

Intibucá, Honduras

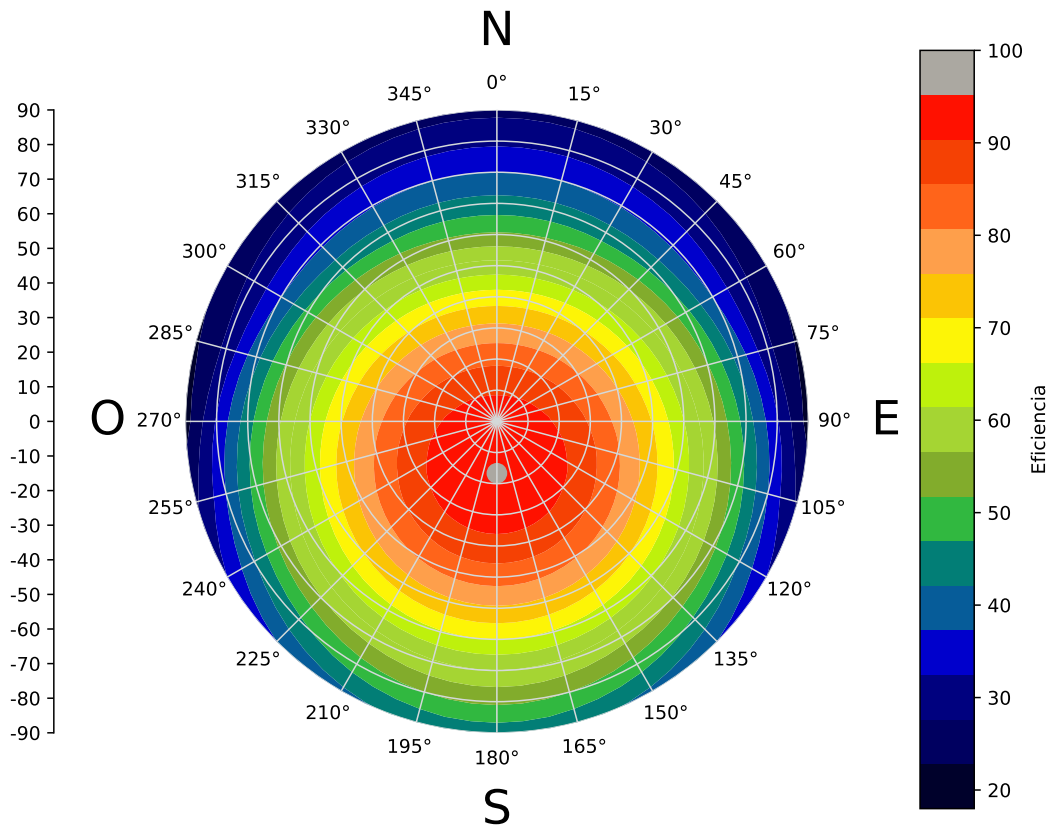
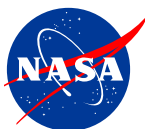


Tabla 1: Generalidades

Latitud	14.30827940115741
Longitud	-88.17763745784761
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	5.1262	11.5125	0.5549	0.1405	-20.8472	84.4214
Febrero	5.3808	11.027	0.5458	0.133	-13.3253	86.5285
Marzo	5.8551	9.6875	0.5675	0.1423	-2.3892	89.3878
Abril	5.9061	9.5604	0.5664	0.147	9.4932	92.4523
Mayo	5.512	8.9963	0.544	0.1402	18.8058	94.9904
Junio	5.468	9.3039	0.5394	0.1351	23.0771	96.2389
Julio	5.7537	9.6976	0.5601	0.1378	21.1015	95.653
Agosto	5.6629	9.6198	0.559	0.1397	13.296	93.4653
Septiembre	5.3437	9.3212	0.5648	0.1465	1.9936	90.5106
Octubre	5.1769	9.3977	0.534	0.1383	-9.8485	87.4536
Noviembre	4.6695	8.0443	0.5297	0.1382	-19.0505	84.9403
Diciembre	4.6031	8.0151	0.5471	0.1361	-23.0956	83.7555
Promedio	5.3092	8.9471	0.5478	0.1355	—	89.9831

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0097	0.9929	0.9749	0.9561	0.9438	0.9378	0.9399	0.9468	0.9643	0.9875	1.004	1.0134	0.9726
10	1.0219	0.9888	0.9521	0.9144	0.8903	0.8786	0.8825	0.8958	0.9303	0.9779	1.0108	1.0294	0.9477
15	1.0276	0.9789	0.9234	0.867	0.8314	0.8141	0.8199	0.839	0.8901	0.9626	1.0114	1.0389	0.917
20	1.0268	0.9633	0.889	0.8143	0.7676	0.7448	0.7523	0.7769	0.844	0.9415	1.0058	1.042	0.8807
25	1.0194	0.9421	0.8492	0.7568	0.6993	0.6712	0.6804	0.7098	0.7923	0.9149	0.9942	1.0386	0.839
30	1.0055	0.9155	0.8042	0.6947	0.6271	0.594	0.6047	0.6384	0.7354	0.883	0.9765	1.0287	0.7923
35	0.9853	0.8837	0.7545	0.6287	0.5516	0.5136	0.5258	0.5632	0.6738	0.846	0.9529	1.0124	0.741
40	0.9588	0.847	0.7003	0.5592	0.4732	0.4308	0.4442	0.4847	0.6079	0.8043	0.9236	0.9899	0.6853
45	0.9263	0.8055	0.6421	0.4868	0.3927	0.3462	0.3607	0.4036	0.5382	0.7581	0.8888	0.9612	0.6258
50	0.888	0.7596	0.5804	0.412	0.3107	0.2604	0.2758	0.3204	0.4652	0.7077	0.8487	0.9266	0.563
55	0.8443	0.7098	0.5155	0.3354	0.2278	0.2075	0.1983	0.236	0.3896	0.6536	0.8038	0.8864	0.5007
60	0.7954	0.6562	0.4481	0.2575	0.2022	0.2041	0.1955	0.1509	0.3118	0.5962	0.7542	0.8409	0.4511
65	0.7417	0.5995	0.3786	0.1803	0.199	0.2006	0.1925	0.1315	0.2326	0.5359	0.7005	0.7904	0.4069
70	0.6836	0.5399	0.3075	0.1784	0.1957	0.1969	0.1894	0.132	0.1524	0.4732	0.6429	0.7353	0.3689
75	0.6216	0.4779	0.2354	0.1765	0.1923	0.193	0.1862	0.1324	0.102	0.4085	0.582	0.676	0.332
80	0.5561	0.4141	0.1797	0.1745	0.1887	0.1891	0.183	0.1329	0.105	0.3423	0.5182	0.6131	0.2997
85	0.4877	0.3489	0.1769	0.1725	0.1852	0.1851	0.1796	0.1334	0.108	0.2752	0.452	0.5469	0.271
90	0.4168	0.2301	0.1741	0.1704	0.1816	0.1811	0.1763	0.1339	0.1111	0.2167	0.3839	0.4779	0.2378



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0096	0.9929	0.9749	0.9562	0.944	0.938	0.94	0.947	0.9644	0.9875	1.0039	1.0133	0.9727
10	1.0218	0.9887	0.9522	0.9146	0.8907	0.879	0.8829	0.8961	0.9305	0.978	1.0106	1.0292	0.9479
15	1.0274	0.9788	0.9236	0.8674	0.8319	0.8147	0.8204	0.8395	0.8904	0.9626	1.0112	1.0386	0.9172
20	1.0265	0.9632	0.8892	0.8148	0.7683	0.7456	0.7531	0.7775	0.8444	0.9415	1.0056	1.0416	0.8809
25	1.019	0.942	0.8495	0.7574	0.7001	0.6722	0.6813	0.7106	0.7928	0.9149	0.9939	1.0381	0.8393
30	1.0051	0.9154	0.8045	0.6955	0.6281	0.5951	0.6058	0.6393	0.736	0.883	0.9761	1.0282	0.7927
35	0.9848	0.8836	0.7548	0.6296	0.5527	0.5149	0.527	0.5642	0.6744	0.8461	0.9525	1.0118	0.7414
40	0.9582	0.8468	0.7007	0.5602	0.4745	0.4323	0.4456	0.4859	0.6086	0.8043	0.9231	0.9891	0.6858
45	0.9256	0.8053	0.6425	0.4879	0.3941	0.3478	0.3622	0.4049	0.539	0.7581	0.8883	0.9604	0.6263
50	0.8873	0.7595	0.5808	0.4132	0.3122	0.2621	0.2775	0.3219	0.4661	0.7077	0.8482	0.9258	0.5635
55	0.8435	0.7096	0.516	0.3366	0.2294	0.2075	0.1983	0.2375	0.3906	0.6536	0.8032	0.8855	0.501
60	0.7945	0.6561	0.4486	0.2589	0.2022	0.2041	0.1955	0.1525	0.313	0.5962	0.7536	0.8399	0.4513
65	0.7408	0.5993	0.3791	0.1806	0.199	0.2006	0.1925	0.1315	0.2338	0.5359	0.6998	0.7894	0.4069
70	0.6827	0.5397	0.308	0.1784	0.1957	0.1969	0.1894	0.132	0.1539	0.4732	0.6423	0.7343	0.3689
75	0.6207	0.4777	0.236	0.1765	0.1923	0.193	0.1862	0.1324	0.102	0.4085	0.5814	0.675	0.3318
80	0.5552	0.4139	0.1798	0.1745	0.1887	0.1891	0.183	0.1329	0.1053	0.3424	0.5175	0.612	0.2995
85	0.4867	0.3487	0.1769	0.1725	0.1852	0.1851	0.1796	0.1334	0.1083	0.2753	0.4513	0.5457	0.2707
90	0.4159	0.2301	0.1741	0.1704	0.1816	0.1811	0.1763	0.1339	0.1113	0.2167	0.3832	0.4768	0.2376

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0094	0.9928	0.9751	0.9566	0.9445	0.9386	0.9406	0.9475	0.9647	0.9876	1.0037	1.013	0.9728
10	1.0213	0.9886	0.9525	0.9154	0.8917	0.8801	0.884	0.8971	0.9311	0.978	1.0103	1.0286	0.9482
15	1.0267	0.9787	0.924	0.8685	0.8334	0.8164	0.8221	0.8409	0.8912	0.9626	1.0107	1.0378	0.9177
20	1.0255	0.963	0.8898	0.8163	0.7703	0.7478	0.7552	0.7794	0.8455	0.9415	1.0049	1.0405	0.8817
25	1.0178	0.9418	0.8502	0.7592	0.7026	0.675	0.684	0.7129	0.7942	0.915	0.993	1.0367	0.8402
30	1.0037	0.9151	0.8054	0.6977	0.6311	0.5984	0.609	0.6421	0.7376	0.8831	0.9751	1.0265	0.7937
35	0.9831	0.8833	0.7558	0.6321	0.5561	0.5188	0.5307	0.5674	0.6764	0.8461	0.9513	1.0099	0.7426
40	0.9564	0.8464	0.7018	0.5631	0.4784	0.4366	0.4497	0.4895	0.6108	0.8044	0.9218	0.987	0.6872
45	0.9236	0.8049	0.6438	0.4911	0.3984	0.3525	0.3668	0.4089	0.5414	0.7582	0.8868	0.9581	0.6279
50	0.8851	0.759	0.5822	0.4166	0.3168	0.2672	0.2824	0.3263	0.4689	0.7078	0.8466	0.9232	0.5652
55	0.8412	0.7091	0.5175	0.3404	0.2343	0.2075	0.1983	0.2422	0.3936	0.6537	0.8015	0.8828	0.5018
60	0.7921	0.6555	0.4501	0.2629	0.2022	0.2041	0.1955	0.1574	0.3162	0.5963	0.7518	0.8371	0.4518
65	0.7382	0.5987	0.3807	0.1848	0.199	0.2006	0.1925	0.1315	0.2374	0.536	0.698	0.7864	0.407
70	0.68	0.5391	0.3098	0.1784	0.1957	0.1969	0.1894	0.132	0.1575	0.4733	0.6403	0.7312	0.3686
75	0.6179	0.4772	0.2379	0.1765	0.1923	0.193	0.1862	0.1324	0.102	0.4086	0.5794	0.6718	0.3313
80	0.5524	0.4133	0.18	0.1745	0.1887	0.1891	0.183	0.1329	0.106	0.3425	0.5155	0.6087	0.2989
85	0.4839	0.3481	0.1771	0.1725	0.1852	0.1851	0.1796	0.1334	0.1089	0.2754	0.4493	0.5425	0.2701
90	0.413	0.2301	0.1742	0.1704	0.1816	0.1811	0.1763	0.1339	0.1119	0.2167	0.3811	0.4735	0.237



