0.976
10	1.0175	0.9892	0.9575	0.9259	0.9052	0.8938	0.8981	0.9108	0.9404	0.9796	1.0087	1.0253	0.9544
15	1.0208	0.9792	0.9313	0.8842	0.8536	0.8367	0.843	0.8613	0.9052	0.9646	1.008	1.0326	0.9267
20	1.0175	0.9633	0.8992	0.8369	0.7967	0.7746	0.7827	0.8063	0.864	0.9438	1.0009	1.0331	0.8932
25	1.0075	0.9415	0.8614	0.7846	0.7352	0.7078	0.7178	0.7461	0.8171	0.9172	0.9874	1.027	0.8542
30	0.991	0.9142	0.8183	0.7276	0.6694	0.6371	0.6487	0.6813	0.7648	0.8851	0.9677	1.0143	0.81
35	0.9681	0.8814	0.7702	0.6663	0.5999	0.5628	0.5759	0.6123	0.7076	0.8477	0.9419	0.995	0.7608
40	0.9389	0.8434	0.7174	0.6012	0.5272	0.4855	0.5001	0.5397	0.6459	0.8053	0.9102	0.9693	0.707
45	0.9037	0.8006	0.6603	0.5329	0.4518	0.4059	0.4218	0.464	0.58	0.7582	0.8729	0.9374	0.6491
50	0.8628	0.7531	0.5996	0.4617	0.3744	0.3245	0.3415	0.3858	0.5105	0.7068	0.8302	0.8995	0.5875
55	0.8164	0.7015	0.5355	0.3883	0.2953	0.2419	0.2599	0.3056	0.438	0.6514	0.7825	0.856	0.5227
60	0.765	0.6461	0.4686	0.3131	0.2153	0.181	0.1774	0.224	0.3629	0.5925	0.7302	0.8072	0.4569
65	0.7088	0.5873	0.3993	0.2368	0.1833	0.1786	0.1736	0.1416	0.2859	0.5305	0.6735	0.7534	0.4044
70	0.6484	0.5255	0.3281	0.1635	0.1806	0.1762	0.1713	0.1201	0.2075	0.466	0.613	0.695	0.3579
75	0.5841	0.4613	0.2557	0.1625	0.1779	0.1736	0.169	0.1211	0.1283	0.3993	0.5491	0.6325	0.3179
80	0.5166	0.3951	0.1824	0.1638	0.1751	0.171	0.1665	0.1222	0.1029	0.331	0.4823	0.5664	0.2813
85	0.4462	0.3274	0.1601	0.1627	0.1723	0.1684	0.1641	0.1232	0.1064	0.2617	0.4132	0.4972	0.2502
90	0.3736	0.2011	0.1589	0.1614	0.1695	0.1658	0.1616	0.1242	0.1098	0.1891	0.3422	0.4254	0.2152

Tabla 11: Azimut de 40°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0063	0.9929	0.9784	0.9637	0.9538	0.9482	0.9503	0.9566	0.9706	0.9885	1.0021	1.0099	0.9768
10	1.0149	0.9886	0.9589	0.9294	0.91	0.8994	0.9034	0.9152	0.9429	0.9795	1.0068	1.0223	0.9559
15	1.017	0.9782	0.9334	0.8894	0.8607	0.845	0.8508	0.8679	0.909	0.9646	1.0051	1.028	0.9291
20	1.0124	0.962	0.9019	0.8438	0.8063	0.7855	0.7931	0.815	0.869	0.9438	0.997	1.0271	0.8964
25	1.0013	0.94	0.8648	0.7932	0.747	0.7214	0.7306	0.757	0.8232	0.9172	0.9826	1.0196	0.8582
30	0.9837	0.9123	0.8223	0.7377	0.6834	0.6531	0.6639	0.6942	0.7721	0.8851	0.9621	1.0055	0.8146
35	0.9597	0.8792	0.7748	0.678	0.616	0.5812	0.5934	0.6271	0.716	0.8476	0.9354	0.9849	0.7661
40	0.9295	0.841	0.7225	0.6143	0.5452	0.5062	0.5197	0.5563	0.6553	0.8052	0.903	0.958	0.713
45	0.8934	0.7979	0.666	0.5473	0.4717	0.4286	0.4434	0.4823	0.5904	0.7581	0.865	0.925	0.6558
50	0.8516	0.7503	0.6058	0.4774	0.3959	0.3491	0.3649	0.4056	0.5218	0.7066	0.8216	0.8861	0.5947
55	0.8044	0.6985	0.5422	0.4051	0.3183	0.2682	0.2849	0.3268	0.45	0.6512	0.7733	0.8417	0.5304
60	0.7523	0.6429	0.4756	0.3309	0.2396	0.1865	0.204	0.2465	0.3757	0.5923	0.7204	0.792	0.4632
65	0.6955	0.5839	0.4067	0.2554	0.1833	0.1786	0.1736	0.1651	0.2993	0.5304	0.6633	0.7375	0.406
70	0.6346	0.522	0.3358	0.1791	0.1806	0.1762	0.1713	0.1201	0.2213	0.4658	0.6024	0.6785	0.3573
75	0.57	0.4577	0.2635	0.1625	0.1779	0.1736	0.169	0.1211	0.1425	0.3991	0.5383	0.6156	0.3159
80	0.5021	0.3914	0.1904	0.1645	0.1751	0.171	0.1665	0.123	0.1035	0.3308	0.4713	0.5492	0.2782
85	0.4316	0.3237	0.1602	0.1634	0.1723	0.1684	0.1641	0.1239	0.107	0.2615	0.402	0.4797	0.2465
90	0.3589	0.2011	0.159	0.1622	0.1695	0.1658	0.1616	0.1248	0.1104	0.1891	0.3309	0.4078	0.2118



Tabla 12: Azimut de 45°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0049	0.9925	0.9791	0.9656	0.9564	0.9513	0.9533	0.959	0.972	0.9884	1.001	1.0082	0.9777
10	1.0121	0.9878	0.9604	0.9333	0.9154	0.9055	0.9092	0.9201	0.9457	0.9795	1.0046	1.0189	0.9577
15	1.0128	0.9772	0.9356	0.8951	0.8687	0.8541	0.8595	0.8753	0.9131	0.9645	1.0019	1.023	0.9317
20	1.0069	0.9606	0.9049	0.8515	0.8168	0.7976	0.8046	0.8248	0.8744	0.9437	0.9927	1.0205	0.8999
25	0.9944	0.9382	0.8685	0.8026	0.7601	0.7363	0.7449	0.769	0.8301	0.9171	0.9774	1.0114	0.8625
30	0.9756	0.9102	0.8267	0.749	0.6989	0.6708	0.6808	0.7084	0.7802	0.885	0.9558	0.9958	0.8198
35	0.9504	0.8769	0.7798	0.6909	0.6338	0.6015	0.6128	0.6435	0.7254	0.8475	0.9283	0.9737	0.772
40	0.9191	0.8383	0.7282	0.6289	0.5652	0.529	0.5415	0.5747	0.6657	0.8051	0.895	0.9455	0.7197
45	0.8819	0.795	0.6724	0.5633	0.4936	0.4538	0.4673	0.5025	0.6018	0.7579	0.8561	0.9112	0.6631
50	0.8391	0.7471	0.6127	0.4947	0.4197	0.3764	0.3909	0.4276	0.5342	0.7065	0.8121	0.8712	0.6027
55	0.7911	0.6951	0.5495	0.4236	0.3438	0.2974	0.3127	0.3503	0.4633	0.6511	0.7631	0.8257	0.5389
60	0.7382	0.6393	0.4834	0.3505	0.2666	0.2173	0.2333	0.2713	0.3897	0.5922	0.7096	0.7752	0.4722
65	0.6808	0.5801	0.4148	0.2759	0.1886	0.1786	0.1736	0.1911	0.314	0.5302	0.652	0.7199	0.4083
70	0.6193	0.5181	0.3442	0.2003	0.1806	0.1762	0.1713	0.1201	0.2366	0.4656	0.5907	0.6603	0.357
75	0.5543	0.4537	0.2722	0.1625	0.1779	0.1736	0.169	0.1211	0.1582	0.3989	0.5262	0.5968	0.3137
80	0.4861	0.3873	0.1992	0.1615	0.1751	0.171	0.1665	0.1222	0.0987	0.3307	0.459	0.53	0.2739
85	0.4154	0.3195	0.1603	0.1642	0.1723	0.1684	0.1641	0.125	0.1075	0.2613	0.3895	0.4604	0.2423
90	0.3427	0.2011	0.1591	0.163	0.1695	0.1658	0.1616	0.1258	0.111	0.1891	0.3184	0.3884	0.208

Tabla 13: Azimut de 50°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0033	0.9921	0.98	0.9677	0.9594	0.9547	0.9564	0.9617	0.9735	0.9884	0.9998	1.0064	0.9786
10	1.009	0.9871	0.9621	0.9375	0.9212	0.9122	0.9156	0.9255	0.9487	0.9795	1.0023	1.0152	0.9596
15	1.0082	0.976	0.9382	0.9014	0.8774	0.8641	0.869	0.8832	0.9176	0.9645	0.9983	1.0175	0.9346
20	1.0008	0.959	0.9082	0.8598	0.8283	0.8108	0.8172	0.8353	0.8804	0.9436	0.9881	1.0132	0.9037
25	0.987	0.9363	0.8726	0.813	0.7743	0.7527	0.7604	0.7821	0.8375	0.917	0.9716	1.0024	0.8672
30	0.9667	0.908	0.8316	0.7612	0.7158	0.6902	0.6992	0.7239	0.7891	0.8849	0.949	0.9851	0.8254
35	0.9402	0.8743	0.7854	0.705	0.6531	0.6237	0.634	0.6613	0.7354	0.8474	0.9205	0.9616	0.7785
40	0.9077	0.8354	0.7345	0.6447	0.5869	0.5539	0.5652	0.5947	0.677	0.8049	0.8862	0.9318	0.7269
45	0.8694	0.7918	0.6793	0.5807	0.5175	0.4812	0.4934	0.5246	0.6143	0.7578	0.8465	0.8962	0.6711
50	0.8256	0.7436	0.6202	0.5136	0.4456	0.4061	0.4192	0.4514	0.5477	0.7063	0.8016	0.8549	0.6113
55	0.7766	0.6913	0.5575	0.4438	0.3715	0.3291	0.3429	0.3758	0.4778	0.6509	0.7519	0.8083	0.5481
60	0.7229	0.6353	0.4919	0.3718	0.2959	0.2509	0.2653	0.2983	0.405	0.592	0.6978	0.7568	0.482
65	0.6647	0.576	0.4237	0.2982	0.2193	0.1786	0.1869	0.2194	0.3299	0.53	0.6396	0.7006	0.4139
70	0.6027	0.5138	0.3534	0.2235	0.1806	0.1762	0.1713	0.1397	0.2531	0.4654	0.5779	0.6403	0.3582
75	0.5372	0.4493	0.2816	0.1625	0.1779	0.1736	0.169	0.1211	0.1752	0.3987	0.513	0.5763	0.3113
80	0.4687	0.3829	0.2088	0.1615	0.1751	0.171	0.1665	0.1222	0.0987	0.3305	0.4455	0.5091	0.27
85	0.3978	0.315	0.1604	0.1649	0.1723	0.1684	0.1641	0.126	0.108	0.2611	0.376	0.4392	0.2378
90	0.3249	0.2011	0.1593	0.1637	0.1695	0.1658	0.1616	0.1269	0.1115	0.1891	0.3048	0.3671	0.2038