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.009	0.9927	0.9753	0.9572	0.9454	0.9395	0.9415	0.9483	0.9651	0.9876	1.0034	1.0125	0.9731
10	1.0205	0.9884	0.953	0.9166	0.8934	0.882	0.8859	0.8987	0.932	0.978	1.0097	1.0276	0.9488
15	1.0254	0.9784	0.9248	0.8704	0.836	0.8192	0.8248	0.8433	0.8926	0.9626	1.0098	1.0364	0.9186
20	1.0239	0.9627	0.8908	0.8188	0.7736	0.7516	0.7589	0.7825	0.8473	0.9416	1.0037	1.0386	0.8828
25	1.0158	0.9414	0.8514	0.7623	0.7068	0.6797	0.6885	0.7168	0.7965	0.915	0.9915	1.0344	0.8417
30	1.0013	0.9146	0.8069	0.7013	0.636	0.604	0.6143	0.6467	0.7404	0.8832	0.9734	1.0238	0.7955
35	0.9804	0.8827	0.7575	0.6363	0.5618	0.5251	0.5368	0.5728	0.6795	0.8462	0.9493	1.0067	0.7446
40	0.9534	0.8458	0.7037	0.5678	0.4847	0.4437	0.4566	0.4955	0.6144	0.8045	0.9196	0.9835	0.6894
45	0.9203	0.8042	0.6458	0.4963	0.4054	0.3604	0.3744	0.4155	0.5455	0.7583	0.8844	0.9542	0.6304
50	0.8815	0.7583	0.5844	0.4224	0.3244	0.2757	0.2907	0.3335	0.4733	0.7079	0.844	0.919	0.5679
55	0.8373	0.7083	0.5199	0.3466	0.2425	0.2075	0.2061	0.25	0.3984	0.6539	0.7987	0.8783	0.5039
60	0.788	0.6547	0.4527	0.2695	0.2022	0.2041	0.1955	0.1656	0.3214	0.5965	0.7488	0.8323	0.4526
65	0.7339	0.5978	0.3834	0.1917	0.199	0.2006	0.1925	0.1315	0.2427	0.5362	0.6948	0.7814	0.4071
70	0.6756	0.5382	0.3127	0.1784	0.1957	0.1969	0.1894	0.132	0.1631	0.4735	0.6371	0.726	0.3682
75	0.6134	0.4762	0.2408	0.1765	0.1923	0.193	0.1862	0.1324	0.102	0.4088	0.576	0.6665	0.3303
80	0.5477	0.4123	0.1801	0.1745	0.1887	0.1891	0.183	0.1329	0.1067	0.3426	0.5121	0.6033	0.2978
85	0.4792	0.3471	0.1773	0.1725	0.1852	0.1851	0.1796	0.1334	0.1096	0.2755	0.4458	0.537	0.2689
90	0.4083	0.2301	0.1744	0.1704	0.1816	0.1811	0.1763	0.1339	0.1125	0.2167	0.3777	0.468	0.2359

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0084	0.9926	0.9757	0.9581	0.9465	0.9408	0.9428	0.9493	0.9658	0.9876	1.003	1.0118	0.9735
10	1.0193	0.9882	0.9537	0.9183	0.8957	0.8847	0.8884	0.9008	0.9333	0.978	1.0089	1.0263	0.9496
15	1.0237	0.978	0.9259	0.8729	0.8395	0.8232	0.8286	0.8465	0.8945	0.9627	1.0085	1.0344	0.9199
20	1.0216	0.9622	0.8922	0.8222	0.7783	0.7568	0.7639	0.7868	0.8499	0.9417	1.0021	1.036	0.8845
25	1.0131	0.9408	0.8532	0.7665	0.7125	0.6861	0.6947	0.7222	0.7996	0.9151	0.9895	1.0312	0.8437
30	0.998	0.9139	0.8089	0.7063	0.6428	0.6117	0.6217	0.6531	0.7442	0.8833	0.971	1.02	0.7979
35	0.9767	0.8819	0.7598	0.6421	0.5696	0.534	0.5453	0.5801	0.6839	0.8464	0.9466	1.0024	0.7474
40	0.9491	0.8449	0.7063	0.5743	0.4936	0.4536	0.4662	0.5038	0.6194	0.8046	0.9165	0.9786	0.6926
45	0.9157	0.8032	0.6487	0.5036	0.4151	0.3713	0.3849	0.4247	0.551	0.7584	0.881	0.9488	0.6339
50	0.8765	0.7572	0.5875	0.4303	0.335	0.2876	0.3021	0.3435	0.4794	0.7081	0.8403	0.9132	0.5717
55	0.8319	0.7072	0.5232	0.3551	0.2537	0.2075	0.2183	0.2607	0.4049	0.6541	0.7948	0.872	0.507
60	0.7823	0.6535	0.4563	0.2785	0.2022	0.2041	0.1955	0.177	0.3283	0.5967	0.7447	0.8257	0.4537
65	0.728	0.5966	0.3873	0.2011	0.199	0.2006	0.1925	0.1315	0.2499	0.5364	0.6905	0.7745	0.4073
70	0.6694	0.5369	0.3167	0.1784	0.1957	0.1969	0.1894	0.132	0.1705	0.4737	0.6326	0.7188	0.3676
75	0.607	0.4749	0.2449	0.1765	0.1923	0.193	0.1862	0.1324	0.102	0.409	0.5714	0.6591	0.3291
80	0.5413	0.411	0.1803	0.1745	0.1887	0.1891	0.183	0.1329	0.1074	0.3429	0.5074	0.5958	0.2962
85	0.4727	0.3457	0.1775	0.1725	0.1852	0.1851	0.1796	0.1334	0.1103	0.2758	0.4411	0.5294	0.2674
90	0.4018	0.2301	0.1746	0.1704	0.1816	0.1811	0.1763	0.1339	0.1132	0.2167	0.3729	0.4604	0.2344



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0077	0.9924	0.9762	0.9592	0.948	0.9425	0.9444	0.9507	0.9666	0.9876	1.0025	1.011	0.9741
10	1.0179	0.9879	0.9546	0.9205	0.8987	0.888	0.8916	0.9036	0.9349	0.9781	1.0078	1.0246	0.9507
15	1.0216	0.9776	0.9272	0.8762	0.8439	0.8282	0.8334	0.8507	0.897	0.9628	1.007	1.0319	0.9215
20	1.0188	0.9616	0.894	0.8265	0.7842	0.7635	0.7703	0.7924	0.8531	0.9418	1	1.0327	0.8866
25	1.0095	0.94	0.8554	0.7719	0.7199	0.6944	0.7027	0.729	0.8037	0.9153	0.987	1.0271	0.8463
30	0.9939	0.9131	0.8115	0.7127	0.6515	0.6214	0.6311	0.6612	0.749	0.8834	0.9679	1.0151	0.801
35	0.9719	0.8809	0.7628	0.6495	0.5796	0.5452	0.5561	0.5895	0.6895	0.8465	0.9431	0.9968	0.751
40	0.9438	0.8438	0.7097	0.5827	0.5048	0.4662	0.4783	0.5143	0.6257	0.8048	0.9126	0.9724	0.6966
45	0.9098	0.802	0.6524	0.5127	0.4275	0.3852	0.3983	0.4364	0.558	0.7587	0.8767	0.9419	0.6383
50	0.8701	0.7559	0.5915	0.4403	0.3484	0.3026	0.3166	0.3561	0.487	0.7083	0.8356	0.9057	0.5765
55	0.8251	0.7057	0.5275	0.3658	0.2681	0.2191	0.2338	0.2743	0.413	0.6543	0.7898	0.8641	0.5117
60	0.7751	0.652	0.4609	0.2899	0.2022	0.2041	0.1955	0.1913	0.3368	0.5969	0.7394	0.8173	0.4551
65	0.7205	0.595	0.3921	0.213	0.199	0.2006	0.1925	0.1315	0.2589	0.5367	0.685	0.7657	0.4075
70	0.6616	0.5352	0.3217	0.1784	0.1957	0.1969	0.1894	0.132	0.1798	0.474	0.6269	0.7097	0.3668
75	0.599	0.4732	0.2501	0.1765	0.1923	0.193	0.1862	0.1324	0.102	0.4093	0.5655	0.6497	0.3274
80	0.5331	0.4093	0.1804	0.175	0.1887	0.1891	0.183	0.1329	0.108	0.3432	0.5014	0.5862	0.2942
85	0.4644	0.344	0.1776	0.1729	0.1852	0.1851	0.1796	0.1334	0.111	0.2761	0.435	0.5197	0.2653
90	0.3934	0.2301	0.1747	0.1707	0.1816	0.1811	0.1763	0.1339	0.1139	0.2167	0.3668	0.4507	0.2325

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0068	0.9923	0.9767	0.9605	0.9498	0.9446	0.9464	0.9524	0.9675	0.9876	1.0019	1.01	0.9747
10	1.0161	0.9875	0.9557	0.9232	0.9023	0.8921	0.8955	0.907	0.9368	0.9782	1.0065	1.0226	0.952
15	1.019	0.977	0.9288	0.8801	0.8493	0.8343	0.8393	0.8557	0.8999	0.9629	1.0051	1.0288	0.9234
20	1.0154	0.9609	0.8962	0.8318	0.7913	0.7715	0.778	0.799	0.857	0.9419	0.9975	1.0287	0.8891
25	1.0053	0.9391	0.858	0.7784	0.7287	0.7043	0.7122	0.7373	0.8085	0.9154	0.9839	1.0222	0.8494
30	0.9888	0.912	0.8147	0.7205	0.662	0.6332	0.6424	0.671	0.7548	0.8836	0.9643	1.0093	0.8047
35	0.9661	0.8797	0.7664	0.6584	0.5917	0.5587	0.5691	0.6008	0.6962	0.8467	0.9389	0.9901	0.7552
40	0.9373	0.8424	0.7137	0.5927	0.5183	0.4814	0.4929	0.527	0.6333	0.8051	0.9079	0.9648	0.7014
45	0.9027	0.8005	0.6568	0.5238	0.4424	0.4019	0.4144	0.4503	0.5664	0.7589	0.8715	0.9336	0.6436
50	0.8624	0.7542	0.5963	0.4523	0.3646	0.3207	0.334	0.3713	0.496	0.7086	0.83	0.8968	0.5823
55	0.8169	0.704	0.5327	0.3786	0.2854	0.2385	0.2525	0.2905	0.4227	0.6546	0.7838	0.8545	0.5179
60	0.7664	0.6501	0.4664	0.3035	0.2054	0.2041	0.1955	0.2086	0.347	0.5972	0.7331	0.8072	0.457
65	0.7113	0.5931	0.3979	0.2273	0.199	0.2006	0.1925	0.1315	0.2696	0.537	0.6783	0.7551	0.4078
70	0.6521	0.5332	0.3277	0.1784	0.1957	0.1969	0.1894	0.132	0.1909	0.4743	0.62	0.6987	0.3658
75	0.5893	0.4711	0.2562	0.1765	0.1923	0.193	0.1862	0.1324	0.1115	0.4096	0.5584	0.6384	0.3263
80	0.5232	0.4072	0.1805	0.1758	0.1887	0.1891	0.183	0.1329	0.1086	0.3435	0.4942	0.5747	0.2918
85	0.4544	0.3419	0.1777	0.1737	0.1852	0.1851	0.1796	0.1334	0.1116	0.2764	0.4277	0.5081	0.2629
90	0.3834	0.2301	0.1749	0.1715	0.1816	0.1811	0.1763	0.1339	0.1146	0.2167	0.3595	0.439	0.2302



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0058	0.992	0.9773	0.962	0.9519	0.9469	0.9486	0.9544	0.9687	0.9877	1.0011	1.0088	0.9754
10	1.0141	0.9871	0.957	0.9262	0.9065	0.8968	0.9001	0.9109	0.9391	0.9782	1.005	1.0202	0.9534
15	1.016	0.9764	0.9307	0.8847	0.8556	0.8413	0.846	0.8616	0.9033	0.963	1.0028	1.0253	0.9256
20	1.0114	0.96	0.8987	0.8378	0.7996	0.7808	0.787	0.8067	0.8616	0.942	0.9946	1.024	0.892
25	1.0003	0.9381	0.8611	0.7859	0.7389	0.7159	0.7233	0.7469	0.8142	0.9156	0.9802	1.0164	0.8531
30	0.983	0.9108	0.8183	0.7294	0.6741	0.6469	0.6556	0.6824	0.7615	0.8838	0.96	1.0024	0.809
35	0.9594	0.8783	0.7706	0.6687	0.6056	0.5744	0.5843	0.6139	0.704	0.847	0.934	0.9823	0.7602
40	0.9298	0.8408	0.7184	0.6042	0.534	0.4991	0.5099	0.5417	0.642	0.8053	0.9024	0.9561	0.707
45	0.8944	0.7988	0.662	0.5365	0.4597	0.4213	0.4331	0.4666	0.5759	0.7592	0.8655	0.924	0.6497
50	0.8534	0.7523	0.602	0.4661	0.3833	0.3418	0.3543	0.3889	0.5063	0.7089	0.8235	0.8863	0.5889
55	0.8073	0.702	0.5388	0.3935	0.3054	0.261	0.2742	0.3094	0.4338	0.6549	0.7768	0.8433	0.525
60	0.7562	0.648	0.4729	0.3192	0.2266	0.2041	0.1955	0.2285	0.3588	0.5976	0.7257	0.7954	0.4607
65	0.7007	0.5908	0.4046	0.2437	0.199	0.2006	0.1925	0.1468	0.2818	0.5374	0.6706	0.7427	0.4093
70	0.6411	0.5309	0.3347	0.1784	0.1957	0.1969	0.1894	0.132	0.2036	0.4747	0.6119	0.6859	0.3646
75	0.578	0.4687	0.2634	0.1765	0.1923	0.193	0.1862	0.1324	0.1246	0.4101	0.5502	0.6253	0.3251
80	0.5116	0.4047	0.1806	0.1766	0.1887	0.1891	0.183	0.1329	0.1092	0.3439	0.4858	0.5613	0.289
85	0.4427	0.3394	0.1779	0.1745	0.1852	0.1851	0.1796	0.1334	0.1123	0.2769	0.4192	0.4945	0.26
90	0.3717	0.2301	0.175	0.1723	0.1816	0.1811	0.1763	0.1339	0.1152	0.2167	0.3509	0.4253	0.2275