Tabla 14: Azimut de 55°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	1.0017	0.9917	0.9809	0.97	0.9625	0.9583	0.9599	0.9646	0.9751	0.9884	0.9986	1.0044	0.9797
10	1.0057	0.9862	0.9639	0.942	0.9275	0.9194	0.9224	0.9312	0.9519	0.9794	0.9997	1.0113	0.9617
15	1.0033	0.9747	0.9408	0.9082	0.8868	0.8748	0.8792	0.8918	0.9224	0.9644	0.9945	1.0116	0.9377
20	0.9943	0.9574	0.9118	0.8688	0.8407	0.825	0.8307	0.8467	0.8869	0.9435	0.9831	1.0054	0.9078
25	0.9789	0.9342	0.877	0.8241	0.7896	0.7702	0.7771	0.7962	0.8454	0.9169	0.9654	0.9928	0.8723
30	0.9572	0.9055	0.8368	0.7744	0.7339	0.711	0.719	0.7406	0.7985	0.8847	0.9417	0.9737	0.8314
35	0.9293	0.8715	0.7913	0.7201	0.674	0.6476	0.6567	0.6805	0.7463	0.8473	0.9121	0.9485	0.7854
40	0.8954	0.8323	0.7412	0.6616	0.6102	0.5807	0.5907	0.6162	0.6891	0.8048	0.8768	0.9172	0.7347
45	0.8559	0.7883	0.6867	0.5993	0.5432	0.5106	0.5214	0.5482	0.6276	0.7576	0.8361	0.8801	0.6796
50	0.811	0.7399	0.6282	0.5338	0.4734	0.438	0.4495	0.477	0.5622	0.7062	0.7904	0.8374	0.6206
55	0.761	0.6874	0.5661	0.4654	0.4013	0.3633	0.3754	0.4032	0.4932	0.6507	0.7399	0.7896	0.558
60	0.7063	0.6311	0.501	0.3947	0.3274	0.287	0.2997	0.3272	0.4213	0.5918	0.6851	0.737	0.4925
65	0.6475	0.5716	0.4332	0.3221	0.2522	0.2098	0.2228	0.2497	0.347	0.5298	0.6263	0.6799	0.4243
70	0.5848	0.5093	0.3633	0.2483	0.1806	0.1762	0.1713	0.1711	0.2709	0.4652	0.5641	0.6188	0.3603
75	0.5187	0.4446	0.2918	0.1737	0.1779	0.1736	0.169	0.1211	0.1934	0.3985	0.4989	0.5542	0.3096
80	0.4499	0.3781	0.2192	0.1615	0.1751	0.171	0.1665	0.1222	0.1152	0.3302	0.4311	0.4866	0.2672
85	0.3788	0.3102	0.1605	0.1656	0.1723	0.1684	0.1641	0.127	0.1085	0.2609	0.3613	0.4164	0.2328
90	0.3059	0.2011	0.1594	0.1644	0.1695	0.1658	0.1616	0.1279	0.112	0.1891	0.2901	0.3443	0.1993

Tabla 15: Azimut de 60°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9999	0.9913	0.9818	0.9724	0.9658	0.9621	0.9635	0.9677	0.9768	0.9884	0.9972	1.0023	0.9808
10	1.0022	0.9853	0.9658	0.9468	0.9341	0.927	0.9297	0.9373	0.9554	0.9794	0.997	1.007	0.9639
15	0.998	0.9734	0.9437	0.9154	0.8967	0.8863	0.8901	0.901	0.9276	0.9644	0.9905	1.0053	0.941
20	0.9874	0.9556	0.9156	0.8783	0.8538	0.8401	0.845	0.8588	0.8937	0.9435	0.9777	0.9971	0.9122
25	0.9703	0.932	0.8817	0.8358	0.8059	0.7889	0.7949	0.8111	0.8539	0.9168	0.9588	0.9825	0.8777
30	0.947	0.9029	0.8423	0.7883	0.7531	0.733	0.74	0.7583	0.8085	0.8846	0.9339	0.9616	0.8378
35	0.9176	0.8685	0.7977	0.7361	0.696	0.673	0.6808	0.7008	0.7577	0.8471	0.9031	0.9345	0.7927
40	0.8824	0.829	0.7483	0.6796	0.635	0.6091	0.6177	0.639	0.702	0.8047	0.8668	0.9016	0.7429
45	0.8415	0.7847	0.6946	0.6191	0.5705	0.5419	0.5512	0.5733	0.6417	0.7575	0.8251	0.8629	0.6887
50	0.7954	0.7359	0.6367	0.5552	0.5029	0.4718	0.4818	0.5042	0.5775	0.706	0.7784	0.8188	0.6304
55	0.7444	0.6831	0.5753	0.4883	0.4329	0.3995	0.4099	0.4322	0.5096	0.6505	0.7271	0.7697	0.5685
60	0.6888	0.6266	0.5106	0.4189	0.3608	0.3253	0.3361	0.3579	0.4387	0.5916	0.6716	0.716	0.5036
65	0.6291	0.5669	0.4433	0.3475	0.2872	0.2499	0.261	0.2818	0.3652	0.5296	0.6122	0.6579	0.436
70	0.5657	0.5044	0.3737	0.2746	0.2126	0.1762	0.185	0.2045	0.2897	0.465	0.5495	0.596	0.3664
75	0.4992	0.4396	0.3025	0.2007	0.1779	0.1736	0.169	0.1264	0.2127	0.3983	0.4838	0.5308	0.3095
80	0.4299	0.373	0.2302	0.1615	0.1751	0.171	0.1665	0.1222	0.1349	0.33	0.4158	0.4627	0.2644
85	0.3586	0.305	0.1606	0.1662	0.1734	0.1684	0.1641	0.128	0.1089	0.2606	0.3458	0.3923	0.2277
90	0.2856	0.2011	0.1595	0.1651	0.1704	0.1658	0.1616	0.1289	0.1124	0.1891	0.2745	0.32	0.1945



Tabla 16: Azimut de 65°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.998	0.9908	0.9829	0.9749	0.9693	0.9661	0.9674	0.9709	0.9786	0.9884	0.9958	1.0001	0.9819
10	0.9985	0.9844	0.9679	0.9519	0.9411	0.9351	0.9373	0.9438	0.959	0.9793	0.9942	1.0026	0.9662
15	0.9925	0.972	0.9467	0.9229	0.9072	0.8982	0.9015	0.9105	0.933	0.9643	0.9863	0.9987	0.9445
20	0.9801	0.9537	0.9196	0.8883	0.8677	0.8559	0.8601	0.8715	0.9008	0.9434	0.9721	0.9884	0.9168
25	0.9613	0.9297	0.8866	0.8482	0.823	0.8085	0.8135	0.8268	0.8627	0.9167	0.9519	0.9717	0.8834
30	0.9364	0.9002	0.8481	0.803	0.7734	0.7562	0.762	0.7769	0.819	0.8845	0.9257	0.9488	0.8445
35	0.9054	0.8654	0.8044	0.7529	0.7192	0.6996	0.7061	0.7221	0.7697	0.847	0.8937	0.9199	0.8004
40	0.8687	0.8255	0.7559	0.6984	0.661	0.6389	0.6461	0.6629	0.7154	0.8045	0.8562	0.8851	0.7515
45	0.8265	0.7808	0.7028	0.6399	0.5991	0.5747	0.5824	0.5996	0.6566	0.7573	0.8135	0.8448	0.6982
50	0.7791	0.7318	0.6457	0.5777	0.5339	0.5074	0.5156	0.5327	0.5935	0.7058	0.7659	0.7993	0.6407
55	0.7269	0.6787	0.5849	0.5123	0.466	0.4375	0.4461	0.4627	0.5268	0.6503	0.7137	0.7488	0.5796
60	0.6703	0.6219	0.5208	0.4443	0.3958	0.3655	0.3744	0.3902	0.4568	0.5914	0.6574	0.6938	0.5152
65	0.6097	0.562	0.4539	0.374	0.3239	0.292	0.301	0.3155	0.3841	0.5294	0.5974	0.6348	0.4481
70	0.5457	0.4993	0.3847	0.3021	0.2507	0.2175	0.2266	0.2394	0.3093	0.4648	0.5341	0.572	0.3788
75	0.4786	0.4343	0.3138	0.2291	0.1779	0.1736	0.169	0.1624	0.2329	0.3981	0.468	0.5061	0.312
80	0.4089	0.3676	0.2417	0.1615	0.1751	0.171	0.1665	0.1222	0.1556	0.3298	0.3996	0.4375	0.2614
85	0.3373	0.2996	0.1689	0.1668	0.1746	0.1684	0.165	0.1289	0.1092	0.2604	0.3295	0.3668	0.223
90	0.2643	0.2011	0.1595	0.1657	0.1716	0.1658	0.1624	0.1298	0.1127	0.1891	0.2581	0.2945	0.1896

Tabla 17: Azimut de 70°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9961	0.9903	0.9839	0.9776	0.973	0.9703	0.9713	0.9742	0.9805	0.9883	0.9943	0.9977	0.9831
10	0.9947	0.9834	0.97	0.9572	0.9484	0.9434	0.9453	0.9505	0.9627	0.9793	0.9912	0.998	0.9687
15	0.9868	0.9705	0.9498	0.9308	0.918	0.9107	0.9133	0.9205	0.9386	0.9642	0.9818	0.9918	0.9481
20	0.9725	0.9518	0.9237	0.8987	0.882	0.8724	0.8758	0.8846	0.9082	0.9433	0.9663	0.9793	0.9216
25	0.9519	0.9273	0.8917	0.8611	0.8407	0.8289	0.8329	0.8431	0.8719	0.9166	0.9447	0.9605	0.8893
30	0.9252	0.8974	0.8542	0.8182	0.7944	0.7804	0.785	0.7962	0.8298	0.8844	0.9171	0.9355	0.8515
35	0.8927	0.8621	0.8113	0.7704	0.7434	0.7273	0.7325	0.7443	0.7822	0.8468	0.8839	0.9046	0.8085
40	0.8544	0.8218	0.7637	0.718	0.6881	0.67	0.6756	0.6877	0.7294	0.8043	0.8453	0.868	0.7605
45	0.8107	0.7768	0.7114	0.6614	0.6289	0.6089	0.6149	0.6269	0.6719	0.7571	0.8014	0.826	0.708
50	0.7621	0.7274	0.655	0.601	0.5662	0.5444	0.5508	0.5623	0.6102	0.7056	0.7528	0.7789	0.6514
55	0.7087	0.674	0.5948	0.5373	0.5005	0.4771	0.4837	0.4944	0.5446	0.6501	0.6997	0.727	0.591
60	0.6511	0.617	0.5313	0.4707	0.4323	0.4074	0.4142	0.4236	0.4756	0.5912	0.6426	0.6708	0.5273
65	0.5896	0.5568	0.4649	0.4017	0.362	0.3358	0.3427	0.3506	0.4038	0.5291	0.5819	0.6106	0.4608
70	0.5248	0.494	0.3962	0.3308	0.2903	0.2629	0.2698	0.2758	0.3298	0.4645	0.518	0.547	0.392
75	0.4571	0.4288	0.3256	0.2585	0.2176	0.1892	0.196	0.1997	0.254	0.3978	0.4515	0.4804	0.3213
80	0.387	0.362	0.2537	0.1854	0.1751	0.171	0.1665	0.1231	0.177	0.3295	0.3828	0.4113	0.2604
85	0.3152	0.2939	0.181	0.1604	0.1723	0.1684	0.1641	0.1232	0.1022	0.2601	0.3125	0.3403	0.2161
90	0.242	0.2011	0.1596	0.1663	0.1728	0.1669	0.1639	0.1307	0.113	0.1891	0.2411	0.2679	0.1845



Tabla 18: Azimut de 75°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9941	0.9898	0.985	0.9803	0.9768	0.9747	0.9755	0.9777	0.9824	0.9883	0.9928	0.9954	0.9844
10	0.9907	0.9824	0.9721	0.9626	0.9559	0.9521	0.9535	0.9574	0.9666	0.9792	0.9881	0.9932	0.9712
15	0.9808	0.969	0.9531	0.9389	0.9292	0.9236	0.9256	0.9308	0.9444	0.9642	0.9773	0.9847	0.9518
20	0.9646	0.9498	0.928	0.9094	0.8969	0.8895	0.892	0.8983	0.9159	0.9432	0.9603	0.9699	0.9265
25	0.9422	0.9249	0.897	0.8743	0.859	0.8499	0.8529	0.8599	0.8814	0.9165	0.9372	0.9489	0.8953
30	0.9138	0.8945	0.8604	0.8339	0.8161	0.8053	0.8087	0.8161	0.841	0.8842	0.9083	0.9218	0.8587
35	0.8795	0.8588	0.8185	0.7884	0.7683	0.7558	0.7596	0.7671	0.795	0.8467	0.8738	0.8889	0.8167
40	0.8396	0.8181	0.7717	0.7382	0.716	0.702	0.7061	0.7133	0.7438	0.8042	0.8339	0.8504	0.7698
45	0.7945	0.7727	0.7203	0.6836	0.6595	0.6441	0.6484	0.6551	0.6878	0.7569	0.789	0.8066	0.7182
50	0.7445	0.7229	0.6646	0.6251	0.5994	0.5826	0.5871	0.5928	0.6273	0.7054	0.7393	0.7579	0.6624
55	0.6899	0.6692	0.6051	0.563	0.536	0.5179	0.5225	0.527	0.5629	0.6499	0.6853	0.7045	0.6028
60	0.6312	0.6119	0.5421	0.4978	0.4698	0.4505	0.4552	0.4581	0.495	0.5909	0.6273	0.647	0.5398
65	0.5688	0.5515	0.4763	0.4301	0.4013	0.381	0.3856	0.3867	0.4241	0.5289	0.5659	0.5858	0.4738
70	0.5032	0.4884	0.4079	0.3603	0.3311	0.3097	0.3143	0.3132	0.3508	0.4643	0.5014	0.5212	0.4055
75	0.4349	0.4232	0.3377	0.2888	0.2595	0.2373	0.2418	0.2382	0.2756	0.3975	0.4344	0.4539	0.3352
80	0.3645	0.3562	0.266	0.2164	0.1872	0.171	0.1686	0.1623	0.199	0.3292	0.3654	0.3843	0.2642
85	0.2923	0.2881	0.1935	0.1604	0.1723	0.1684	0.1641	0.1232	0.1217	0.2599	0.2949	0.313	0.2127
90	0.2191	0.2011	0.1597	0.1668	0.174	0.1686	0.1654	0.1315	0.1133	0.1891	0.2234	0.2404	0.1794

Tabla 19: Azimut de 80°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9921	0.9893	0.9861	0.9831	0.9806	0.9791	0.9797	0.9812	0.9844	0.9883	0.9912	0.9929	0.9857
10	0.9866	0.9813	0.9744	0.9681	0.9636	0.9609	0.9619	0.9644	0.9706	0.9792	0.985	0.9883	0.9737
15	0.9747	0.9674	0.9564	0.9472	0.9407	0.9368	0.9381	0.9413	0.9503	0.9641	0.9726	0.9774	0.9556
20	0.9566	0.9477	0.9324	0.9204	0.912	0.9069	0.9085	0.9122	0.9237	0.9431	0.9541	0.9603	0.9315
25	0.9323	0.9223	0.9024	0.8878	0.8778	0.8715	0.8734	0.8771	0.891	0.9164	0.9296	0.937	0.9016
30	0.902	0.8915	0.8668	0.8499	0.8383	0.8307	0.8329	0.8364	0.8524	0.8841	0.8993	0.9077	0.866
35	0.866	0.8553	0.8259	0.8068	0.7937	0.7851	0.7874	0.7905	0.8081	0.8465	0.8635	0.8728	0.8251
40	0.8246	0.8142	0.78	0.7588	0.7445	0.7347	0.7372	0.7395	0.7585	0.804	0.8223	0.8323	0.7792
45	0.7779	0.7684	0.7294	0.7062	0.6909	0.6801	0.6826	0.6838	0.7039	0.7567	0.7762	0.7867	0.7286
50	0.7265	0.7183	0.6744	0.6496	0.6334	0.6216	0.6242	0.624	0.6448	0.7052	0.7255	0.7363	0.6736
55	0.6707	0.6643	0.6156	0.5892	0.5723	0.5596	0.5622	0.5603	0.5816	0.6497	0.6705	0.6815	0.6148
60	0.6109	0.6067	0.5532	0.5256	0.5082	0.4946	0.4971	0.4934	0.5148	0.5907	0.6117	0.6227	0.5525
65	0.5476	0.5461	0.4879	0.4592	0.4415	0.4271	0.4295	0.4236	0.4448	0.5286	0.5495	0.5603	0.4871
70	0.4812	0.4828	0.42	0.3904	0.3727	0.3576	0.3598	0.3515	0.3723	0.464	0.4845	0.4948	0.4193
75	0.4123	0.4174	0.3501	0.3198	0.3023	0.2866	0.2886	0.2776	0.2977	0.3973	0.417	0.4267	0.3494
80	0.3413	0.3503	0.2787	0.248	0.2309	0.2146	0.2163	0.2024	0.2216	0.329	0.3477	0.3566	0.2781
85	0.269	0.2821	0.2063	0.1754	0.1723	0.1684	0.1641	0.1266	0.1445	0.2596	0.2769	0.285	0.2109
90	0.1956	0.2011	0.1597	0.1672	0.1752	0.1703	0.1668	0.1323	0.1134	0.1891	0.2054	0.2123	0.174



Tabla 20: Azimut de 85°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.99	0.9887	0.9872	0.9859	0.9846	0.9836	0.984	0.9848	0.9864	0.9883	0.9896	0.9904	0.987
10	0.9825	0.9803	0.9766	0.9738	0.9715	0.9699	0.9704	0.9716	0.9746	0.9791	0.9818	0.9834	0.9763
15	0.9686	0.9659	0.9598	0.9556	0.9524	0.9502	0.9508	0.952	0.9563	0.964	0.9679	0.97	0.9594
20	0.9485	0.9456	0.9368	0.9315	0.9274	0.9246	0.9253	0.9263	0.9316	0.943	0.9478	0.9505	0.9366
25	0.9222	0.9198	0.9079	0.9016	0.8968	0.8933	0.8941	0.8946	0.9008	0.9162	0.9218	0.9249	0.9078
30	0.8901	0.8884	0.8733	0.8661	0.8608	0.8566	0.8575	0.8571	0.864	0.884	0.8901	0.8935	0.8735
35	0.8524	0.8518	0.8333	0.8254	0.8195	0.8147	0.8156	0.8141	0.8214	0.8464	0.8529	0.8564	0.8337
40	0.8092	0.8103	0.7883	0.7796	0.7734	0.7679	0.7688	0.766	0.7733	0.8038	0.8105	0.814	0.7888
45	0.7611	0.7641	0.7386	0.7292	0.7227	0.7166	0.7174	0.713	0.7203	0.7565	0.7633	0.7665	0.7391
50	0.7082	0.7137	0.6844	0.6745	0.6678	0.6611	0.6618	0.6556	0.6625	0.705	0.7114	0.7145	0.685
55	0.6512	0.6593	0.6262	0.6158	0.6092	0.6019	0.6024	0.5941	0.6005	0.6495	0.6555	0.6581	0.627
60	0.5902	0.6015	0.5645	0.5537	0.5472	0.5393	0.5396	0.5291	0.5348	0.5904	0.5958	0.598	0.5654
65	0.5259	0.5406	0.4997	0.4886	0.4823	0.4739	0.474	0.461	0.4658	0.5284	0.5329	0.5344	0.5006
70	0.4588	0.4771	0.4322	0.4209	0.415	0.4061	0.406	0.3902	0.394	0.4637	0.4673	0.468	0.4333
75	0.3892	0.4115	0.3626	0.3512	0.3458	0.3365	0.336	0.3174	0.32	0.397	0.3993	0.3992	0.3638
80	0.3179	0.3443	0.2915	0.28	0.2752	0.2654	0.2647	0.2431	0.2444	0.3287	0.3296	0.3285	0.2928
85	0.2452	0.2761	0.2193	0.2078	0.2038	0.1936	0.1925	0.1678	0.1676	0.2593	0.2587	0.2565	0.2207
90	0.1718	0.2011	0.1597	0.1676	0.1763	0.172	0.1682	0.133	0.1136	0.1891	0.1871	0.1838	0.1686