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0046	0.9918	0.9781	0.9638	0.9543	0.9496	0.9512	0.9566	0.97	0.9877	1.0003	1.0074	0.9763
10	1.0118	0.9866	0.9584	0.9297	0.9112	0.9022	0.9052	0.9153	0.9417	0.9783	1.0034	1.0175	0.9551
15	1.0125	0.9757	0.9328	0.8899	0.8626	0.8493	0.8537	0.8682	0.9072	0.9631	1.0003	1.0213	0.9281
20	1.0068	0.9591	0.9015	0.8447	0.809	0.7914	0.7971	0.8155	0.8667	0.9422	0.9912	1.0188	0.8953
25	0.9947	0.9369	0.8646	0.7945	0.7505	0.7289	0.7359	0.7577	0.8206	0.9158	0.9761	1.0099	0.8572
30	0.9763	0.9094	0.8224	0.7395	0.6879	0.6624	0.6705	0.6953	0.7691	0.8841	0.9552	0.9947	0.8139
35	0.9518	0.8767	0.7753	0.6803	0.6214	0.5922	0.6014	0.6287	0.7127	0.8472	0.9284	0.9734	0.7658
40	0.9213	0.839	0.7237	0.6173	0.5517	0.519	0.5291	0.5583	0.6518	0.8056	0.8962	0.9461	0.7133
45	0.885	0.7968	0.6679	0.551	0.4792	0.4433	0.4542	0.4849	0.5867	0.7595	0.8586	0.9131	0.6567
50	0.8433	0.7502	0.6084	0.4818	0.4045	0.3656	0.3772	0.4088	0.518	0.7093	0.8161	0.8745	0.5965
55	0.7964	0.6997	0.5457	0.4102	0.3281	0.2865	0.2987	0.3306	0.4463	0.6553	0.7688	0.8307	0.5331
60	0.7448	0.6456	0.4801	0.3369	0.2506	0.2066	0.2193	0.2509	0.3719	0.598	0.7173	0.782	0.467
65	0.6887	0.5883	0.4122	0.2622	0.199	0.2006	0.1925	0.1703	0.2956	0.5378	0.6618	0.7288	0.4115
70	0.6287	0.5283	0.3425	0.1868	0.1957	0.1969	0.1894	0.132	0.2179	0.4751	0.6029	0.6714	0.364
75	0.5651	0.466	0.2715	0.1765	0.1923	0.193	0.1862	0.1324	0.1393	0.4105	0.5408	0.6104	0.3237
80	0.4986	0.402	0.1997	0.1773	0.1887	0.1891	0.183	0.1335	0.1098	0.3444	0.4762	0.5461	0.2874
85	0.4295	0.3366	0.178	0.1752	0.1852	0.1851	0.1796	0.1339	0.1128	0.2773	0.4095	0.4791	0.2568
90	0.3584	0.2301	0.1752	0.173	0.1816	0.1811	0.1763	0.1342	0.1158	0.2167	0.3412	0.4099	0.2245



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0033	0.9915	0.9789	0.9657	0.9569	0.9526	0.9541	0.959	0.9714	0.9878	0.9993	1.0059	0.9772
10	1.0092	0.9861	0.96	0.9336	0.9165	0.9081	0.9109	0.9202	0.9446	0.9784	1.0015	1.0146	0.957
15	1.0087	0.9749	0.9352	0.8957	0.8705	0.8581	0.8622	0.8755	0.9115	0.9632	0.9976	1.0169	0.9308
20	1.0018	0.958	0.9046	0.8524	0.8194	0.8031	0.8084	0.8252	0.8724	0.9424	0.9876	1.0129	0.899
25	0.9885	0.9356	0.8685	0.8039	0.7634	0.7434	0.7499	0.7698	0.8276	0.916	0.9716	1.0026	0.8617
30	0.969	0.9078	0.827	0.7507	0.7031	0.6796	0.687	0.7095	0.7775	0.8843	0.9498	0.9862	0.8193
35	0.9433	0.8749	0.7806	0.6932	0.639	0.612	0.6204	0.645	0.7224	0.8476	0.9223	0.9636	0.772
40	0.9118	0.837	0.7296	0.6318	0.5714	0.5411	0.5504	0.5767	0.6626	0.806	0.8893	0.9351	0.7202
45	0.8746	0.7946	0.6744	0.5669	0.5009	0.4676	0.4776	0.5051	0.5986	0.7599	0.851	0.901	0.6643
50	0.832	0.7478	0.6155	0.499	0.4279	0.392	0.4026	0.4307	0.5309	0.7097	0.8078	0.8614	0.6048
55	0.7844	0.6971	0.5533	0.4287	0.3532	0.3147	0.3259	0.3541	0.46	0.6558	0.76	0.8167	0.542
60	0.732	0.6429	0.4882	0.3564	0.2771	0.2364	0.248	0.2758	0.3865	0.5985	0.708	0.7672	0.4764
65	0.6754	0.5855	0.4207	0.2827	0.2002	0.2006	0.1925	0.1963	0.3109	0.5383	0.6521	0.7132	0.414
70	0.6149	0.5254	0.3512	0.208	0.1957	0.1969	0.1894	0.132	0.2337	0.4756	0.5928	0.6553	0.3642
75	0.5509	0.463	0.2804	0.1765	0.1923	0.193	0.1862	0.1324	0.1555	0.411	0.5304	0.5938	0.3221
80	0.4841	0.3989	0.2088	0.178	0.1887	0.1891	0.183	0.1345	0.1103	0.3449	0.4656	0.5292	0.2846
85	0.4148	0.3335	0.1781	0.176	0.1852	0.1851	0.1796	0.1349	0.1134	0.2779	0.3988	0.462	0.2533
90	0.3437	0.2301	0.1753	0.1738	0.1816	0.1811	0.1763	0.1353	0.1164	0.2167	0.3305	0.3928	0.2211

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0019	0.9912	0.9797	0.9678	0.9598	0.9558	0.9572	0.9617	0.9729	0.9878	0.9983	1.0043	0.9782
10	1.0064	0.9855	0.9618	0.9378	0.9222	0.9146	0.9171	0.9256	0.9477	0.9785	0.9995	1.0113	0.959
15	1.0046	0.974	0.9378	0.902	0.8791	0.8678	0.8715	0.8835	0.9162	0.9634	0.9945	1.0121	0.9339
20	0.9963	0.9569	0.908	0.8607	0.8307	0.8159	0.8207	0.8358	0.8786	0.9426	0.9836	1.0065	0.903
25	0.9817	0.9342	0.8727	0.8142	0.7775	0.7593	0.7651	0.7829	0.8353	0.9163	0.9667	0.9947	0.8667
30	0.961	0.9061	0.832	0.7629	0.7198	0.6983	0.705	0.7251	0.7866	0.8846	0.9439	0.9768	0.8252
35	0.9341	0.8729	0.7864	0.7072	0.658	0.6335	0.641	0.6629	0.7329	0.8479	0.9155	0.9529	0.7788
40	0.9015	0.8349	0.736	0.6475	0.5928	0.5652	0.5736	0.5967	0.6743	0.8063	0.8817	0.9231	0.7278
45	0.8632	0.7922	0.6815	0.5842	0.5244	0.4942	0.5032	0.5271	0.6115	0.7603	0.8427	0.8878	0.6727
50	0.8197	0.7452	0.6233	0.5178	0.4535	0.4207	0.4303	0.4546	0.5449	0.7102	0.7988	0.8471	0.6138
55	0.7712	0.6944	0.5616	0.4488	0.3805	0.3455	0.3555	0.3796	0.475	0.6562	0.7504	0.8014	0.5517
60	0.7181	0.6399	0.4969	0.3777	0.306	0.2689	0.2793	0.3028	0.4023	0.599	0.6978	0.751	0.4866
65	0.6608	0.5824	0.4298	0.3049	0.2305	0.2006	0.2022	0.2246	0.3274	0.5388	0.6415	0.6963	0.42
70	0.5998	0.5222	0.3607	0.2311	0.1957	0.1969	0.1894	0.1457	0.2508	0.4762	0.5817	0.6377	0.3657
75	0.5354	0.4598	0.2902	0.1765	0.1923	0.193	0.1862	0.1324	0.1731	0.4116	0.5191	0.5758	0.3205
80	0.4683	0.3956	0.2188	0.1745	0.1887	0.1891	0.183	0.1329	0.105	0.3455	0.4541	0.5108	0.2805
85	0.3988	0.3302	0.1782	0.1767	0.1852	0.1851	0.1796	0.136	0.1139	0.2784	0.3871	0.4434	0.2494
90	0.3276	0.2301	0.1754	0.1745	0.1816	0.1811	0.1763	0.1363	0.1169	0.2167	0.3188	0.3741	0.2174



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	1.0004	0.9909	0.9807	0.9701	0.9629	0.9593	0.9605	0.9646	0.9746	0.9879	0.9972	1.0026	0.9793
10	1.0034	0.9849	0.9636	0.9423	0.9284	0.9215	0.9238	0.9313	0.951	0.9786	0.9973	1.0078	0.9612
15	1.0001	0.9731	0.9406	0.9087	0.8883	0.8782	0.8815	0.8921	0.9212	0.9635	0.9913	1.0068	0.9371
20	0.9904	0.9556	0.9117	0.8696	0.8429	0.8297	0.8339	0.8472	0.8853	0.9428	0.9792	0.9996	0.9073
25	0.9744	0.9326	0.8772	0.8253	0.7925	0.7763	0.7814	0.7969	0.8436	0.9165	0.9613	0.9862	0.872
30	0.9523	0.9043	0.8374	0.7761	0.7376	0.7184	0.7244	0.7417	0.7964	0.8849	0.9376	0.9668	0.8315
35	0.9242	0.8709	0.7925	0.7223	0.6785	0.6566	0.6633	0.682	0.7441	0.8482	0.9083	0.9413	0.786
40	0.8904	0.8325	0.743	0.6644	0.6158	0.5911	0.5985	0.6182	0.6868	0.8067	0.8736	0.9102	0.7359
45	0.851	0.7896	0.6892	0.6028	0.5497	0.5227	0.5306	0.5508	0.6253	0.7608	0.8338	0.8735	0.6816
50	0.8065	0.7424	0.6316	0.538	0.4809	0.4516	0.46	0.4802	0.5598	0.7106	0.7892	0.8317	0.6235
55	0.7571	0.6914	0.5705	0.4704	0.4098	0.3785	0.3872	0.407	0.491	0.6567	0.7401	0.7849	0.562
60	0.7031	0.6368	0.5063	0.4004	0.337	0.3039	0.3129	0.3317	0.4192	0.5995	0.6869	0.7335	0.4976
65	0.6452	0.5791	0.4396	0.3287	0.2629	0.2283	0.2374	0.2549	0.3451	0.5394	0.63	0.6781	0.4307
70	0.5835	0.5188	0.3709	0.2558	0.1957	0.1969	0.1894	0.1771	0.2692	0.4768	0.5699	0.6188	0.3686
75	0.5187	0.4563	0.3007	0.1821	0.1923	0.193	0.1862	0.1324	0.192	0.4122	0.5069	0.5563	0.3191
80	0.4513	0.392	0.2294	0.1745	0.1887	0.1891	0.183	0.1329	0.1142	0.3461	0.4417	0.491	0.2778
85	0.3816	0.3265	0.1783	0.1773	0.1852	0.1851	0.1796	0.1369	0.1143	0.279	0.3746	0.4234	0.2452
90	0.3104	0.2301	0.1755	0.1752	0.1816	0.1811	0.1763	0.1373	0.1174	0.2167	0.3062	0.354	0.2135

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9988	0.9906	0.9817	0.9725	0.9662	0.963	0.9641	0.9677	0.9764	0.9879	0.996	1.0007	0.9805
10	1.0003	0.9842	0.9656	0.9471	0.935	0.9289	0.9309	0.9374	0.9546	0.9787	0.9949	1.0041	0.9635
15	0.9953	0.9721	0.9436	0.9159	0.8981	0.8892	0.8921	0.9012	0.9265	0.9637	0.9878	1.0013	0.9406
20	0.9841	0.9543	0.9156	0.8791	0.8558	0.8443	0.848	0.8593	0.8923	0.943	0.9747	0.9923	0.9119
25	0.9667	0.931	0.8821	0.837	0.8086	0.7943	0.7988	0.8119	0.8523	0.9168	0.9556	0.9772	0.8777
30	0.9431	0.9024	0.8431	0.79	0.7566	0.7398	0.7449	0.7595	0.8068	0.8853	0.9309	0.9561	0.8382
35	0.9137	0.8686	0.7991	0.7383	0.7003	0.6811	0.6868	0.7024	0.7559	0.8486	0.9006	0.9291	0.7937
40	0.8786	0.83	0.7504	0.6823	0.6402	0.6186	0.6249	0.641	0.7001	0.8072	0.865	0.8964	0.7446
45	0.838	0.7869	0.6974	0.6225	0.5766	0.5529	0.5597	0.5759	0.6399	0.7612	0.8243	0.8584	0.6911
50	0.7924	0.7395	0.6404	0.5593	0.51	0.4844	0.4915	0.5074	0.5757	0.7111	0.7789	0.8153	0.6338
55	0.742	0.6882	0.5799	0.4932	0.4409	0.4136	0.4209	0.4361	0.5079	0.6573	0.7291	0.7674	0.573
60	0.6872	0.6334	0.5163	0.4246	0.3699	0.3409	0.3485	0.3625	0.4372	0.6001	0.6753	0.715	0.5092
65	0.6285	0.5756	0.4501	0.354	0.2973	0.2671	0.2747	0.2871	0.3639	0.54	0.6179	0.6587	0.4429
70	0.5663	0.5151	0.3818	0.282	0.2239	0.1969	0.2001	0.2105	0.2886	0.4774	0.5573	0.5987	0.3749
75	0.501	0.4525	0.3118	0.2091	0.1923	0.193	0.1862	0.1332	0.212	0.4128	0.494	0.5357	0.3195
80	0.4332	0.3882	0.2408	0.1745	0.1887	0.1891	0.183	0.1329	0.1346	0.3468	0.4285	0.47	0.2758
85	0.3633	0.3227	0.1784	0.178	0.1859	0.1851	0.1796	0.1379	0.1147	0.2797	0.3612	0.4021	0.2407
90	0.292	0.2301	0.1756	0.1758	0.1821	0.1811	0.1763	0.1383	0.1178	0.2167	0.2927	0.3326	0.2093



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9972	0.9902	0.9827	0.975	0.9697	0.9669	0.9679	0.9709	0.9783	0.988	0.9948	0.9987	0.9817
10	0.9969	0.9835	0.9677	0.9521	0.9419	0.9367	0.9384	0.9439	0.9583	0.9788	0.9925	1.0002	0.9659
15	0.9903	0.971	0.9467	0.9234	0.9084	0.9009	0.9033	0.9108	0.9321	0.9639	0.9841	0.9955	0.9442
20	0.9775	0.9529	0.9198	0.8891	0.8694	0.8596	0.8627	0.8719	0.8997	0.9433	0.9698	0.9846	0.9167
25	0.9585	0.9293	0.8872	0.8494	0.8254	0.8133	0.817	0.8276	0.8615	0.9171	0.9497	0.9677	0.8836
30	0.9335	0.9003	0.8492	0.8046	0.7765	0.7622	0.7665	0.778	0.8176	0.8856	0.9238	0.9448	0.8452
35	0.9026	0.8663	0.806	0.755	0.7232	0.7069	0.7116	0.7237	0.7684	0.849	0.8925	0.9162	0.8018
40	0.8662	0.8274	0.7581	0.7011	0.6658	0.6475	0.6527	0.6649	0.7141	0.8076	0.8559	0.882	0.7536
45	0.8244	0.784	0.7059	0.6432	0.6048	0.5847	0.5902	0.6022	0.6553	0.7617	0.8143	0.8425	0.7011
50	0.7776	0.7364	0.6497	0.5817	0.5405	0.5188	0.5246	0.5359	0.5923	0.7117	0.7681	0.798	0.6446
55	0.7262	0.6849	0.5898	0.5172	0.4736	0.4504	0.4563	0.4666	0.5257	0.6579	0.7175	0.7489	0.5846
60	0.6705	0.6299	0.5268	0.4499	0.4044	0.3799	0.3859	0.3947	0.456	0.6007	0.6631	0.6955	0.5214
65	0.611	0.5719	0.4611	0.3805	0.3335	0.3078	0.3139	0.3208	0.3835	0.5406	0.6051	0.6383	0.4557
70	0.5481	0.5113	0.3931	0.3095	0.2614	0.2348	0.2408	0.2455	0.309	0.478	0.544	0.5776	0.3878
75	0.4823	0.4486	0.3235	0.2373	0.1923	0.193	0.1862	0.1692	0.233	0.4135	0.4804	0.5139	0.3228
80	0.4141	0.3842	0.2527	0.1745	0.1887	0.1891	0.183	0.1329	0.156	0.3474	0.4146	0.4478	0.2738
85	0.3441	0.3186	0.1784	0.1786	0.1871	0.1851	0.1803	0.1388	0.1151	0.2804	0.3472	0.3797	0.2361
90	0.2727	0.2301	0.1756	0.1764	0.1834	0.1811	0.1767	0.1392	0.1181	0.2167	0.2786	0.3101	0.2049

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9954	0.9899	0.9838	0.9776	0.9733	0.971	0.9718	0.9742	0.9802	0.9881	0.9935	0.9967	0.983
10	0.9934	0.9827	0.9699	0.9574	0.949	0.9448	0.9462	0.9506	0.9622	0.979	0.9899	0.9961	0.9684
15	0.9851	0.9699	0.9499	0.9312	0.9191	0.9129	0.9149	0.9208	0.9379	0.9641	0.9803	0.9894	0.948
20	0.9706	0.9514	0.9241	0.8994	0.8836	0.8756	0.8781	0.8851	0.9074	0.9435	0.9648	0.9766	0.9217
25	0.95	0.9275	0.8925	0.8622	0.8429	0.833	0.836	0.8439	0.871	0.9174	0.9435	0.9578	0.8898
30	0.9234	0.8982	0.8554	0.8197	0.7972	0.7856	0.789	0.7974	0.8289	0.886	0.9165	0.9331	0.8525
35	0.8911	0.8639	0.8132	0.7725	0.747	0.7337	0.7374	0.7459	0.7813	0.8494	0.8841	0.9027	0.8102
40	0.8532	0.8247	0.7662	0.7206	0.6924	0.6776	0.6816	0.6898	0.7286	0.8081	0.8465	0.8669	0.763
45	0.8101	0.781	0.7148	0.6647	0.6341	0.6178	0.622	0.6295	0.6712	0.7622	0.8039	0.8259	0.7114
50	0.7622	0.7331	0.6593	0.605	0.5723	0.5546	0.559	0.5655	0.6096	0.7122	0.7568	0.7801	0.6558
55	0.7097	0.6814	0.6001	0.542	0.5076	0.4887	0.4932	0.4983	0.5442	0.6584	0.7055	0.7297	0.5966
60	0.6531	0.6262	0.5377	0.4762	0.4403	0.4204	0.4249	0.4282	0.4755	0.6013	0.6503	0.6753	0.5341
65	0.5928	0.5681	0.4725	0.4081	0.3711	0.3502	0.3546	0.3559	0.404	0.5412	0.5918	0.6171	0.4689
70	0.5292	0.5073	0.405	0.338	0.3004	0.2787	0.283	0.2818	0.3302	0.4787	0.5302	0.5556	0.4015
75	0.4629	0.4445	0.3357	0.2667	0.2287	0.2065	0.2106	0.2066	0.2548	0.4142	0.4662	0.4913	0.3324
80	0.3943	0.38	0.2651	0.1946	0.1887	0.1891	0.183	0.1329	0.1782	0.3481	0.4001	0.4247	0.2732
85	0.324	0.3144	0.1939	0.1725	0.1852	0.1851	0.1796	0.1334	0.108	0.2811	0.3325	0.3563	0.2305
90	0.2525	0.2301	0.1757	0.177	0.1846	0.1819	0.1782	0.1401	0.1184	0.2167	0.2639	0.2867	0.2005



Tabla 18: Azimut de 75°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Annual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9936	0.9895	0.9849	0.9804	0.977	0.9752	0.9758	0.9777	0.9822	0.9881	0.9922	0.9946	0.9843
10	0.9898	0.982	0.9721	0.9628	0.9565	0.9532	0.9542	0.9575	0.9662	0.9791	0.9873	0.9919	0.9711
15	0.9797	0.9688	0.9533	0.9393	0.9301	0.9254	0.9269	0.9311	0.9439	0.9643	0.9764	0.9832	0.9519
20	0.9635	0.9499	0.9285	0.9101	0.8982	0.8921	0.8939	0.8988	0.9153	0.9438	0.9596	0.9683	0.9268
25	0.9412	0.9256	0.8979	0.8754	0.861	0.8534	0.8556	0.8607	0.8808	0.9177	0.9371	0.9476	0.8962
30	0.913	0.896	0.8619	0.8354	0.8186	0.8097	0.8122	0.8173	0.8405	0.8863	0.9089	0.921	0.8601
35	0.8791	0.8614	0.8206	0.7904	0.7715	0.7613	0.764	0.7687	0.7946	0.8499	0.8754	0.8889	0.8188
40	0.8399	0.8219	0.7746	0.7408	0.7199	0.7086	0.7114	0.7154	0.7435	0.8086	0.8367	0.8514	0.7727
45	0.7955	0.7779	0.724	0.6868	0.6643	0.6518	0.6548	0.6577	0.6876	0.7628	0.7932	0.8088	0.7221
50	0.7463	0.7298	0.6693	0.629	0.605	0.5916	0.5945	0.5961	0.6273	0.7128	0.7452	0.7616	0.6674
55	0.6927	0.6778	0.6107	0.5677	0.5426	0.5282	0.5311	0.5309	0.5632	0.6591	0.6931	0.7099	0.6089
60	0.6351	0.6225	0.5489	0.5033	0.4773	0.4621	0.465	0.4627	0.4955	0.602	0.6372	0.6543	0.5472
65	0.5739	0.5641	0.4842	0.4364	0.4098	0.3939	0.3966	0.392	0.425	0.5419	0.578	0.5951	0.4826
70	0.5097	0.5032	0.4172	0.3675	0.3406	0.324	0.3266	0.3193	0.352	0.4794	0.516	0.5329	0.4157
75	0.4428	0.4403	0.3482	0.2969	0.27	0.2531	0.2553	0.2451	0.2772	0.4149	0.4515	0.468	0.3469
80	0.3739	0.3757	0.2779	0.2254	0.1988	0.1891	0.1835	0.17	0.201	0.3489	0.3852	0.4009	0.2775
85	0.3033	0.31	0.2068	0.1725	0.1852	0.1851	0.1796	0.1334	0.1242	0.2819	0.3174	0.3322	0.2276
90	0.2318	0.2301	0.1757	0.1775	0.1858	0.1836	0.1797	0.141	0.1187	0.2167	0.2488	0.2625	0.196

Tabla 19: Azimut de 80°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Annual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9917	0.9891	0.9861	0.9831	0.9808	0.9795	0.9799	0.9813	0.9843	0.9882	0.9909	0.9924	0.9856
10	0.9861	0.9812	0.9744	0.9683	0.964	0.9617	0.9625	0.9645	0.9703	0.9792	0.9846	0.9876	0.9737
15	0.9742	0.9676	0.9567	0.9476	0.9414	0.9382	0.9391	0.9416	0.95	0.9645	0.9724	0.9768	0.9558
20	0.9562	0.9484	0.933	0.9211	0.9132	0.9089	0.9101	0.9127	0.9234	0.944	0.9543	0.9599	0.9321
25	0.9322	0.9237	0.9035	0.8889	0.8794	0.8742	0.8756	0.8779	0.8908	0.918	0.9305	0.9371	0.9027
30	0.9024	0.8938	0.8685	0.8514	0.8405	0.8344	0.8358	0.8376	0.8524	0.8867	0.9012	0.9086	0.8678
35	0.8669	0.8588	0.8282	0.8087	0.7965	0.7896	0.7911	0.7921	0.8082	0.8503	0.8665	0.8747	0.8276
40	0.8262	0.819	0.7831	0.7613	0.748	0.7402	0.7418	0.7416	0.7587	0.809	0.8267	0.8355	0.7826
45	0.7804	0.7747	0.7334	0.7094	0.6952	0.6867	0.6882	0.6865	0.7043	0.7633	0.7822	0.7913	0.733
50	0.73	0.7263	0.6794	0.6535	0.6385	0.6293	0.6308	0.6272	0.6455	0.7134	0.7333	0.7426	0.6792
55	0.6753	0.6741	0.6216	0.5939	0.5784	0.5685	0.5699	0.5643	0.5826	0.6597	0.6804	0.6897	0.6215
60	0.6167	0.6186	0.5604	0.531	0.5152	0.5048	0.506	0.498	0.516	0.6026	0.6238	0.6329	0.5605
65	0.5546	0.56	0.4963	0.4654	0.4494	0.4386	0.4396	0.4289	0.4464	0.5426	0.5639	0.5727	0.4965
70	0.4897	0.499	0.4296	0.3975	0.3816	0.3704	0.3711	0.3576	0.3743	0.4801	0.5014	0.5096	0.4302
75	0.4223	0.4359	0.361	0.3278	0.3123	0.3007	0.3011	0.2844	0.3	0.4156	0.4365	0.444	0.3618
80	0.3529	0.3713	0.291	0.2569	0.2418	0.23	0.2301	0.2101	0.2244	0.3496	0.3699	0.3765	0.2921
85	0.2821	0.3056	0.22	0.1853	0.1852	0.1851	0.1796	0.1352	0.1478	0.2826	0.3019	0.3076	0.2265
90	0.2105	0.2301	0.1757	0.1779	0.1869	0.1853	0.1811	0.1417	0.1189	0.2167	0.2332	0.2377	0.1913