Tabla 21: Azimut de 90°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9879	0.9882	0.9884	0.9887	0.9885	0.9882	0.9883	0.9885	0.9885	0.9882	0.988	0.9879	0.9883
10	0.9783	0.9792	0.9789	0.9795	0.9793	0.9789	0.979	0.9788	0.9786	0.9791	0.9786	0.9784	0.9789
15	0.9624	0.9643	0.9632	0.9641	0.9641	0.9636	0.9636	0.9628	0.9623	0.964	0.9631	0.9626	0.9633
20	0.9402	0.9435	0.9413	0.9427	0.9429	0.9424	0.9423	0.9405	0.9396	0.9429	0.9415	0.9407	0.9417
25	0.9121	0.9172	0.9134	0.9154	0.916	0.9153	0.9151	0.9121	0.9107	0.9161	0.914	0.9128	0.9142
30	0.8781	0.8853	0.8799	0.8825	0.8834	0.8826	0.8822	0.8778	0.8756	0.8838	0.8809	0.8791	0.8809
35	0.8386	0.8483	0.8408	0.8441	0.8455	0.8445	0.8439	0.8379	0.8347	0.8462	0.8424	0.8399	0.8422
40	0.7938	0.8063	0.7967	0.8006	0.8025	0.8013	0.8005	0.7926	0.7883	0.8036	0.7987	0.7955	0.7984
45	0.7441	0.7598	0.7478	0.7523	0.7547	0.7533	0.7523	0.7423	0.7367	0.7563	0.7502	0.7462	0.7497
50	0.6898	0.709	0.6944	0.6995	0.7025	0.7009	0.6996	0.6874	0.6803	0.7047	0.6973	0.6924	0.6965
55	0.6315	0.6543	0.637	0.6426	0.6462	0.6444	0.6429	0.6281	0.6196	0.6492	0.6404	0.6346	0.6392
60	0.5694	0.5961	0.5758	0.582	0.5864	0.5843	0.5824	0.565	0.5549	0.5902	0.5799	0.573	0.5783
65	0.5042	0.535	0.5115	0.5182	0.5233	0.521	0.5188	0.4986	0.4869	0.5281	0.5162	0.5083	0.5142
70	0.4362	0.4713	0.4445	0.4516	0.4575	0.455	0.4524	0.4292	0.4159	0.4635	0.4499	0.441	0.4473
75	0.366	0.4056	0.3753	0.3828	0.3895	0.3867	0.3838	0.3575	0.3425	0.3967	0.3815	0.3714	0.3783
80	0.2942	0.3383	0.3044	0.3122	0.3198	0.3167	0.3134	0.284	0.2673	0.3284	0.3114	0.3002	0.3075
85	0.2213	0.27	0.2324	0.2404	0.2489	0.2454	0.2418	0.2092	0.1908	0.259	0.2403	0.2279	0.2356
90	0.1478	0.2011	0.1597	0.1679	0.1773	0.1736	0.1696	0.1336	0.1136	0.1891	0.1686	0.155	0.1631



Tabla 22: Azimut de 95°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9858	0.9877	0.9895	0.9916	0.9925	0.9927	0.9926	0.9921	0.9905	0.9882	0.9864	0.9854	0.9896
10	0.9741	0.9781	0.9812	0.9851	0.9872	0.988	0.9876	0.986	0.9827	0.9791	0.9754	0.9734	0.9815
15	0.9561	0.9627	0.9665	0.9725	0.9758	0.9771	0.9764	0.9735	0.9683	0.9639	0.9583	0.9552	0.9672
20	0.932	0.9415	0.9458	0.9538	0.9584	0.9602	0.9592	0.9547	0.9475	0.9428	0.9352	0.9308	0.9468
25	0.9019	0.9146	0.919	0.9292	0.9351	0.9373	0.9359	0.9296	0.9205	0.916	0.9062	0.9006	0.9205
30	0.8661	0.8823	0.8864	0.8988	0.906	0.9086	0.9069	0.8986	0.8872	0.8837	0.8717	0.8647	0.8884
35	0.8248	0.8448	0.8483	0.8628	0.8714	0.8743	0.8723	0.8617	0.848	0.8461	0.8318	0.8234	0.8508
40	0.7784	0.8024	0.8051	0.8216	0.8315	0.8347	0.8323	0.8193	0.8032	0.8034	0.7868	0.777	0.808
45	0.7271	0.7554	0.7571	0.7754	0.7867	0.7901	0.7872	0.7716	0.7531	0.7561	0.7371	0.7259	0.7602
50	0.6714	0.7043	0.7044	0.7245	0.7371	0.7407	0.7374	0.7191	0.6981	0.7045	0.6831	0.6704	0.7079
55	0.6118	0.6493	0.6477	0.6693	0.6833	0.687	0.6833	0.662	0.6386	0.649	0.6252	0.611	0.6514
60	0.5486	0.5908	0.5872	0.6102	0.6255	0.6293	0.6252	0.6009	0.575	0.59	0.5639	0.5481	0.5912
65	0.4824	0.5294	0.5234	0.5477	0.5643	0.5681	0.5635	0.5361	0.5079	0.5279	0.4995	0.4823	0.5277
70	0.4136	0.4656	0.4568	0.4822	0.5	0.5037	0.4988	0.4681	0.4377	0.4632	0.4326	0.4139	0.4614
75	0.3428	0.3997	0.3879	0.4143	0.4332	0.4368	0.4314	0.3975	0.3649	0.3965	0.3636	0.3436	0.3927
80	0.2706	0.3323	0.3173	0.3443	0.3643	0.3678	0.362	0.3248	0.2901	0.3281	0.2932	0.2718	0.3222
85	0.1973	0.2638	0.2454	0.2729	0.2939	0.2972	0.291	0.2505	0.2139	0.2588	0.2219	0.1992	0.2505
90	0.1478	0.2011	0.1728	0.2005	0.2225	0.2255	0.219	0.1751	0.1368	0.1891	0.1686	0.155	0.1845

Tabla 23: Azimut de 100°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9837	0.9871	0.9907	0.9944	0.9964	0.9972	0.9969	0.9957	0.9925	0.9882	0.9848	0.9829	0.9909
10	0.97	0.9771	0.9834	0.9908	0.995	0.9969	0.9961	0.9931	0.9867	0.979	0.9722	0.9684	0.9841
15	0.95	0.9611	0.9699	0.9809	0.9874	0.9905	0.9891	0.9842	0.9743	0.9638	0.9536	0.9478	0.971
20	0.9239	0.9394	0.9502	0.9649	0.9738	0.9778	0.9759	0.9687	0.9554	0.9427	0.9289	0.9211	0.9519
25	0.8919	0.912	0.9245	0.9429	0.954	0.9591	0.9567	0.947	0.9302	0.9159	0.8985	0.8885	0.9268
30	0.8542	0.8792	0.8929	0.9149	0.9284	0.9343	0.9314	0.9191	0.8987	0.8835	0.8625	0.8504	0.8958
35	0.8111	0.8413	0.8557	0.8814	0.8971	0.9039	0.9004	0.8852	0.8612	0.8459	0.8213	0.807	0.8593
40	0.763	0.7985	0.8135	0.8423	0.8603	0.8678	0.8637	0.8457	0.818	0.8033	0.775	0.7586	0.8175
45	0.7102	0.7511	0.7662	0.7982	0.8183	0.8265	0.8218	0.8006	0.7693	0.7559	0.7242	0.7057	0.7707
50	0.6532	0.6996	0.7144	0.7492	0.7714	0.7801	0.7749	0.7505	0.7157	0.7043	0.6691	0.6485	0.7192
55	0.5923	0.6443	0.6583	0.6957	0.72	0.7291	0.7234	0.6956	0.6574	0.6488	0.6102	0.5876	0.6635
60	0.528	0.5856	0.5984	0.6382	0.6643	0.6738	0.6675	0.6364	0.5949	0.5897	0.548	0.5234	0.604
65	0.4608	0.5239	0.5351	0.577	0.6049	0.6147	0.6078	0.5733	0.5287	0.5276	0.4829	0.4564	0.5411
70	0.3912	0.4598	0.469	0.5126	0.5421	0.5521	0.5447	0.5067	0.4592	0.463	0.4153	0.3871	0.4752
75	0.3198	0.3938	0.4004	0.4455	0.4765	0.4865	0.4787	0.4372	0.3871	0.3962	0.3459	0.316	0.407
80	0.2471	0.3263	0.33	0.3761	0.4084	0.4185	0.4102	0.3652	0.3127	0.3279	0.2752	0.2437	0.3368
85	0.1736	0.2578	0.2583	0.3051	0.3386	0.3485	0.3398	0.2914	0.2368	0.2585	0.2036	0.1708	0.2652
90	0.1478	0.2011	0.1858	0.2329	0.2674	0.277	0.2679	0.2162	0.1598	0.1891	0.1686	0.155	0.2057



Tabla 24: Azimut de 105°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9817	0.9866	0.9918	0.9972	1.0002	1.0016	1.0011	0.9992	0.9945	0.9882	0.9832	0.9805	0.9921
10	0.9659	0.976	0.9856	0.9963	1.0027	1.0058	1.0045	1.0002	0.9906	0.979	0.9691	0.9636	0.9866
15	0.9439	0.9596	0.9732	0.9891	0.9989	1.0036	1.0016	0.9946	0.9801	0.9637	0.9489	0.9405	0.9748
20	0.9158	0.9373	0.9546	0.9758	0.9889	0.9952	0.9925	0.9826	0.9631	0.9426	0.9227	0.9114	0.9569
25	0.8819	0.9095	0.9299	0.9563	0.9727	0.9805	0.977	0.9641	0.9397	0.9158	0.8909	0.8767	0.9329
30	0.8424	0.8762	0.8993	0.9308	0.9505	0.9597	0.9555	0.9393	0.91	0.8834	0.8535	0.8364	0.9031
35	0.7977	0.8379	0.8631	0.8996	0.9224	0.9329	0.928	0.9084	0.8741	0.8457	0.8109	0.7909	0.8676
40	0.7479	0.7946	0.8217	0.8627	0.8887	0.9004	0.8947	0.8716	0.8324	0.8031	0.7634	0.7406	0.8268
45	0.6936	0.7469	0.7752	0.8206	0.8495	0.8623	0.8559	0.8292	0.7853	0.7558	0.7114	0.6858	0.7809
50	0.6352	0.695	0.7241	0.7735	0.8052	0.8189	0.8118	0.7814	0.7329	0.7041	0.6553	0.627	0.7304
55	0.573	0.6394	0.6687	0.7217	0.756	0.7706	0.7628	0.7286	0.6758	0.6485	0.5954	0.5646	0.6754
60	0.5077	0.5804	0.6094	0.6656	0.7024	0.7177	0.7092	0.6713	0.6144	0.5895	0.5324	0.4991	0.6166
65	0.4395	0.5185	0.5467	0.6057	0.6448	0.6605	0.6514	0.6098	0.5491	0.5274	0.4665	0.4309	0.5542
70	0.3692	0.4542	0.4809	0.5424	0.5835	0.5996	0.5899	0.5446	0.4804	0.4627	0.3984	0.3607	0.4889
75	0.2971	0.388	0.4128	0.4761	0.519	0.5354	0.5252	0.4761	0.4088	0.3959	0.3285	0.2889	0.421
80	0.224	0.3204	0.3426	0.4074	0.4518	0.4683	0.4576	0.4049	0.3349	0.3276	0.2574	0.2161	0.3511
85	0.1502	0.2518	0.271	0.3367	0.3825	0.3989	0.3877	0.3316	0.2593	0.2582	0.1857	0.1569	0.2809
90	0.1478	0.2011	0.1986	0.2646	0.3114	0.3277	0.3161	0.2566	0.1824	0.1891	0.1686	0.155	0.2266