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9899	0.9887	0.9873	0.986	0.9847	0.9838	0.9841	0.9849	0.9864	0.9883	0.9895	0.9902	0.987
10	0.9824	0.9804	0.9768	0.974	0.9717	0.9704	0.9708	0.9717	0.9745	0.9794	0.9819	0.9833	0.9764
15	0.9686	0.9664	0.9602	0.956	0.9529	0.9511	0.9516	0.9523	0.9562	0.9647	0.9683	0.9703	0.9599
20	0.9488	0.9469	0.9376	0.9321	0.9283	0.926	0.9266	0.9268	0.9316	0.9443	0.9489	0.9513	0.9374
25	0.9231	0.9218	0.9092	0.9026	0.8982	0.8954	0.8959	0.8954	0.901	0.9184	0.9238	0.9265	0.9093
30	0.8916	0.8915	0.8753	0.8676	0.8626	0.8594	0.8599	0.8583	0.8643	0.8871	0.8933	0.8961	0.8756
35	0.8546	0.8562	0.8359	0.8273	0.822	0.8183	0.8187	0.8158	0.8219	0.8507	0.8574	0.8602	0.8366
40	0.8123	0.8161	0.7917	0.7821	0.7765	0.7724	0.7727	0.7681	0.7741	0.8095	0.8166	0.8193	0.7926
45	0.7651	0.7715	0.7429	0.7323	0.7265	0.722	0.7222	0.7157	0.7213	0.7638	0.7711	0.7736	0.744
50	0.7134	0.7228	0.6897	0.6783	0.6725	0.6676	0.6676	0.6589	0.6638	0.714	0.7212	0.7234	0.6911
55	0.6576	0.6704	0.6326	0.6204	0.6147	0.6095	0.6093	0.5981	0.6022	0.6603	0.6674	0.6691	0.6343
60	0.598	0.6146	0.5721	0.5591	0.5536	0.5481	0.5476	0.5337	0.5368	0.6033	0.6101	0.6111	0.574
65	0.5351	0.5559	0.5085	0.4948	0.4896	0.4839	0.4831	0.4663	0.4682	0.5433	0.5497	0.5499	0.5107
70	0.4694	0.4947	0.4423	0.428	0.4233	0.4174	0.4163	0.3964	0.3968	0.4809	0.4865	0.486	0.4448
75	0.4014	0.4315	0.374	0.3592	0.3551	0.349	0.3476	0.3243	0.3232	0.4164	0.4213	0.4198	0.3769
80	0.3316	0.3668	0.3043	0.2889	0.2855	0.2793	0.2775	0.2508	0.248	0.3504	0.3543	0.3518	0.3074
85	0.2606	0.301	0.2335	0.2176	0.2151	0.2088	0.2066	0.1764	0.1717	0.2834	0.2862	0.2825	0.237
90	0.1889	0.2301	0.1758	0.1783	0.188	0.1869	0.1825	0.1425	0.119	0.2167	0.2175	0.2126	0.1866

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.988	0.9883	0.9884	0.9888	0.9885	0.9882	0.9883	0.9885	0.9885	0.9883	0.9881	0.988	0.9883
10	0.9786	0.9796	0.9791	0.9796	0.9795	0.9792	0.9792	0.9789	0.9787	0.9795	0.9791	0.9789	0.9792
15	0.963	0.9652	0.9637	0.9644	0.9645	0.9642	0.9641	0.9631	0.9625	0.9649	0.9642	0.9637	0.964
20	0.9414	0.9453	0.9423	0.9433	0.9436	0.9433	0.9431	0.941	0.9399	0.9446	0.9435	0.9426	0.9428
25	0.9139	0.9199	0.915	0.9164	0.917	0.9167	0.9164	0.913	0.9111	0.9187	0.9171	0.9158	0.9159
30	0.8807	0.8892	0.882	0.8839	0.8849	0.8846	0.8841	0.8791	0.8764	0.8875	0.8853	0.8834	0.8834
35	0.8421	0.8535	0.8437	0.846	0.8476	0.8472	0.8465	0.8396	0.8357	0.8512	0.8483	0.8457	0.8456
40	0.7983	0.8131	0.8004	0.8031	0.8052	0.8047	0.8038	0.7948	0.7896	0.81	0.8064	0.803	0.8027
45	0.7498	0.7683	0.7525	0.7554	0.7581	0.7576	0.7564	0.745	0.7383	0.7644	0.7599	0.7557	0.7551
50	0.6968	0.7193	0.7001	0.7033	0.7066	0.7062	0.7046	0.6907	0.6823	0.7146	0.7091	0.7039	0.7031
55	0.6397	0.6667	0.6437	0.6471	0.6512	0.6507	0.6489	0.6321	0.6219	0.661	0.6544	0.6483	0.6471
60	0.5791	0.6107	0.5838	0.5873	0.5922	0.5917	0.5895	0.5697	0.5577	0.604	0.5963	0.5892	0.5876
65	0.5154	0.5518	0.5207	0.5243	0.53	0.5295	0.5269	0.5039	0.49	0.544	0.5353	0.527	0.5249
70	0.4489	0.4904	0.455	0.4586	0.4652	0.4646	0.4617	0.4354	0.4194	0.4816	0.4716	0.4622	0.4596
75	0.3804	0.4271	0.3871	0.3906	0.3982	0.3976	0.3943	0.3645	0.3465	0.4171	0.4059	0.3953	0.3921
80	0.3102	0.3623	0.3176	0.321	0.3295	0.3289	0.3251	0.2917	0.2718	0.3512	0.3387	0.3268	0.3229
85	0.2389	0.2965	0.247	0.2501	0.2596	0.259	0.2548	0.2178	0.1957	0.2842	0.2704	0.2573	0.2526
90	0.1671	0.2301	0.1758	0.1786	0.189	0.1884	0.1838	0.1431	0.119	0.2167	0.2016	0.1872	0.1817



Tabla 22: Azimut de 95°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Annual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9861	0.9879	0.9896	0.9916	0.9924	0.9926	0.9926	0.9921	0.9906	0.9884	0.9867	0.9858	0.9897
10	0.9748	0.9788	0.9815	0.9853	0.9872	0.9879	0.9876	0.9861	0.9829	0.9796	0.9763	0.9745	0.9819
15	0.9574	0.9641	0.9672	0.9729	0.976	0.9772	0.9766	0.9738	0.9687	0.9651	0.9601	0.9571	0.968
20	0.934	0.9437	0.9469	0.9544	0.9589	0.9605	0.9597	0.9552	0.9481	0.9448	0.938	0.934	0.9482
25	0.9047	0.9179	0.9207	0.9301	0.9359	0.9379	0.9368	0.9305	0.9213	0.919	0.9104	0.9051	0.9225
30	0.8698	0.8869	0.8888	0.9002	0.9072	0.9097	0.9082	0.8998	0.8884	0.8879	0.8774	0.8707	0.8913
35	0.8296	0.8509	0.8515	0.8647	0.8731	0.876	0.8742	0.8634	0.8495	0.8516	0.8392	0.8312	0.8546
40	0.7843	0.8102	0.8091	0.824	0.8338	0.8371	0.8349	0.8215	0.805	0.8105	0.7962	0.7867	0.8128
45	0.7344	0.765	0.762	0.7784	0.7896	0.7932	0.7906	0.7744	0.7553	0.7649	0.7486	0.7377	0.7662
50	0.6801	0.7158	0.7105	0.7282	0.7407	0.7447	0.7416	0.7224	0.7007	0.7152	0.6969	0.6845	0.7151
55	0.6219	0.6629	0.6548	0.6737	0.6877	0.6919	0.6884	0.666	0.6416	0.6616	0.6414	0.6276	0.66
60	0.5603	0.6067	0.5955	0.6154	0.6307	0.6352	0.6313	0.6056	0.5785	0.6046	0.5826	0.5672	0.6011
65	0.4956	0.5476	0.533	0.5538	0.5704	0.575	0.5707	0.5415	0.5118	0.5447	0.5209	0.504	0.5391
70	0.4285	0.4861	0.4677	0.4891	0.507	0.5119	0.5071	0.4743	0.442	0.4823	0.4567	0.4384	0.4743
75	0.3594	0.4227	0.4002	0.4221	0.4412	0.4462	0.4409	0.4045	0.3697	0.4179	0.3906	0.3708	0.4072
80	0.2888	0.3578	0.331	0.353	0.3733	0.3784	0.3727	0.3326	0.2954	0.3519	0.323	0.3019	0.3383
85	0.2173	0.2919	0.2605	0.2826	0.304	0.3091	0.3029	0.2591	0.2197	0.2849	0.2546	0.2321	0.2682
90	0.1671	0.2301	0.1893	0.2112	0.2336	0.2387	0.2322	0.1846	0.1431	0.2174	0.2016	0.1872	0.203

Tabla 23: Azimut de 100°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Annual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9842	0.9875	0.9908	0.9945	0.9963	0.997	0.9967	0.9957	0.9927	0.9885	0.9853	0.9836	0.9911
10	0.971	0.978	0.9838	0.9909	0.9949	0.9966	0.996	0.9933	0.987	0.9798	0.9736	0.9701	0.9846
15	0.9518	0.9629	0.9707	0.9812	0.9875	0.9901	0.9891	0.9845	0.9749	0.9653	0.956	0.9506	0.972
20	0.9266	0.9422	0.9515	0.9655	0.974	0.9776	0.9761	0.9693	0.9563	0.9451	0.9327	0.9254	0.9535
25	0.8956	0.916	0.9264	0.9438	0.9546	0.959	0.9571	0.9479	0.9314	0.9194	0.9037	0.8944	0.9291
30	0.859	0.8847	0.8956	0.9163	0.9293	0.9347	0.9322	0.9204	0.9003	0.8883	0.8695	0.8582	0.899
35	0.8172	0.8483	0.8592	0.8832	0.8985	0.9046	0.9017	0.887	0.8632	0.8521	0.8302	0.8168	0.8635
40	0.7704	0.8073	0.8178	0.8447	0.8622	0.8691	0.8657	0.8479	0.8203	0.811	0.786	0.7706	0.8228
45	0.7191	0.7618	0.7715	0.8011	0.8208	0.8284	0.8244	0.8034	0.7721	0.7655	0.7375	0.72	0.7771
50	0.6635	0.7123	0.7207	0.7528	0.7746	0.7828	0.7783	0.7539	0.7189	0.7158	0.6848	0.6653	0.727
55	0.6042	0.6592	0.6658	0.7001	0.7238	0.7327	0.7276	0.6996	0.6611	0.6622	0.6285	0.607	0.6727
60	0.5416	0.6027	0.6071	0.6433	0.669	0.6783	0.6727	0.6411	0.5991	0.6053	0.5689	0.5455	0.6146
65	0.4761	0.5435	0.5452	0.5829	0.6104	0.6202	0.6141	0.5787	0.5333	0.5454	0.5066	0.4812	0.5531
70	0.4082	0.4818	0.4803	0.5194	0.5485	0.5587	0.5521	0.5129	0.4644	0.4831	0.4419	0.4148	0.4888
75	0.3385	0.4183	0.4132	0.4532	0.4838	0.4943	0.4872	0.4442	0.3927	0.4186	0.3754	0.3465	0.4222
80	0.2675	0.3533	0.3442	0.3848	0.4168	0.4275	0.4199	0.3731	0.3189	0.3527	0.3075	0.2771	0.3536
85	0.1958	0.2874	0.2739	0.3147	0.348	0.3587	0.3507	0.3001	0.2434	0.2857	0.2389	0.207	0.2837
90	0.1671	0.2301	0.2028	0.2434	0.2778	0.2886	0.2801	0.2257	0.1669	0.2182	0.2016	0.1872	0.2241



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9823	0.9871	0.992	0.9972	1.0001	1.0013	1.0009	0.9992	0.9947	0.9885	0.984	0.9815	0.9924
10	0.9673	0.9773	0.9861	0.9964	1.0025	1.0052	1.0042	1.0003	0.9911	0.9799	0.9709	0.9658	0.9873
15	0.9463	0.9617	0.9741	0.9895	0.9988	1.0028	1.0013	0.995	0.9809	0.9655	0.952	0.9442	0.976
20	0.9193	0.9406	0.956	0.9763	0.9889	0.9944	0.9922	0.9832	0.9643	0.9453	0.9273	0.9169	0.9587
25	0.8866	0.9141	0.932	0.9572	0.973	0.9798	0.977	0.965	0.9413	0.9197	0.8972	0.884	0.9356
30	0.8484	0.8824	0.9022	0.9321	0.9511	0.9592	0.9558	0.9406	0.912	0.8887	0.8617	0.8458	0.9067
35	0.805	0.8457	0.8668	0.9013	0.9234	0.9328	0.9287	0.9101	0.8766	0.8525	0.8213	0.8026	0.8722
40	0.7568	0.8044	0.8263	0.8651	0.8901	0.9006	0.8959	0.8738	0.8354	0.8115	0.7761	0.7547	0.8326
45	0.7041	0.7586	0.7809	0.8235	0.8515	0.8631	0.8577	0.8319	0.7887	0.766	0.7265	0.7025	0.7879
50	0.6473	0.7089	0.7308	0.7771	0.8078	0.8204	0.8144	0.7848	0.7368	0.7163	0.6729	0.6463	0.7387
55	0.5868	0.6555	0.6766	0.726	0.7594	0.7728	0.7662	0.7327	0.6802	0.6629	0.6158	0.5867	0.6851
60	0.5231	0.5989	0.6186	0.6707	0.7065	0.7208	0.7135	0.6761	0.6193	0.606	0.5555	0.524	0.6277
65	0.4568	0.5394	0.5571	0.6116	0.6497	0.6646	0.6567	0.6153	0.5545	0.5461	0.4925	0.4588	0.5669
70	0.3882	0.4776	0.4928	0.5491	0.5893	0.6047	0.5963	0.5508	0.4863	0.4838	0.4273	0.3915	0.5031
75	0.318	0.414	0.4259	0.4838	0.5258	0.5416	0.5326	0.4832	0.4153	0.4194	0.3604	0.3226	0.4369
80	0.2466	0.3489	0.3572	0.416	0.4596	0.4757	0.4662	0.4128	0.3419	0.3534	0.2922	0.2527	0.3686
85	0.1746	0.2829	0.287	0.3462	0.3912	0.4076	0.3976	0.3403	0.2667	0.2865	0.2234	0.1917	0.2996
90	0.1671	0.2301	0.216	0.2751	0.3212	0.3376	0.3272	0.2661	0.1903	0.219	0.2016	0.1872	0.2449

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9805	0.9867	0.9931	0.9999	1.0038	1.0055	1.0049	1.0027	0.9967	0.9886	0.9827	0.9794	0.9937
10	0.9637	0.9765	0.9884	1.0018	1.0099	1.0135	1.0122	1.0072	0.9951	0.98	0.9683	0.9616	0.9899
15	0.9409	0.9606	0.9775	0.9975	1.0098	1.0153	1.0132	1.0052	0.9869	0.9657	0.9481	0.938	0.9799
20	0.9122	0.9391	0.9605	0.9869	1.0034	1.0108	1.008	0.9967	0.9721	0.9456	0.9222	0.9086	0.9638
25	0.8778	0.9123	0.9375	0.9703	0.9909	1.0001	0.9965	0.9817	0.9509	0.92	0.8908	0.8738	0.9419
30	0.838	0.8802	0.9087	0.9476	0.9723	0.9832	0.9788	0.9603	0.9234	0.889	0.8541	0.8337	0.9141
35	0.7931	0.8432	0.8743	0.9191	0.9477	0.9602	0.9551	0.9327	0.8897	0.8529	0.8126	0.7887	0.8808
40	0.7434	0.8016	0.8345	0.8849	0.9174	0.9314	0.9255	0.8992	0.85	0.812	0.7663	0.7391	0.8421
45	0.6894	0.7556	0.79	0.8453	0.8815	0.8969	0.8902	0.8598	0.8048	0.7666	0.7158	0.6854	0.7984
50	0.6313	0.7055	0.7407	0.8007	0.8403	0.857	0.8496	0.8149	0.7542	0.7169	0.6613	0.6278	0.75
55	0.5698	0.6519	0.6872	0.7513	0.7941	0.812	0.8038	0.7649	0.6989	0.6635	0.6034	0.5669	0.6973
60	0.5052	0.5951	0.6297	0.6974	0.7432	0.7622	0.7533	0.7101	0.639	0.6066	0.5423	0.5031	0.6406
65	0.438	0.5355	0.5688	0.6396	0.6881	0.7079	0.6984	0.6509	0.5751	0.5468	0.4787	0.4369	0.5804
70	0.3687	0.4735	0.5049	0.5781	0.6291	0.6496	0.6394	0.5878	0.5077	0.4845	0.413	0.3688	0.5171
75	0.2979	0.4097	0.4384	0.5136	0.5667	0.5878	0.577	0.5212	0.4373	0.4201	0.3457	0.2993	0.4512
80	0.2261	0.3446	0.3699	0.4463	0.5013	0.5228	0.5115	0.4516	0.3643	0.3542	0.2773	0.2289	0.3832
85	0.1695	0.2785	0.2999	0.377	0.4334	0.4552	0.4433	0.3795	0.2894	0.2872	0.2083	0.1917	0.3177
90	0.1671	0.2301	0.2289	0.306	0.3636	0.3854	0.3731	0.3055	0.2131	0.2197	0.2016	0.1872	0.2651



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9788	0.9863	0.9942	1.0026	1.0074	1.0095	1.0088	1.006	0.9987	0.9887	0.9814	0.9773	0.995
10	0.9602	0.9758	0.9906	1.007	1.0171	1.0216	1.02	1.0139	0.9989	0.9802	0.9657	0.9576	0.9924
15	0.9357	0.9595	0.9807	1.0053	1.0204	1.0273	1.0248	1.0151	0.9926	0.9659	0.9443	0.9319	0.9836
20	0.9053	0.9377	0.9648	0.9972	1.0175	1.0267	1.0233	1.0098	0.9796	0.9459	0.9171	0.9006	0.9688
25	0.8693	0.9105	0.9428	0.9829	1.0083	1.0197	1.0153	0.9978	0.9602	0.9203	0.8846	0.8639	0.948
30	0.8279	0.8781	0.9149	0.9625	0.9928	1.0064	1.0011	0.9794	0.9344	0.8894	0.8468	0.822	0.9213
35	0.7816	0.8408	0.8815	0.9362	0.9713	0.9868	0.9806	0.9546	0.9023	0.8534	0.8041	0.7753	0.889
40	0.7305	0.7988	0.8426	0.9041	0.9437	0.9612	0.9541	0.9236	0.8642	0.8125	0.7569	0.7241	0.8514
45	0.6751	0.7526	0.7988	0.8664	0.9104	0.9297	0.9217	0.8867	0.8203	0.7671	0.7054	0.6688	0.8086
50	0.6159	0.7023	0.7503	0.8235	0.8716	0.8925	0.8836	0.8441	0.7711	0.7175	0.6501	0.6099	0.761
55	0.5533	0.6484	0.6974	0.7757	0.8276	0.8499	0.8402	0.7961	0.7169	0.6641	0.5913	0.5477	0.709
60	0.4877	0.5914	0.6405	0.7232	0.7787	0.8022	0.7918	0.7431	0.658	0.6072	0.5296	0.4828	0.653
65	0.4197	0.5316	0.5801	0.6666	0.7252	0.7498	0.7386	0.6854	0.595	0.5475	0.4654	0.4156	0.5934
70	0.3498	0.4695	0.5166	0.6061	0.6676	0.6931	0.6812	0.6236	0.5284	0.4851	0.3992	0.3468	0.5306
75	0.2785	0.4056	0.4504	0.5424	0.6062	0.6325	0.6199	0.5579	0.4585	0.4208	0.3315	0.2766	0.4651
80	0.2063	0.3404	0.3822	0.4757	0.5416	0.5683	0.5552	0.4891	0.386	0.3549	0.2628	0.2059	0.3974
85	0.1695	0.2743	0.3123	0.4067	0.4742	0.5013	0.4876	0.4175	0.3114	0.2879	0.2071	0.1917	0.3368
90	0.1671	0.2301	0.2414	0.3359	0.4046	0.4317	0.4176	0.3436	0.2352	0.2204	0.2016	0.1872	0.2847

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9771	0.986	0.9952	1.0051	1.0109	1.0134	1.0125	1.0092	1.0005	0.9887	0.9801	0.9754	0.9962
10	0.9569	0.9751	0.9926	1.0121	1.0239	1.0293	1.0274	1.0203	1.0026	0.9803	0.9633	0.9536	0.9948
15	0.9307	0.9584	0.9838	1.0127	1.0307	1.0389	1.0359	1.0246	0.9981	0.966	0.9406	0.9261	0.9872
20	0.8987	0.9363	0.9689	1.007	1.031	1.0419	1.0379	1.0223	0.9869	0.9461	0.9123	0.8929	0.9735
25	0.8611	0.9088	0.9479	0.9951	1.0249	1.0385	1.0334	1.0133	0.9691	0.9206	0.8786	0.8544	0.9538
30	0.8183	0.8761	0.9209	0.9769	1.0125	1.0286	1.0225	0.9977	0.9449	0.8897	0.8397	0.8107	0.9282
35	0.7705	0.8385	0.8884	0.9526	0.9938	1.0123	1.0051	0.9756	0.9144	0.8538	0.796	0.7624	0.8969
40	0.7181	0.7962	0.8503	0.9225	0.969	0.9898	0.9815	0.9471	0.8777	0.8129	0.7478	0.7096	0.8602
45	0.6615	0.7497	0.8072	0.8867	0.9382	0.9611	0.9519	0.9125	0.8352	0.7676	0.6954	0.6529	0.8183
50	0.6011	0.6992	0.7594	0.8454	0.9017	0.9265	0.9163	0.872	0.7872	0.718	0.6392	0.5926	0.7716
55	0.5375	0.6451	0.7071	0.7991	0.8598	0.8863	0.8751	0.826	0.7341	0.6646	0.5798	0.5293	0.7203
60	0.471	0.5879	0.6508	0.7479	0.8127	0.8407	0.8287	0.7746	0.6762	0.6078	0.5174	0.4633	0.6649
65	0.4022	0.5279	0.5909	0.6924	0.7608	0.79	0.7772	0.7184	0.6141	0.5481	0.4526	0.3953	0.6058
70	0.3316	0.4657	0.5278	0.633	0.7044	0.7348	0.7212	0.6578	0.5481	0.4858	0.386	0.3256	0.5435
75	0.2598	0.4017	0.462	0.5699	0.6441	0.6753	0.661	0.5932	0.4788	0.4215	0.3179	0.2549	0.4783
80	0.1873	0.3364	0.394	0.5039	0.5803	0.612	0.5971	0.525	0.4067	0.3556	0.2489	0.1961	0.4119
85	0.1695	0.2703	0.3242	0.4352	0.5133	0.5454	0.53	0.4538	0.3323	0.2886	0.2071	0.1917	0.3551
90	0.1671	0.2301	0.2534	0.3645	0.4439	0.476	0.4602	0.3801	0.2562	0.2211	0.2016	0.1872	0.3035



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9755	0.9857	0.9962	1.0075	1.0141	1.0171	1.0161	1.0123	1.0023	0.9888	0.979	0.9735	0.9973
10	0.9537	0.9744	0.9946	1.0168	1.0305	1.0367	1.0345	1.0263	1.0061	0.9804	0.9609	0.9499	0.9971
15	0.9259	0.9574	0.9868	1.0198	1.0404	1.0498	1.0464	1.0337	1.0033	0.9662	0.9371	0.9206	0.9906
20	0.8924	0.935	0.9728	1.0164	1.0438	1.0564	1.0518	1.0342	0.9937	0.9463	0.9077	0.8856	0.978
25	0.8534	0.9071	0.9527	1.0066	1.0408	1.0564	1.0506	1.028	0.9776	0.9209	0.8729	0.8453	0.9594
30	0.8091	0.8741	0.9267	0.9905	1.0312	1.0498	1.0428	1.0151	0.9549	0.8901	0.833	0.8	0.9348
35	0.7599	0.8362	0.8949	0.9682	1.0153	1.0366	1.0284	0.9955	0.9258	0.8541	0.7883	0.7501	0.9045
40	0.7063	0.7937	0.8577	0.9399	0.993	1.0169	1.0076	0.9694	0.8905	0.8133	0.7392	0.6959	0.8686
45	0.6485	0.7469	0.8153	0.9058	0.9647	0.9909	0.9805	0.937	0.8493	0.768	0.6859	0.6378	0.8276
50	0.587	0.6962	0.7681	0.8662	0.9303	0.9588	0.9473	0.8985	0.8025	0.7185	0.629	0.5762	0.7816
55	0.5224	0.6419	0.7164	0.8212	0.8903	0.9208	0.9083	0.8543	0.7504	0.6652	0.5688	0.5118	0.731
60	0.4551	0.5845	0.6607	0.7714	0.845	0.8771	0.8637	0.8046	0.6935	0.6084	0.5058	0.4448	0.6762
65	0.3855	0.5244	0.6012	0.717	0.7945	0.8282	0.8139	0.7498	0.6322	0.5487	0.4405	0.3759	0.6176
70	0.3144	0.4621	0.5384	0.6584	0.7395	0.7744	0.7592	0.6903	0.5669	0.4864	0.3734	0.3055	0.5557
75	0.242	0.398	0.4729	0.5961	0.6801	0.716	0.7001	0.6265	0.4981	0.4221	0.3049	0.2343	0.4909
80	0.1718	0.3326	0.4051	0.5305	0.617	0.6535	0.637	0.559	0.4263	0.3562	0.2357	0.1961	0.4267
85	0.1695	0.2664	0.3356	0.4622	0.5505	0.5874	0.5703	0.4882	0.3522	0.2893	0.2071	0.1917	0.3725
90	0.1671	0.2301	0.2647	0.3916	0.4811	0.5181	0.5006	0.4147	0.2762	0.2218	0.2016	0.1872	0.3212