Tabla 25: Azimut de 110°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9797	0.9861	0.9929	0.9999	1.004	1.0059	1.0052	1.0026	0.9964	0.9881	0.9817	0.9781	0.9934
10	0.9619	0.975	0.9878	1.0017	1.0102	1.0144	1.0127	1.0071	0.9944	0.9789	0.966	0.9588	0.9891
15	0.938	0.958	0.9765	0.9972	1.01	1.0164	1.0138	1.0049	0.9858	0.9637	0.9443	0.9334	0.9785
20	0.908	0.9353	0.9589	0.9864	1.0036	1.0121	1.0086	0.9961	0.9706	0.9425	0.9167	0.9021	0.9617
25	0.8722	0.907	0.9352	0.9694	0.9909	1.0014	0.9969	0.9808	0.949	0.9157	0.8834	0.865	0.9389
30	0.831	0.8733	0.9056	0.9463	0.972	0.9845	0.979	0.959	0.921	0.8833	0.8447	0.8226	0.9102
35	0.7845	0.8345	0.8703	0.9173	0.9471	0.9613	0.955	0.931	0.8867	0.8456	0.8008	0.7751	0.8758
40	0.7332	0.7909	0.8296	0.8826	0.9163	0.9322	0.9249	0.8969	0.8466	0.8029	0.7521	0.7229	0.8359
45	0.6774	0.7428	0.784	0.8425	0.8799	0.8972	0.8891	0.857	0.8008	0.7556	0.699	0.6664	0.791
50	0.6176	0.6905	0.7336	0.7971	0.8381	0.8568	0.8478	0.8115	0.7497	0.7039	0.6418	0.6059	0.7412
55	0.5543	0.6346	0.6789	0.747	0.7912	0.8111	0.8012	0.7608	0.6938	0.6483	0.581	0.5421	0.687
60	0.4878	0.5753	0.6201	0.6924	0.7396	0.7604	0.7498	0.7053	0.6334	0.5893	0.5171	0.4753	0.6288
65	0.4187	0.5132	0.5579	0.6337	0.6837	0.7053	0.694	0.6454	0.569	0.5271	0.4505	0.406	0.567
70	0.3476	0.4487	0.4926	0.5714	0.6238	0.646	0.634	0.5815	0.501	0.4624	0.3818	0.3349	0.5022
75	0.275	0.3823	0.4248	0.506	0.5605	0.5831	0.5705	0.5141	0.43	0.3957	0.3115	0.2624	0.4346
80	0.2014	0.3146	0.3549	0.4378	0.4941	0.517	0.5038	0.4437	0.3566	0.3273	0.2401	0.189	0.365
85	0.1486	0.246	0.2834	0.3675	0.4253	0.4481	0.4345	0.3708	0.2812	0.2579	0.1719	0.1569	0.2993
90	0.1478	0.2011	0.211	0.2956	0.3544	0.377	0.363	0.2959	0.2044	0.1891	0.1686	0.155	0.2469



Tabla 26: Azimut de 115°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9777	0.9856	0.9939	1.0026	1.0076	1.0101	1.0092	1.006	0.9983	0.9881	0.9802	0.9758	0.9946
10	0.9581	0.974	0.9899	1.0069	1.0174	1.0227	1.0206	1.0137	0.9981	0.9789	0.9631	0.9542	0.9915
15	0.9322	0.9566	0.9796	1.005	1.0209	1.0289	1.0256	1.0148	0.9913	0.9636	0.9399	0.9265	0.9821
20	0.9004	0.9334	0.963	0.9967	1.0179	1.0285	1.0242	1.0092	0.9779	0.9424	0.9109	0.893	0.9664
25	0.8629	0.9046	0.9403	0.9821	1.0085	1.0217	1.0162	0.9969	0.958	0.9156	0.8762	0.8538	0.9447
30	0.8199	0.8705	0.9116	0.9613	0.9929	1.0084	1.0018	0.9781	0.9316	0.8831	0.8361	0.8093	0.9171
35	0.7718	0.8312	0.8772	0.9345	0.971	0.9888	0.9811	0.9528	0.8989	0.8454	0.791	0.7599	0.8836
40	0.7189	0.7872	0.8374	0.9019	0.9431	0.9629	0.9541	0.9214	0.8602	0.8027	0.7411	0.7058	0.8447
45	0.6617	0.7387	0.7925	0.8636	0.9093	0.9311	0.9212	0.8839	0.8158	0.7554	0.6869	0.6476	0.8006
50	0.6006	0.6862	0.7428	0.82	0.8699	0.8934	0.8826	0.8406	0.766	0.7037	0.6287	0.5856	0.7517
55	0.5361	0.6299	0.6887	0.7715	0.8253	0.8502	0.8384	0.792	0.7111	0.6481	0.567	0.5203	0.6982
60	0.4686	0.5704	0.6306	0.7182	0.7756	0.8018	0.7892	0.7382	0.6517	0.589	0.5023	0.4522	0.6407
65	0.3986	0.508	0.5688	0.6608	0.7213	0.7486	0.7351	0.6798	0.5882	0.5269	0.4351	0.3819	0.5794
70	0.3267	0.4434	0.5039	0.5995	0.6629	0.6909	0.6767	0.6172	0.5209	0.4622	0.3658	0.3099	0.515
75	0.2535	0.3768	0.4364	0.5348	0.6006	0.6292	0.6143	0.5508	0.4505	0.3954	0.295	0.2367	0.4478
80	0.1795	0.309	0.3667	0.4673	0.5351	0.564	0.5485	0.4811	0.3775	0.3271	0.2232	0.1628	0.3785
85	0.1486	0.2403	0.2954	0.3973	0.4667	0.4957	0.4797	0.4086	0.3023	0.2577	0.1719	0.1569	0.3184
90	0.1478	0.2011	0.2231	0.3255	0.396	0.4248	0.4084	0.334	0.2256	0.1891	0.1686	0.155	0.2666

Tabla 27: Azimut de 120°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9759	0.9851	0.9949	1.0051	1.0111	1.0142	1.013	1.0092	1.0001	0.9881	0.9787	0.9735	0.9957
10	0.9543	0.9731	0.9919	1.012	1.0244	1.0307	1.0283	1.0201	1.0017	0.9788	0.9602	0.9497	0.9938
15	0.9267	0.9552	0.9826	1.0125	1.0312	1.0408	1.037	1.0243	0.9966	0.9635	0.9357	0.9199	0.9855
20	0.8931	0.9315	0.967	1.0065	1.0316	1.0443	1.0391	1.0217	0.9849	0.9424	0.9053	0.8842	0.971
25	0.8538	0.9023	0.9452	0.9943	1.0255	1.0411	1.0347	1.0124	0.9666	0.9155	0.8693	0.843	0.9503
30	0.8092	0.8677	0.9174	0.9757	1.0129	1.0314	1.0236	0.9964	0.9418	0.883	0.8279	0.7966	0.9236
35	0.7595	0.8281	0.8839	0.951	0.9939	1.0151	1.0061	0.9738	0.9106	0.8453	0.7816	0.7452	0.8912
40	0.7052	0.7837	0.8448	0.9203	0.9687	0.9924	0.9822	0.9448	0.8733	0.8026	0.7306	0.6894	0.8532
45	0.6466	0.7349	0.8007	0.8839	0.9375	0.9635	0.952	0.9096	0.8301	0.7552	0.6753	0.6295	0.8099
50	0.5843	0.682	0.7517	0.842	0.9005	0.9285	0.9159	0.8685	0.7815	0.7035	0.6161	0.566	0.7617
55	0.5186	0.6254	0.6981	0.7949	0.8579	0.8878	0.8741	0.8218	0.7278	0.6479	0.5536	0.4994	0.7089
60	0.4501	0.5657	0.6405	0.743	0.8101	0.8415	0.8269	0.7698	0.6693	0.5888	0.4881	0.4301	0.652
65	0.3793	0.5031	0.5792	0.6867	0.7574	0.7901	0.7746	0.7128	0.6065	0.5267	0.4202	0.3588	0.5913
70	0.3067	0.4382	0.5147	0.6264	0.7003	0.734	0.7176	0.6514	0.54	0.462	0.3504	0.2859	0.5273
75	0.2329	0.3716	0.4475	0.5624	0.6391	0.6735	0.6564	0.586	0.4701	0.3952	0.2792	0.212	0.4605
80	0.1585	0.3036	0.3781	0.4954	0.5743	0.6091	0.5914	0.517	0.3974	0.3268	0.2071	0.1588	0.3931
85	0.1486	0.2349	0.3069	0.4258	0.5064	0.5413	0.5231	0.4449	0.3225	0.2574	0.1719	0.1569	0.3367
90	0.1478	0.2011	0.2346	0.3541	0.4358	0.4706	0.4519	0.3704	0.2459	0.1891	0.1686	0.155	0.2854



Tabla 28: Azimut de 125°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9741	0.9847	0.9959	1.0075	1.0145	1.018	1.0166	1.0123	1.0018	0.9881	0.9774	0.9714	0.9968
10	0.9508	0.9722	0.9939	1.0167	1.031	1.0383	1.0355	1.0262	1.0051	0.9788	0.9575	0.9455	0.996
15	0.9214	0.9538	0.9855	1.0196	1.0411	1.0521	1.0478	1.0333	1.0017	0.9635	0.9316	0.9136	0.9887
20	0.8862	0.9297	0.9708	1.0159	1.0446	1.0592	1.0534	1.0336	0.9915	0.9423	0.8999	0.8759	0.9753
25	0.8453	0.9001	0.9499	1.0058	1.0415	1.0596	1.0522	1.0271	0.9747	0.9154	0.8627	0.8327	0.9556
30	0.7991	0.8652	0.923	0.9893	1.0319	1.0532	1.0444	1.0137	0.9514	0.8829	0.8201	0.7844	0.9299
35	0.7479	0.8251	0.8902	0.9666	1.0157	1.0402	1.0299	0.9937	0.9217	0.8452	0.7727	0.7313	0.8983
40	0.6922	0.7804	0.8519	0.9378	0.9931	1.0205	1.0088	0.9671	0.8857	0.8024	0.7206	0.6738	0.8612
45	0.6323	0.7312	0.8084	0.9031	0.9643	0.9943	0.9813	0.9341	0.8437	0.755	0.6643	0.6123	0.8187
50	0.5687	0.678	0.76	0.8628	0.9295	0.9619	0.9476	0.895	0.7962	0.7033	0.6042	0.5474	0.7712
55	0.502	0.6212	0.7071	0.8171	0.8889	0.9234	0.908	0.8501	0.7435	0.6477	0.5408	0.4795	0.7191
60	0.4325	0.5612	0.65	0.7665	0.8429	0.8792	0.8627	0.7997	0.6859	0.5886	0.4746	0.4091	0.6627
65	0.3609	0.4984	0.5891	0.7113	0.7917	0.8295	0.812	0.7441	0.6239	0.5265	0.4061	0.3368	0.6025
70	0.2876	0.4334	0.525	0.6518	0.7358	0.7748	0.7564	0.6839	0.558	0.4617	0.3357	0.2631	0.5389
75	0.2133	0.3666	0.4581	0.5886	0.6756	0.7155	0.6963	0.6193	0.4887	0.395	0.2641	0.1885	0.4725
80	0.1495	0.2985	0.3888	0.5222	0.6115	0.6519	0.6321	0.551	0.4164	0.3266	0.1917	0.1588	0.4082
85	0.1486	0.2297	0.3178	0.4529	0.544	0.5846	0.5642	0.4794	0.3417	0.2572	0.1719	0.1569	0.3541
90	0.1478	0.2011	0.2456	0.3813	0.4736	0.5141	0.4932	0.405	0.2652	0.1891	0.1686	0.155	0.3033