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.974	0.9853	0.9972	1.0097	1.0172	1.0206	1.0194	1.0152	1.004	0.9888	0.9779	0.9718	0.9984
10	0.9507	0.9737	0.9965	1.0213	1.0366	1.0436	1.0412	1.032	1.0094	0.9805	0.9588	0.9464	0.9992
15	0.9215	0.9565	0.9896	1.0265	1.0495	1.0602	1.0563	1.0422	1.0082	0.9664	0.9339	0.9153	0.9938
20	0.8865	0.9337	0.9765	1.0252	1.0559	1.0701	1.0649	1.0454	1.0002	0.9465	0.9034	0.8787	0.9822
25	0.8461	0.9056	0.9572	1.0174	1.0557	1.0732	1.0668	1.0418	0.9855	0.9211	0.8676	0.8368	0.9646
30	0.8004	0.8723	0.9321	1.0033	1.0488	1.0697	1.0619	1.0314	0.9642	0.8904	0.8267	0.79	0.9409
35	0.75	0.8341	0.9011	0.9829	1.0355	1.0594	1.0503	1.0142	0.9365	0.8545	0.7811	0.7386	0.9115
40	0.6952	0.7914	0.8646	0.9563	1.0156	1.0424	1.0321	0.9903	0.9026	0.8137	0.7311	0.6829	0.8765
45	0.6363	0.7444	0.8229	0.9238	0.9895	1.019	1.0074	0.96	0.8625	0.7685	0.677	0.6235	0.8362
50	0.5738	0.6934	0.7763	0.8857	0.9572	0.9892	0.9765	0.9234	0.8168	0.719	0.6193	0.5608	0.7909
55	0.5083	0.6389	0.7252	0.8421	0.919	0.9532	0.9395	0.8809	0.7657	0.6657	0.5584	0.4953	0.741
60	0.4401	0.5814	0.6699	0.7934	0.8753	0.9114	0.8966	0.8327	0.7097	0.6089	0.4949	0.4274	0.6868
65	0.3699	0.5211	0.6108	0.74	0.8263	0.8641	0.8483	0.7792	0.6491	0.5492	0.429	0.3576	0.6287
70	0.2981	0.4586	0.5484	0.6822	0.7723	0.8115	0.7949	0.7208	0.5844	0.487	0.3615	0.2866	0.5672
75	0.2254	0.3944	0.4832	0.6206	0.7139	0.7542	0.7368	0.6579	0.5161	0.4227	0.2927	0.2148	0.5027
80	0.1718	0.329	0.4156	0.5555	0.6514	0.6924	0.6744	0.591	0.4447	0.3568	0.2233	0.1961	0.4418
85	0.1695	0.2628	0.3462	0.4875	0.5853	0.6268	0.6081	0.5206	0.3708	0.2899	0.2071	0.1917	0.3889
90	0.1671	0.2301	0.2754	0.417	0.5161	0.5577	0.5385	0.4472	0.2949	0.2224	0.2016	0.1872	0.3379



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9726	0.985	0.998	1.0118	1.0201	1.0238	1.0226	1.0178	1.0055	0.9889	0.9769	0.9701	0.9994
10	0.9479	0.9732	0.9982	1.0255	1.0423	1.0501	1.0473	1.0374	1.0125	0.9806	0.9567	0.9432	1.0012
15	0.9173	0.9556	0.9922	1.0326	1.058	1.0698	1.0656	1.0501	1.0127	0.9665	0.9308	0.9105	0.9968
20	0.881	0.9326	0.9799	1.0333	1.0671	1.0827	1.0771	1.0558	1.0062	0.9467	0.8994	0.8723	0.9862
25	0.8393	0.9042	0.9615	1.0275	1.0695	1.0889	1.0818	1.0547	0.9929	0.9214	0.8626	0.8289	0.9694
30	0.7924	0.8706	0.9371	1.0152	1.0652	1.0881	1.0796	1.0466	0.9729	0.8907	0.8209	0.7806	0.9467
35	0.7408	0.8322	0.9068	0.9965	1.0542	1.0805	1.0706	1.0316	0.9465	0.8548	0.7744	0.7278	0.9181
40	0.6848	0.7892	0.8711	0.9715	1.0366	1.0661	1.0549	1.0098	0.9137	0.8141	0.7235	0.6709	0.8839
45	0.6249	0.742	0.83	0.9405	1.0125	1.045	1.0325	0.9814	0.8748	0.7689	0.6687	0.6103	0.8443
50	0.5615	0.6908	0.7839	0.9037	0.9821	1.0174	1.0035	0.9465	0.8301	0.7194	0.6103	0.5465	0.7997
55	0.4951	0.6362	0.7333	0.8613	0.9457	0.9834	0.9684	0.9056	0.7799	0.6661	0.5488	0.48	0.7503
60	0.4262	0.5784	0.6784	0.8138	0.9034	0.9433	0.9272	0.8587	0.7246	0.6094	0.4847	0.4112	0.6966
65	0.3553	0.518	0.6198	0.7613	0.8557	0.8974	0.8803	0.8064	0.6647	0.5498	0.4184	0.3407	0.639
70	0.283	0.4555	0.5577	0.7043	0.8029	0.846	0.828	0.749	0.6006	0.4875	0.3505	0.2691	0.5778
75	0.2098	0.3912	0.4928	0.6433	0.7453	0.7896	0.7708	0.6869	0.5328	0.4233	0.2814	0.2005	0.514
80	0.1718	0.3256	0.4254	0.5787	0.6834	0.7286	0.709	0.6206	0.4617	0.3574	0.2126	0.1961	0.4559
85	0.1695	0.2594	0.356	0.5109	0.6176	0.6633	0.6432	0.5505	0.388	0.2905	0.2071	0.1917	0.404
90	0.1671	0.2301	0.2853	0.4405	0.5485	0.5943	0.5737	0.4772	0.3122	0.223	0.2016	0.1872	0.3534

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9713	0.9848	0.9988	1.0137	1.0227	1.0268	1.0254	1.0203	1.0069	0.9889	0.9759	0.9686	1.0004
10	0.9454	0.9726	0.9998	1.0293	1.0475	1.056	1.053	1.0422	1.0153	0.9807	0.9549	0.9402	1.0031
15	0.9135	0.9548	0.9946	1.0383	1.0658	1.0785	1.074	1.0573	1.0169	0.9667	0.928	0.9061	0.9995
20	0.876	0.9315	0.983	1.0408	1.0774	1.0943	1.0882	1.0654	1.0116	0.9469	0.8957	0.8665	0.9898
25	0.8331	0.9028	0.9654	1.0367	1.0822	1.1032	1.0955	1.0664	0.9996	0.9216	0.8581	0.8217	0.9738
30	0.7851	0.8691	0.9416	1.026	1.0801	1.105	1.0958	1.0604	0.9808	0.8909	0.8155	0.7721	0.9519
35	0.7324	0.8304	0.9121	1.0089	1.0713	1.0999	1.0892	1.0474	0.9555	0.8551	0.7682	0.718	0.924
40	0.6754	0.7872	0.8769	0.9854	1.0558	1.0879	1.0757	1.0275	0.9238	0.8145	0.7166	0.6599	0.8906
45	0.6145	0.7398	0.8364	0.9558	1.0336	1.0689	1.0553	1.0009	0.886	0.7692	0.6611	0.5982	0.8516
50	0.5502	0.6884	0.7909	0.9202	1.0049	1.0432	1.0283	0.9676	0.8422	0.7198	0.6021	0.5334	0.8076
55	0.483	0.6336	0.7407	0.879	0.97	1.011	0.9948	0.9281	0.7928	0.6666	0.54	0.4659	0.7588
60	0.4135	0.5758	0.6863	0.8324	0.9292	0.9724	0.9552	0.8826	0.7383	0.6099	0.4754	0.3963	0.7056
65	0.342	0.5152	0.628	0.7807	0.8826	0.9279	0.9095	0.8313	0.679	0.5502	0.4087	0.3252	0.6484
70	0.2692	0.4526	0.5662	0.7245	0.8308	0.8776	0.8583	0.7748	0.6154	0.488	0.3404	0.253	0.5876
75	0.1956	0.3882	0.5015	0.664	0.7739	0.8221	0.8019	0.7134	0.548	0.4238	0.271	0.2005	0.5253
80	0.1718	0.3226	0.4343	0.5998	0.7126	0.7616	0.7408	0.6476	0.4772	0.3579	0.2126	0.1961	0.4696
85	0.1695	0.2563	0.3651	0.5323	0.6472	0.6967	0.6753	0.5779	0.4037	0.291	0.2071	0.1917	0.4178
90	0.1671	0.2301	0.2944	0.462	0.5782	0.6278	0.6059	0.5047	0.3279	0.2235	0.2016	0.1872	0.3675



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9701	0.9845	0.9996	1.0155	1.0251	1.0295	1.028	1.0225	1.0082	0.989	0.9751	0.9673	1.0012
10	0.9431	0.9721	1.0013	1.0327	1.0522	1.0613	1.0581	1.0466	1.0178	0.9808	0.9532	0.9375	1.0047
15	0.9101	0.9541	0.9967	1.0434	1.0728	1.0865	1.0816	1.0638	1.0206	0.9668	0.9255	0.9021	1.002
20	0.8714	0.9305	0.9859	1.0475	1.0866	1.1048	1.0982	1.074	1.0166	0.9471	0.8924	0.8612	0.993
25	0.8274	0.9017	0.9688	1.045	1.0936	1.1161	1.1079	1.077	1.0057	0.9218	0.854	0.8152	0.9778
30	0.7784	0.8677	0.9458	1.0358	1.0936	1.1203	1.1105	1.0729	0.988	0.8912	0.8107	0.7644	0.9566
35	0.7248	0.8288	0.9168	1.0201	1.0867	1.1174	1.106	1.0617	0.9637	0.8554	0.7627	0.7092	0.9294
40	0.6668	0.7854	0.8823	0.9979	1.073	1.1074	1.0945	1.0435	0.9329	0.8148	0.7104	0.65	0.8966
45	0.6051	0.7378	0.8423	0.9695	1.0525	1.0904	1.076	1.0184	0.8959	0.7696	0.6543	0.5873	0.8583
50	0.5401	0.6863	0.7972	0.9351	1.0255	1.0665	1.0506	0.9866	0.853	0.7202	0.5947	0.5216	0.8148
55	0.4722	0.6313	0.7474	0.8948	0.992	1.0358	1.0187	0.9484	0.8044	0.667	0.5321	0.4533	0.7665
60	0.402	0.5733	0.6933	0.8491	0.9524	0.9987	0.9803	0.904	0.7505	0.6103	0.467	0.383	0.7137
65	0.33	0.5127	0.6353	0.7982	0.9069	0.9553	0.9359	0.8537	0.6918	0.5507	0.3999	0.3112	0.6568
70	0.2567	0.4499	0.5738	0.7426	0.8559	0.9061	0.8856	0.798	0.6286	0.4885	0.3313	0.2384	0.5963
75	0.1828	0.3855	0.5093	0.6826	0.7997	0.8513	0.83	0.7372	0.5616	0.4242	0.2617	0.2005	0.5355
80	0.1718	0.3198	0.4423	0.6188	0.7389	0.7914	0.7693	0.6719	0.4911	0.3584	0.2126	0.1961	0.4819
85	0.1695	0.2535	0.3731	0.5515	0.6737	0.7268	0.7041	0.6024	0.4177	0.2915	0.2071	0.1917	0.4302
90	0.1671	0.2301	0.3025	0.4813	0.6048	0.658	0.6349	0.5293	0.342	0.224	0.2016	0.1872	0.3802

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9691	0.9843	1.0002	1.017	1.0272	1.0318	1.0302	1.0244	1.0093	0.989	0.9743	0.9661	1.0019
10	0.941	0.9717	1.0025	1.0357	1.0564	1.066	1.0626	1.0504	1.0201	0.9809	0.9517	0.9352	1.0062
15	0.907	0.9535	0.9986	1.0479	1.079	1.0934	1.0883	1.0695	1.0239	0.9669	0.9233	0.8986	1.0042
20	0.8674	0.9297	0.9884	1.0534	1.0948	1.114	1.1071	1.0815	1.0209	0.9472	0.8895	0.8565	0.9959
25	0.8225	0.9006	0.9719	1.0523	1.1036	1.1274	1.1188	1.0863	1.011	0.922	0.8504	0.8094	0.9814
30	0.7726	0.8664	0.9494	1.0444	1.1055	1.1337	1.1234	1.0839	0.9943	0.8914	0.8064	0.7575	0.9607
35	0.718	0.8274	0.921	1.0299	1.1004	1.1328	1.1208	1.0743	0.9708	0.8556	0.7578	0.7013	0.9342
40	0.6593	0.7838	0.8869	1.0089	1.0883	1.1246	1.111	1.0576	0.9409	0.815	0.7049	0.6412	0.9019
45	0.5969	0.7361	0.8474	0.9816	1.0693	1.1093	1.0941	1.0339	0.9047	0.7699	0.6482	0.5777	0.8641
50	0.5311	0.6844	0.8028	0.9481	1.0436	1.087	1.0703	1.0034	0.8625	0.7205	0.5881	0.5111	0.8211
55	0.4626	0.6293	0.7534	0.9087	1.0113	1.0577	1.0397	0.9662	0.8146	0.6673	0.5251	0.4421	0.7732
60	0.3918	0.5712	0.6996	0.8638	0.9728	1.0219	1.0025	0.9228	0.7613	0.6107	0.4596	0.3712	0.7208
65	0.3194	0.5105	0.6418	0.8136	0.9282	0.9796	0.9591	0.8734	0.703	0.5511	0.3922	0.2988	0.6642
70	0.2457	0.4476	0.5805	0.7585	0.878	0.9312	0.9097	0.8184	0.6403	0.4889	0.3233	0.2256	0.604
75	0.174	0.3831	0.5162	0.6989	0.8225	0.8771	0.8547	0.7582	0.5735	0.4246	0.2534	0.2005	0.5447
80	0.1718	0.3174	0.4493	0.6354	0.762	0.8176	0.7945	0.6932	0.5033	0.3588	0.2126	0.1961	0.4927
85	0.1695	0.2511	0.3803	0.5683	0.6971	0.7533	0.7295	0.624	0.43	0.2919	0.2071	0.1917	0.4411
90	0.1671	0.2301	0.3097	0.4982	0.6283	0.6845	0.6603	0.551	0.3544	0.2244	0.2016	0.1872	0.3914