Tabla 29: Azimut de 130°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9724	0.9842	0.9968	1.0097	1.0176	1.0216	1.0201	1.0151	1.0034	0.9881	0.9761	0.9694	0.9979
10	0.9475	0.9713	0.9957	1.0212	1.0373	1.0455	1.0423	1.0319	1.0083	0.9787	0.955	0.9415	0.998
15	0.9165	0.9526	0.9882	1.0262	1.0504	1.0628	1.0579	1.0418	1.0064	0.9634	0.9278	0.9077	0.9918
20	0.8796	0.9281	0.9743	1.0247	1.0568	1.0733	1.0667	1.0448	0.9977	0.9422	0.8949	0.8681	0.9793
25	0.8372	0.898	0.9543	1.0166	1.0566	1.077	1.0687	1.0409	0.9824	0.9153	0.8565	0.8231	0.9605
30	0.7895	0.8627	0.9282	1.0021	1.0497	1.0738	1.0639	1.03	0.9604	0.8828	0.8128	0.773	0.9357
35	0.737	0.8224	0.8962	0.9813	1.0361	1.0637	1.0522	1.0124	0.932	0.845	0.7642	0.7182	0.9051
40	0.6799	0.7773	0.8586	0.9542	1.016	1.0468	1.0338	0.988	0.8973	0.8023	0.7111	0.6591	0.8687
45	0.6188	0.7278	0.8157	0.9211	0.9895	1.0233	1.0088	0.9571	0.8565	0.7549	0.6539	0.5962	0.827
50	0.5541	0.6743	0.7679	0.8823	0.9567	0.9933	0.9774	0.9199	0.81	0.7032	0.593	0.5299	0.7802
55	0.4864	0.6172	0.7155	0.838	0.918	0.9569	0.9398	0.8767	0.7582	0.6475	0.5288	0.4608	0.7287
60	0.416	0.557	0.6589	0.7885	0.8736	0.9146	0.8963	0.8277	0.7015	0.5884	0.4619	0.3893	0.6728
65	0.3436	0.494	0.5984	0.7343	0.8239	0.8666	0.8472	0.7735	0.6402	0.5263	0.3928	0.3161	0.6131
70	0.2697	0.4288	0.5347	0.6757	0.7692	0.8132	0.7929	0.7143	0.5749	0.4615	0.3219	0.2416	0.5499
75	0.1949	0.3619	0.468	0.6132	0.7099	0.7549	0.7338	0.6506	0.506	0.3947	0.2499	0.1665	0.4837
80	0.1495	0.2937	0.399	0.5472	0.6465	0.6921	0.6703	0.5829	0.4341	0.3264	0.1773	0.1588	0.4231
85	0.1486	0.2249	0.3281	0.4782	0.5794	0.6253	0.6028	0.5116	0.3596	0.257	0.1719	0.1569	0.3704
90	0.1478	0.2011	0.2559	0.4068	0.5091	0.5549	0.532	0.4374	0.2832	0.1891	0.1686	0.155	0.3201



Tabla 30: Azimut de 135°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9709	0.9839	0.9976	1.0118	1.0205	1.0249	1.0232	1.0178	1.0049	0.988	0.9749	0.9676	0.9988
10	0.9444	0.9706	0.9973	1.0254	1.043	1.0522	1.0486	1.0372	1.0112	0.9787	0.9526	0.9379	0.9999
15	0.9119	0.9514	0.9907	1.0324	1.059	1.0727	1.0673	1.0497	1.0108	0.9634	0.9243	0.9022	0.9946
20	0.8736	0.9265	0.9776	1.0329	1.0682	1.0864	1.0792	1.0552	1.0035	0.9421	0.8903	0.8608	0.983
25	0.8297	0.8961	0.9584	1.0267	1.0706	1.0931	1.0841	1.0537	0.9895	0.9152	0.8507	0.8141	0.9652
30	0.7807	0.8605	0.933	1.014	1.0663	1.0929	1.082	1.0452	0.9688	0.8827	0.806	0.7624	0.9412
35	0.7268	0.8198	0.9017	0.9949	1.0551	1.0856	1.073	1.0297	0.9416	0.8449	0.7564	0.706	0.9113
40	0.6685	0.7744	0.8648	0.9694	1.0373	1.0713	1.0571	1.0074	0.908	0.8022	0.7024	0.6455	0.8757
45	0.6063	0.7246	0.8225	0.9378	1.0128	1.0502	1.0344	0.9784	0.8683	0.7547	0.6443	0.5812	0.8346
50	0.5405	0.6708	0.7752	0.9004	0.982	1.0224	1.0051	0.9429	0.8228	0.703	0.5825	0.5136	0.7884
55	0.4718	0.6135	0.7233	0.8573	0.945	0.9881	0.9694	0.9013	0.7719	0.6474	0.5176	0.4434	0.7375
60	0.4006	0.553	0.6671	0.8089	0.9022	0.9475	0.9275	0.8538	0.7159	0.5882	0.4501	0.3709	0.6822
65	0.3275	0.4899	0.6071	0.7556	0.8538	0.901	0.8799	0.8007	0.6553	0.5261	0.3804	0.2968	0.6228
70	0.2531	0.4245	0.5436	0.6978	0.8001	0.8489	0.8267	0.7425	0.5906	0.4613	0.3091	0.2216	0.56
75	0.1778	0.3575	0.4772	0.6359	0.7417	0.7915	0.7685	0.6796	0.5221	0.3945	0.2368	0.1607	0.4953
80	0.1495	0.2893	0.4083	0.5704	0.6789	0.7294	0.7057	0.6125	0.4505	0.3262	0.1752	0.1588	0.4379
85	0.1486	0.2204	0.3376	0.5017	0.6122	0.663	0.6387	0.5416	0.3762	0.2568	0.1719	0.1569	0.3855
90	0.1478	0.2011	0.2654	0.4303	0.542	0.5927	0.568	0.4674	0.2999	0.1891	0.1686	0.155	0.3356

Tabla 31: Azimut de 140°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9695	0.9835	0.9984	1.0138	1.0232	1.028	1.0262	1.0202	1.0062	0.988	0.9738	0.9659	0.9997
10	0.9416	0.9698	0.9989	1.0292	1.0484	1.0583	1.0544	1.042	1.0139	0.9787	0.9504	0.9345	1.0017
15	0.9077	0.9503	0.9929	1.0381	1.0669	1.0818	1.0759	1.0569	1.0148	0.9633	0.9211	0.8972	0.9972
20	0.868	0.9251	0.9807	1.0403	1.0786	1.0984	1.0905	1.0647	1.0088	0.9421	0.886	0.8542	0.9864
25	0.8228	0.8944	0.9621	1.0359	1.0835	1.1079	1.0981	1.0654	0.9959	0.9151	0.8455	0.8059	0.9694
30	0.7725	0.8584	0.9374	1.0249	1.0815	1.1103	1.0986	1.059	0.9764	0.8826	0.7998	0.7527	0.9462
35	0.7175	0.8174	0.9068	1.0073	1.0725	1.1056	1.092	1.0456	0.9503	0.8448	0.7493	0.6949	0.917
40	0.6581	0.7717	0.8705	0.9833	1.0567	1.0937	1.0784	1.0251	0.9178	0.802	0.6943	0.633	0.8821
45	0.5948	0.7216	0.8288	0.9531	1.0342	1.0748	1.0578	0.9979	0.8791	0.7546	0.6354	0.5674	0.8416
50	0.5281	0.6677	0.7819	0.9169	1.0052	1.049	1.0304	0.964	0.8345	0.7029	0.573	0.4987	0.796
55	0.4585	0.6101	0.7305	0.8749	0.9698	1.0165	0.9964	0.9238	0.7844	0.6472	0.5074	0.4274	0.7456
60	0.3866	0.5494	0.6747	0.8276	0.9283	0.9776	0.9561	0.8775	0.7291	0.5881	0.4393	0.3541	0.6907
65	0.3128	0.4861	0.6149	0.7751	0.8811	0.9325	0.9098	0.8256	0.6691	0.5259	0.3691	0.2792	0.6318
70	0.2378	0.4206	0.5518	0.718	0.8284	0.8815	0.8577	0.7683	0.6048	0.4612	0.2974	0.2034	0.5692
75	0.1621	0.3535	0.4856	0.6567	0.7708	0.8251	0.8003	0.7061	0.5368	0.3944	0.2247	0.1607	0.5064
80	0.1495	0.2852	0.4169	0.5916	0.7085	0.7636	0.7381	0.6394	0.4654	0.326	0.1752	0.1588	0.4515
85	0.1486	0.2162	0.3462	0.5231	0.6421	0.6975	0.6714	0.5689	0.3913	0.2566	0.1719	0.1569	0.3992
90	0.1478	0.2011	0.2741	0.4519	0.5721	0.6273	0.6009	0.4948	0.3151	0.1891	0.1686	0.155	0.3498



Tabla 32: Azimut de 145°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9682	0.9832	0.9991	1.0155	1.0256	1.0308	1.0288	1.0224	1.0075	0.988	0.9728	0.9643	1.0005
10	0.9391	0.9692	1.0003	1.0326	1.0531	1.0637	1.0596	1.0464	1.0164	0.9786	0.9485	0.9314	1.0032
15	0.9039	0.9494	0.995	1.0432	1.074	1.0899	1.0837	1.0634	1.0184	0.9633	0.9182	0.8926	0.9996
20	0.863	0.9238	0.9834	1.0471	1.088	1.1092	1.1008	1.0733	1.0135	0.942	0.8821	0.8482	0.9895
25	0.8167	0.8928	0.9655	1.0442	1.0951	1.1212	1.1108	1.076	1.0018	0.915	0.8407	0.7985	0.9732
30	0.7652	0.8565	0.9414	1.0347	1.0951	1.1261	1.1136	1.0715	0.9833	0.8825	0.7941	0.7439	0.9507
35	0.7091	0.8152	0.9114	1.0185	1.0882	1.1236	1.1091	1.0598	0.9581	0.8447	0.7428	0.6848	0.9221
40	0.6487	0.7693	0.8756	0.9959	1.0742	1.1139	1.0975	1.0411	0.9265	0.8019	0.6871	0.6217	0.8878
45	0.5844	0.719	0.8344	0.9669	1.0535	1.097	1.0788	1.0154	0.8888	0.7545	0.6275	0.555	0.8479
50	0.5169	0.6648	0.788	0.9317	1.026	1.073	1.0532	0.983	0.845	0.7027	0.5643	0.4853	0.8028
55	0.4465	0.607	0.7369	0.8908	0.992	1.0422	1.0208	0.9441	0.7955	0.6471	0.4982	0.4131	0.7528
60	0.3739	0.5462	0.6814	0.8443	0.9518	1.0047	0.9818	0.8989	0.7409	0.5879	0.4295	0.3389	0.6984
65	0.2995	0.4827	0.622	0.7926	0.9056	0.9608	0.9367	0.8479	0.6814	0.5257	0.3589	0.2633	0.6398
70	0.224	0.4171	0.5591	0.7361	0.8539	0.9109	0.8856	0.7914	0.6176	0.461	0.2868	0.1869	0.5775
75	0.1503	0.3499	0.4931	0.6753	0.7969	0.8552	0.829	0.7299	0.5499	0.3942	0.2138	0.1607	0.5165
80	0.1495	0.2815	0.4246	0.6105	0.7352	0.7943	0.7673	0.6637	0.4788	0.3258	0.1752	0.1588	0.4638
85	0.1486	0.2125	0.354	0.5423	0.6691	0.7285	0.7009	0.5934	0.4049	0.2564	0.1719	0.1569	0.4116
90	0.1478	0.2011	0.282	0.4711	0.5991	0.6584	0.6304	0.5194	0.3286	0.1891	0.1686	0.155	0.3626

Tabla 33: Azimut de 150°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9671	0.9829	0.9997	1.017	1.0277	1.0332	1.0311	1.0244	1.0085	0.988	0.972	0.963	1.0012
10	0.9368	0.9686	1.0015	1.0357	1.0573	1.0686	1.0642	1.0503	1.0185	0.9786	0.9467	0.9288	1.0046
15	0.9006	0.9485	0.9968	1.0477	1.0803	1.0972	1.0906	1.0691	1.0216	0.9632	0.9156	0.8886	1.0016
20	0.8586	0.9227	0.9858	1.053	1.0963	1.1187	1.1098	1.0808	1.0177	0.942	0.8787	0.8429	0.9923
25	0.8112	0.8914	0.9684	1.0515	1.1053	1.133	1.1219	1.0853	1.0069	0.915	0.8365	0.792	0.9765
30	0.7588	0.8549	0.9449	1.0433	1.1072	1.1399	1.1267	1.0825	0.9893	0.8824	0.7892	0.7362	0.9546
35	0.7017	0.8133	0.9154	1.0284	1.102	1.1395	1.1242	1.0724	0.965	0.8446	0.7371	0.6759	0.9266
40	0.6404	0.7672	0.8802	1.0069	1.0897	1.1317	1.1144	1.0552	0.9342	0.8018	0.6807	0.6117	0.8928
45	0.5753	0.7167	0.8394	0.979	1.0704	1.1166	1.0974	1.0309	0.8972	0.7544	0.6205	0.5441	0.8535
50	0.507	0.6623	0.7934	0.9448	1.0444	1.0942	1.0733	0.9997	0.8541	0.7026	0.5567	0.4735	0.8088
55	0.4359	0.6043	0.7426	0.9047	1.0116	1.0648	1.0422	0.9619	0.8053	0.6469	0.4901	0.4004	0.7593
60	0.3627	0.5433	0.6874	0.859	0.9725	1.0286	1.0045	0.9177	0.7512	0.5878	0.4209	0.3255	0.7051
65	0.2878	0.4798	0.6283	0.808	0.9273	0.9858	0.9604	0.8676	0.6922	0.5256	0.3499	0.2493	0.6468
70	0.2119	0.414	0.5656	0.7521	0.8763	0.9368	0.9102	0.8118	0.6288	0.4609	0.2775	0.1724	0.5848
75	0.1503	0.3467	0.4998	0.6916	0.82	0.8818	0.8542	0.7507	0.5613	0.394	0.2042	0.1607	0.5263
80	0.1495	0.2783	0.4314	0.6272	0.7586	0.8214	0.793	0.685	0.4905	0.3257	0.1752	0.1588	0.4745
85	0.1486	0.2092	0.3609	0.5591	0.6928	0.7559	0.7269	0.6149	0.4167	0.2563	0.1719	0.1569	0.4225
90	0.1478	0.2011	0.2888	0.488	0.6229	0.6858	0.6564	0.541	0.3405	0.1891	0.1686	0.155	0.3738



Tabla 34: Azimut de 150°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9661	0.9826	1.0003	1.0183	1.0295	1.0353	1.0331	1.026	1.0095	0.988	0.9712	0.9618	1.0018
10	0.9349	0.9681	1.0025	1.0383	1.061	1.0728	1.0682	1.0536	1.0204	0.9786	0.9453	0.9264	1.0058
15	0.8977	0.9478	0.9984	1.0516	1.0856	1.1034	1.0964	1.074	1.0243	0.9632	0.9134	0.8852	1.0034
20	0.8548	0.9217	0.9879	1.0581	1.1034	1.1268	1.1176	1.0873	1.0213	0.9419	0.8758	0.8384	0.9946
25	0.8065	0.8902	0.971	1.0578	1.114	1.1431	1.1315	1.0933	1.0113	0.9149	0.8329	0.7863	0.9794
30	0.7532	0.8534	0.948	1.0507	1.1175	1.1519	1.1381	1.0919	0.9945	0.8824	0.7849	0.7295	0.958
35	0.6953	0.8117	0.9189	1.0369	1.1138	1.1532	1.1372	1.0832	0.9709	0.8445	0.7322	0.6683	0.9305
40	0.6332	0.7653	0.884	1.0164	1.103	1.147	1.129	1.0672	0.9408	0.8017	0.6752	0.6032	0.8972
45	0.5675	0.7147	0.8437	0.9893	1.085	1.1334	1.1134	1.0441	0.9044	0.7543	0.6144	0.5347	0.8582
50	0.4985	0.6601	0.7981	0.956	1.0601	1.1124	1.0905	1.014	0.8619	0.7025	0.5502	0.4633	0.814
55	0.4269	0.602	0.7476	0.9167	1.0285	1.0843	1.0607	0.9772	0.8137	0.6468	0.4831	0.3895	0.7647
60	0.3531	0.5409	0.6926	0.8716	0.9903	1.0492	1.024	0.9338	0.7601	0.5877	0.4136	0.314	0.7109
65	0.2778	0.4772	0.6336	0.8211	0.9459	1.0073	0.9808	0.8844	0.7014	0.5255	0.3422	0.2372	0.6529
70	0.2015	0.4114	0.5711	0.7657	0.8956	0.9591	0.9313	0.8292	0.6383	0.4607	0.2695	0.1625	0.5913
75	0.1503	0.344	0.5054	0.7056	0.8398	0.9047	0.8759	0.7686	0.5711	0.3939	0.196	0.1607	0.5347
80	0.1495	0.2755	0.4371	0.6414	0.7788	0.8447	0.8151	0.7032	0.5004	0.3255	0.1752	0.1588	0.4838
85	0.1486	0.2072	0.3667	0.5735	0.7131	0.7794	0.7492	0.6333	0.4267	0.2561	0.1719	0.1569	0.4319
90	0.1478	0.2011	0.2947	0.5025	0.6432	0.7093	0.6787	0.5595	0.3506	0.1891	0.1686	0.155	0.3833

Tabla 35: Azimut de 160°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9653	0.9824	1.0007	1.0194	1.031	1.037	1.0347	1.0274	1.0103	0.988	0.9706	0.9609	1.0023
10	0.9333	0.9677	1.0034	1.0404	1.064	1.0762	1.0715	1.0563	1.0219	0.9786	0.944	0.9245	1.0068
15	0.8953	0.9472	0.9997	1.0548	1.0901	1.1085	1.1013	1.0781	1.0266	0.9632	0.9115	0.8823	1.0049
20	0.8516	0.9209	0.9896	1.0623	1.1093	1.1336	1.124	1.0927	1.0243	0.9419	0.8734	0.8346	0.9965
25	0.8026	0.8892	0.9731	1.063	1.1213	1.1514	1.1394	1.0999	1.015	0.9149	0.8299	0.7817	0.9818
30	0.7486	0.8523	0.9505	1.0569	1.1261	1.1617	1.1474	1.0998	0.9988	0.8823	0.7814	0.724	0.9608
35	0.69	0.8104	0.9218	1.0439	1.1236	1.1645	1.148	1.0922	0.9758	0.8445	0.7282	0.662	0.9337
40	0.6273	0.7638	0.8873	1.0242	1.1139	1.1597	1.141	1.0772	0.9463	0.8017	0.6707	0.5961	0.9008
45	0.5609	0.713	0.8472	0.9979	1.0971	1.1473	1.1266	1.0551	0.9103	0.7542	0.6094	0.5269	0.8622
50	0.4914	0.6583	0.8019	0.9653	1.0732	1.1275	1.1048	1.0259	0.8683	0.7024	0.5448	0.4548	0.8182
55	0.4193	0.6001	0.7517	0.9266	1.0424	1.1004	1.076	0.9898	0.8205	0.6467	0.4773	0.3805	0.7693
60	0.3451	0.5389	0.697	0.882	1.005	1.0662	1.0401	0.9472	0.7672	0.5876	0.4074	0.3044	0.7157
65	0.2694	0.4751	0.6382	0.832	0.9613	1.0251	0.9976	0.8983	0.709	0.5254	0.3358	0.2273	0.6579
70	0.1928	0.4092	0.5757	0.7769	0.9115	0.9776	0.9488	0.8436	0.6461	0.4606	0.2628	0.1625	0.5973
75	0.1503	0.3417	0.5101	0.7171	0.8561	0.9238	0.8939	0.7834	0.5791	0.3938	0.1892	0.1607	0.5416
80	0.1495	0.2731	0.4419	0.6531	0.7955	0.8641	0.8334	0.7182	0.5085	0.3254	0.1752	0.1588	0.4914
85	0.1486	0.2072	0.3715	0.5853	0.73	0.799	0.7677	0.6485	0.4349	0.256	0.1719	0.1569	0.4398
90	0.1478	0.2011	0.2996	0.5143	0.6601	0.7286	0.6971	0.5747	0.3588	0.1891	0.1686	0.155	0.3912



Tabla 36: Azimut de 165°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9647	0.9823	1.001	1.0203	1.0322	1.0384	1.036	1.0285	1.0109	0.988	0.9701	0.9601	1.0027
10	0.932	0.9674	1.0041	1.0421	1.0663	1.0789	1.0741	1.0585	1.0231	0.9786	0.9431	0.923	1.0076
15	0.8935	0.9467	1.0007	1.0573	1.0936	1.1125	1.1052	1.0813	1.0283	0.9632	0.9101	0.8801	1.006
20	0.8492	0.9203	0.9909	1.0657	1.1139	1.1389	1.1291	1.0969	1.0266	0.9418	0.8715	0.8316	0.998
25	0.7996	0.8884	0.9748	1.0671	1.127	1.158	1.1457	1.1051	1.0178	0.9148	0.8276	0.778	0.9837
30	0.745	0.8513	0.9524	1.0617	1.1328	1.1695	1.1548	1.1059	1.0022	0.8823	0.7786	0.7197	0.963
35	0.6859	0.8093	0.924	1.0494	1.1314	1.1734	1.1564	1.0992	0.9797	0.8444	0.725	0.657	0.9363
40	0.6227	0.7626	0.8898	1.0303	1.1226	1.1696	1.1504	1.0851	0.9505	0.8016	0.6671	0.5906	0.9036
45	0.5558	0.7117	0.85	1.0047	1.1066	1.1583	1.137	1.0637	0.915	0.7541	0.6055	0.5208	0.8653
50	0.4859	0.6569	0.8049	0.9726	1.0834	1.1394	1.1161	1.0352	0.8733	0.7024	0.5405	0.4482	0.8216
55	0.4134	0.5986	0.7549	0.9343	1.0534	1.1131	1.088	0.9997	0.8258	0.6467	0.4727	0.3734	0.7728
60	0.3389	0.5373	0.7004	0.8902	1.0166	1.0796	1.0528	0.9576	0.7728	0.5875	0.4026	0.2969	0.7194
65	0.2629	0.4734	0.6417	0.8405	0.9734	1.0392	1.0109	0.9092	0.7148	0.5253	0.3307	0.2194	0.6618
70	0.186	0.4074	0.5794	0.7856	0.9241	0.9921	0.9626	0.8549	0.6521	0.4606	0.2576	0.1625	0.6021
75	0.1503	0.3399	0.5138	0.726	0.8691	0.9388	0.9081	0.795	0.5853	0.3937	0.1838	0.1607	0.547
80	0.1495	0.2713	0.4456	0.6621	0.8087	0.8795	0.8479	0.73	0.5148	0.3254	0.1752	0.1588	0.4974
85	0.1486	0.2072	0.3753	0.5945	0.7433	0.8291	0.7824	0.6604	0.4412	0.2559	0.1719	0.1569	0.4472
90	0.1478	0.2011	0.3033	0.5235	0.6734	0.7592	0.724	0.5866	0.3652	0.1891	0.1686	0.155	0.3997

Tabla 37: Azimut de 170°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9642	0.9821	1.0013	1.0209	1.0331	1.0394	1.037	1.0293	1.0113	0.988	0.9698	0.9596	1.003
10	0.9311	0.9672	1.0046	1.0434	1.068	1.0809	1.0759	1.06	1.0239	0.9786	0.9424	0.9219	1.0082
15	0.8921	0.9463	1.0015	1.0591	1.0961	1.1154	1.1079	1.0836	1.0296	0.9631	0.9091	0.8785	1.0069
20	0.8474	0.9198	0.9919	1.068	1.1172	1.1428	1.1327	1.1	1.0283	0.9418	0.8701	0.8295	0.9991
25	0.7974	0.8879	0.976	1.0701	1.1311	1.1627	1.1502	1.1089	1.0199	0.9148	0.8259	0.7754	0.985
30	0.7424	0.8507	0.9539	1.0651	1.1377	1.1751	1.1601	1.1103	1.0046	0.8822	0.7766	0.7166	0.9646
35	0.6829	0.8085	0.9257	1.0533	1.1369	1.1798	1.1625	1.1042	0.9824	0.8444	0.7227	0.6534	0.9381
40	0.6193	0.7618	0.8916	1.0347	1.1288	1.1768	1.1572	1.0907	0.9536	0.8016	0.6646	0.5865	0.9056
45	0.5522	0.7108	0.852	1.0095	1.1134	1.1661	1.1444	1.0699	0.9183	0.7541	0.6027	0.5164	0.8675
50	0.4819	0.6559	0.8071	0.9778	1.0908	1.1479	1.1242	1.0418	0.8769	0.7023	0.5375	0.4434	0.824
55	0.4091	0.5975	0.7573	0.9399	1.0612	1.1222	1.0966	1.0068	0.8296	0.6466	0.4695	0.3683	0.7754
60	0.3344	0.5361	0.7029	0.896	1.0249	1.0892	1.062	0.9651	0.7768	0.5875	0.3992	0.2915	0.7221
65	0.2582	0.4722	0.6443	0.8465	0.9821	1.0493	1.0205	0.917	0.7189	0.5253	0.3271	0.2138	0.6646
70	0.1811	0.4062	0.582	0.7919	0.9331	1.0027	0.9725	0.863	0.6563	0.4605	0.2538	0.1625	0.6055
75	0.1503	0.3386	0.5166	0.7324	0.8784	0.9497	0.9184	0.8033	0.5896	0.3937	0.1799	0.1607	0.551
80	0.1495	0.27	0.4483	0.6686	0.8182	0.8907	0.8585	0.7384	0.5192	0.3253	0.1752	0.1588	0.5017
85	0.1486	0.2072	0.3779	0.601	0.7531	0.8406	0.8053	0.669	0.4457	0.2559	0.1719	0.1569	0.4528
90	0.1478	0.2011	0.3059	0.53	0.6924	0.7708	0.735	0.5953	0.3695	0.1891	0.1686	0.155	0.405



Tabla 38: Azimut de 175°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.964	0.9821	1.0014	1.0213	1.0336	1.04	1.0375	1.0298	1.0116	0.988	0.9696	0.9593	1.0032
10	0.9306	0.967	1.0049	1.0441	1.069	1.082	1.077	1.061	1.0245	0.9785	0.942	0.9213	1.0085
15	0.8913	0.9461	1.0019	1.0602	1.0977	1.1172	1.1096	1.085	1.0304	0.9631	0.9085	0.8775	1.0074
20	0.8463	0.9196	0.9925	1.0695	1.1192	1.1451	1.1349	1.1018	1.0293	0.9418	0.8693	0.8282	0.9998
25	0.796	0.8875	0.9767	1.0718	1.1336	1.1656	1.1529	1.1111	1.0211	0.9148	0.8248	0.7738	0.9858
30	0.7408	0.8503	0.9547	1.0672	1.1406	1.1784	1.1633	1.113	1.006	0.8822	0.7754	0.7147	0.9656
35	0.6811	0.8081	0.9266	1.0557	1.1403	1.1836	1.1661	1.1073	0.9841	0.8444	0.7213	0.6513	0.9392
40	0.6173	0.7613	0.8927	1.0374	1.1325	1.1811	1.1613	1.0941	0.9554	0.8016	0.663	0.5841	0.9068
45	0.5499	0.7102	0.8532	1.0124	1.1175	1.1709	1.1489	1.0736	0.9203	0.7541	0.601	0.5137	0.8688
50	0.4795	0.6552	0.8084	0.9809	1.0953	1.153	1.129	1.0459	0.879	0.7023	0.5356	0.4406	0.8254
55	0.4066	0.5968	0.7587	0.9432	1.066	1.1277	1.1018	1.0111	0.8319	0.6466	0.4675	0.3652	0.7769
60	0.3316	0.5354	0.7043	0.8995	1.0299	1.0951	1.0675	0.9697	0.7791	0.5874	0.3971	0.2883	0.7237
65	0.2553	0.4714	0.6458	0.8502	0.9874	1.0554	1.0263	0.9218	0.7213	0.5252	0.3249	0.2104	0.6663
70	0.1782	0.4054	0.5836	0.7957	0.9386	1.0091	0.9785	0.8678	0.6588	0.4605	0.2516	0.1625	0.6075
75	0.1503	0.3378	0.5182	0.7363	0.884	0.9564	0.9247	0.8083	0.5921	0.3936	0.1785	0.1607	0.5534
80	0.1495	0.2692	0.45	0.6725	0.8241	0.9122	0.865	0.7435	0.5217	0.3253	0.1752	0.1588	0.5056
85	0.1486	0.2072	0.3796	0.6049	0.7682	0.8476	0.8119	0.6742	0.4482	0.2558	0.1719	0.1569	0.4562
90	0.1478	0.2011	0.3075	0.534	0.6984	0.7778	0.7416	0.6007	0.372	0.1891	0.1686	0.155	0.4078

Tabla 39: Azimut de 180°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9918	0.9916	0.9912	0.9914	0.9917	0.9917	0.9913	0.9911	0.9911	0.9914
5	0.9639	0.9821	1.0015	1.0214	1.0338	1.0402	1.0377	1.0299	1.0116	0.988	0.9695	0.9591	1.0032
10	0.9304	0.967	1.005	1.0443	1.0694	1.0824	1.0774	1.0613	1.0246	0.9785	0.9418	0.9211	1.0086
15	0.891	0.9461	1.002	1.0606	1.0982	1.1178	1.1101	1.0855	1.0307	0.9631	0.9082	0.8772	1.0075
20	0.846	0.9195	0.9927	1.07	1.1199	1.1459	1.1357	1.1024	1.0296	0.9418	0.869	0.8278	1
25	0.7956	0.8874	0.977	1.0724	1.1344	1.1665	1.1538	1.1119	1.0216	0.9148	0.8245	0.7733	0.9861
30	0.7403	0.8501	0.955	1.0679	1.1416	1.1796	1.1644	1.1139	1.0065	0.8822	0.775	0.714	0.9659
35	0.6805	0.8079	0.927	1.0565	1.1414	1.1849	1.1674	1.1083	0.9846	0.8444	0.7208	0.6506	0.9395
40	0.6166	0.7611	0.8931	1.0383	1.1338	1.1826	1.1627	1.0953	0.9561	0.8015	0.6625	0.5833	0.9072
45	0.5492	0.71	0.8536	1.0134	1.1189	1.1725	1.1504	1.0749	0.921	0.7541	0.6004	0.5128	0.8693
50	0.4787	0.655	0.8089	0.982	1.0967	1.1547	1.1307	1.0472	0.8798	0.7023	0.535	0.4396	0.8259
55	0.4057	0.5966	0.7591	0.9443	1.0676	1.1295	1.1036	1.0126	0.8326	0.6466	0.4668	0.3642	0.7774
60	0.3307	0.5352	0.7048	0.9007	1.0316	1.097	1.0693	0.9712	0.7799	0.5874	0.3964	0.2872	0.7243
65	0.2544	0.4712	0.6464	0.8514	0.9891	1.0575	1.0282	0.9233	0.7221	0.5252	0.3242	0.2092	0.6669
70	0.1772	0.4052	0.5842	0.7969	0.9404	1.0112	0.9806	0.8695	0.6596	0.4605	0.2508	0.1625	0.6082
75	0.1503	0.3376	0.5188	0.7376	0.8859	0.9586	0.9268	0.8099	0.5929	0.3936	0.1785	0.1607	0.5543
80	0.1495	0.269	0.4506	0.6738	0.8261	0.9145	0.8673	0.7453	0.5225	0.3252	0.1752	0.1588	0.5065
85	0.1486	0.2072	0.3802	0.6062	0.7702	0.8499	0.8141	0.676	0.4489	0.2558	0.1719	0.1569	0.4572
90	0.1478	0.2011	0.3081	0.5353	0.7004	0.7801	0.7438	0.6027	0.3727	0.1891	0.1686	0.155	0.4087