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9682	0.9841	1.0007	1.0183	1.029	1.0339	1.0322	1.0261	1.0103	0.989	0.9737	0.9651	1.0026
10	0.9393	0.9713	1.0036	1.0383	1.06	1.07	1.0665	1.0538	1.022	0.9809	0.9504	0.9331	1.0074
15	0.9044	0.9529	1.0002	1.0518	1.0843	1.0994	1.0941	1.0745	1.0268	0.967	0.9214	0.8955	1.006
20	0.864	0.929	0.9905	1.0585	1.1018	1.1219	1.1147	1.088	1.0246	0.9473	0.887	0.8525	0.9983
25	0.8183	0.8997	0.9746	1.0585	1.1123	1.1372	1.1282	1.0944	1.0156	0.9221	0.8473	0.8045	0.9844
30	0.7675	0.8654	0.9526	1.0518	1.1157	1.1453	1.1345	1.0934	0.9996	0.8916	0.8027	0.7517	0.9643
35	0.7123	0.8262	0.9246	1.0384	1.112	1.146	1.1335	1.0852	0.977	0.8558	0.7535	0.6946	0.9383
40	0.6529	0.7825	0.891	1.0184	1.1013	1.1395	1.1252	1.0697	0.9478	0.8153	0.7002	0.6337	0.9064
45	0.5897	0.7346	0.8519	0.992	1.0837	1.1256	1.1098	1.0472	0.9122	0.7701	0.643	0.5694	0.8691
50	0.5234	0.6828	0.8076	0.9593	1.0591	1.1046	1.0872	1.0177	0.8706	0.7208	0.5825	0.5022	0.8265
55	0.4544	0.6276	0.7585	0.9207	1.0279	1.0766	1.0578	0.9815	0.8232	0.6676	0.5191	0.4325	0.779
60	0.3831	0.5694	0.705	0.8764	0.9903	1.0418	1.0216	0.939	0.7704	0.611	0.4533	0.361	0.7269
65	0.3103	0.5085	0.6474	0.8267	0.9466	1.0004	0.979	0.8903	0.7126	0.5514	0.3855	0.2882	0.6706
70	0.2363	0.4456	0.5863	0.7721	0.897	0.9528	0.9304	0.8358	0.6502	0.4892	0.3164	0.2146	0.6106
75	0.174	0.381	0.5221	0.7129	0.842	0.8993	0.8759	0.7761	0.5837	0.425	0.2463	0.2005	0.5532
80	0.1718	0.3153	0.4553	0.6496	0.7819	0.8402	0.8161	0.7115	0.5136	0.3592	0.2126	0.1961	0.5019
85	0.1695	0.249	0.3863	0.5827	0.7172	0.7761	0.7514	0.6424	0.4405	0.2923	0.2071	0.1917	0.4505
90	0.1671	0.2301	0.3158	0.5126	0.6484	0.7073	0.6822	0.5695	0.3649	0.2248	0.2016	0.1872	0.4009

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9675	0.984	1.0012	1.0194	1.0305	1.0356	1.0338	1.0275	1.0111	0.9891	0.9732	0.9642	1.0031
10	0.9378	0.971	1.0045	1.0405	1.0629	1.0734	1.0697	1.0565	1.0236	0.981	0.9494	0.9315	1.0085
15	0.9023	0.9525	1.0016	1.055	1.0887	1.1044	1.0988	1.0785	1.0291	0.9671	0.9199	0.893	1.0076
20	0.8611	0.9284	0.9923	1.0627	1.1076	1.1284	1.121	1.0934	1.0277	0.9474	0.8849	0.8492	1.0003
25	0.8147	0.899	0.9768	1.0637	1.1194	1.1453	1.1359	1.101	1.0194	0.9223	0.8447	0.8004	0.9869
30	0.7634	0.8645	0.9552	1.0579	1.1242	1.1548	1.1436	1.1012	1.0041	0.8917	0.7997	0.7468	0.9673
35	0.7075	0.8252	0.9276	1.0454	1.1217	1.157	1.144	1.0941	0.9821	0.856	0.7501	0.6891	0.9416
40	0.6475	0.7813	0.8943	1.0262	1.1122	1.1517	1.137	1.0797	0.9534	0.8155	0.6963	0.6275	0.9102
45	0.5838	0.7333	0.8555	1.0006	1.0956	1.1391	1.1227	1.0582	0.9184	0.7703	0.6387	0.5625	0.8732
50	0.517	0.6815	0.8116	0.9686	1.072	1.1192	1.1012	1.0296	0.8772	0.721	0.5778	0.4947	0.831
55	0.4475	0.6262	0.7628	0.9306	1.0417	1.0922	1.0727	0.9942	0.8303	0.6679	0.5141	0.4246	0.7837
60	0.3759	0.5678	0.7095	0.8868	1.0048	1.0583	1.0374	0.9523	0.7778	0.6113	0.448	0.3526	0.7319
65	0.3027	0.507	0.6521	0.8376	0.9617	1.0177	0.9956	0.9042	0.7204	0.5517	0.38	0.2794	0.6758
70	0.2285	0.444	0.5911	0.7833	0.9127	0.9707	0.9475	0.8503	0.6583	0.4895	0.3106	0.2055	0.616
75	0.174	0.3794	0.527	0.7244	0.8581	0.9177	0.8935	0.7909	0.592	0.4253	0.2405	0.2005	0.5603
80	0.1718	0.3136	0.4602	0.6613	0.7984	0.859	0.8341	0.7265	0.522	0.3595	0.2126	0.1961	0.5096
85	0.1695	0.2472	0.3913	0.5944	0.7338	0.795	0.7695	0.6576	0.449	0.2926	0.2071	0.1917	0.4582
90	0.1671	0.2301	0.3208	0.5244	0.665	0.7261	0.7002	0.5847	0.3734	0.2251	0.2016	0.1872	0.4088



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9669	0.9839	1.0015	1.0202	1.0316	1.0369	1.0351	1.0286	1.0117	0.9891	0.9727	0.9636	1.0035
10	0.9367	0.9708	1.0052	1.0422	1.0652	1.076	1.0722	1.0587	1.0248	0.981	0.9485	0.9301	1.0093
15	0.9006	0.9521	1.0026	1.0575	1.0921	1.1083	1.1026	1.0818	1.031	0.9671	0.9186	0.891	1.0088
20	0.8589	0.9279	0.9937	1.066	1.1121	1.1336	1.1259	1.0976	1.0301	0.9475	0.8833	0.8466	1.0019
25	0.812	0.8984	0.9785	1.0678	1.125	1.1517	1.1421	1.1062	1.0223	0.9224	0.8427	0.7971	0.9888
30	0.7601	0.8638	0.9572	1.0627	1.1308	1.1624	1.1508	1.1074	1.0076	0.8918	0.7973	0.743	0.9696
35	0.7037	0.8244	0.9299	1.0509	1.1293	1.1656	1.1522	1.1012	0.986	0.8561	0.7473	0.6847	0.9443
40	0.6433	0.7805	0.8969	1.0324	1.1207	1.1614	1.1462	1.0876	0.9578	0.8156	0.6932	0.6226	0.9132
45	0.5792	0.7323	0.8584	1.0073	1.1049	1.1497	1.1328	1.0668	0.9232	0.7705	0.6353	0.5571	0.8765
50	0.512	0.6804	0.8147	0.9758	1.0821	1.1307	1.1122	1.0389	0.8824	0.7212	0.5742	0.4889	0.8345
55	0.4422	0.625	0.7661	0.9383	1.0525	1.1045	1.0845	1.0041	0.8358	0.668	0.5102	0.4183	0.7875
60	0.3702	0.5666	0.713	0.8949	1.0162	1.0712	1.0498	0.9628	0.7836	0.6115	0.4438	0.346	0.7358
65	0.2968	0.5057	0.6558	0.846	0.9737	1.0312	1.0086	0.9151	0.7264	0.5519	0.3757	0.2725	0.6799
70	0.2223	0.4427	0.595	0.792	0.9251	0.9848	0.961	0.8616	0.6645	0.4897	0.3061	0.2047	0.6208
75	0.174	0.378	0.5309	0.7333	0.8708	0.9322	0.9074	0.8025	0.5984	0.4255	0.2358	0.2005	0.5658
80	0.1718	0.3122	0.4641	0.6704	0.8113	0.8739	0.8483	0.7383	0.5286	0.3597	0.2126	0.1961	0.5156
85	0.1695	0.2458	0.3952	0.6036	0.747	0.81	0.7839	0.6695	0.4556	0.2928	0.2071	0.1917	0.4643
90	0.1671	0.2301	0.3247	0.5336	0.6781	0.7559	0.7268	0.5966	0.38	0.2253	0.2016	0.1872	0.4173

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9665	0.9838	1.0018	1.0209	1.0325	1.0378	1.036	1.0294	1.0122	0.9891	0.9724	0.9631	1.0038
10	0.9359	0.9706	1.0057	1.0434	1.0669	1.0779	1.074	1.0602	1.0257	0.981	0.9479	0.9292	1.0099
15	0.8994	0.9518	1.0034	1.0593	1.0946	1.1111	1.1053	1.0841	1.0323	0.9672	0.9177	0.8896	1.0096
20	0.8573	0.9276	0.9947	1.0684	1.1154	1.1373	1.1295	1.1007	1.0319	0.9476	0.8821	0.8447	1.0031
25	0.81	0.898	0.9797	1.0707	1.1291	1.1562	1.1464	1.11	1.0245	0.9224	0.8413	0.7948	0.9903
30	0.7577	0.8633	0.9587	1.0662	1.1356	1.1678	1.156	1.1118	1.0101	0.8919	0.7956	0.7403	0.9712
35	0.701	0.8238	0.9316	1.0549	1.1348	1.1718	1.1582	1.1062	0.9889	0.8562	0.7453	0.6815	0.9462
40	0.6403	0.7798	0.8988	1.0368	1.1268	1.1683	1.1529	1.0933	0.961	0.8157	0.691	0.619	0.9153
45	0.5759	0.7316	0.8605	1.0121	1.1116	1.1573	1.1402	1.073	0.9267	0.7706	0.6329	0.5533	0.8788
50	0.5084	0.6796	0.817	0.9811	1.0894	1.1389	1.1201	1.0456	0.8862	0.7213	0.5715	0.4847	0.837
55	0.4383	0.6242	0.7685	0.9439	1.0602	1.1133	1.0929	1.0113	0.8397	0.6682	0.5074	0.4138	0.7901
60	0.3662	0.5658	0.7156	0.9008	1.0244	1.0806	1.0588	0.9703	0.7878	0.6116	0.4409	0.3413	0.7387
65	0.2925	0.5048	0.6585	0.8521	0.9822	1.041	1.0179	0.923	0.7307	0.552	0.3725	0.2675	0.6829
70	0.2179	0.4417	0.5977	0.7983	0.934	0.995	0.9707	0.8697	0.6689	0.4899	0.3029	0.2047	0.6243
75	0.174	0.3771	0.5337	0.7397	0.88	0.9428	0.9175	0.8108	0.6028	0.4257	0.2325	0.2005	0.5698
80	0.1718	0.3113	0.467	0.6769	0.8208	0.8847	0.8586	0.7468	0.5331	0.3599	0.2126	0.1961	0.52
85	0.1695	0.2448	0.3981	0.6102	0.7566	0.8357	0.8066	0.6781	0.4602	0.293	0.2071	0.1917	0.471
90	0.1671	0.2301	0.3275	0.5401	0.6971	0.7671	0.7375	0.6053	0.3845	0.2255	0.2016	0.1872	0.4226



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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9663	0.9837	1.002	1.0212	1.033	1.0384	1.0365	1.0298	1.0124	0.9891	0.9723	0.9628	1.004
10	0.9354	0.9705	1.0061	1.0441	1.0679	1.079	1.0751	1.0612	1.0262	0.9811	0.9476	0.9286	1.0102
15	0.8986	0.9517	1.0038	1.0604	1.0961	1.1128	1.1069	1.0855	1.0331	0.9672	0.9172	0.8888	1.0102
20	0.8563	0.9274	0.9953	1.0699	1.1174	1.1396	1.1316	1.1025	1.0329	0.9476	0.8814	0.8436	1.0038
25	0.8088	0.8977	0.9805	1.0725	1.1315	1.159	1.1491	1.1122	1.0258	0.9225	0.8404	0.7934	0.9911
30	0.7563	0.863	0.9596	1.0683	1.1385	1.171	1.1592	1.1145	1.0116	0.892	0.7945	0.7386	0.9723
35	0.6994	0.8235	0.9326	1.0572	1.1381	1.1755	1.1618	1.1093	0.9906	0.8563	0.7441	0.6796	0.9473
40	0.6384	0.7794	0.9	1.0394	1.1305	1.1725	1.1569	1.0967	0.963	0.8158	0.6896	0.6169	0.9166
45	0.5739	0.7312	0.8618	1.015	1.1157	1.1619	1.1446	1.0767	0.9288	0.7707	0.6314	0.5509	0.8802
50	0.5062	0.6792	0.8183	0.9842	1.0938	1.1439	1.1249	1.0496	0.8884	0.7214	0.57	0.4821	0.8385
55	0.436	0.6237	0.77	0.9472	1.0649	1.1186	1.098	1.0156	0.8421	0.6683	0.5057	0.4111	0.7918
60	0.3637	0.5653	0.7171	0.9043	1.0294	1.0862	1.0642	0.9748	0.7903	0.6117	0.4391	0.3384	0.7404
65	0.2899	0.5043	0.6601	0.8558	0.9874	1.047	1.0236	0.9277	0.7332	0.5521	0.3707	0.2645	0.6847
70	0.2152	0.4412	0.5994	0.8021	0.9394	1.0012	0.9766	0.8746	0.6715	0.49	0.301	0.2047	0.6264
75	0.174	0.3765	0.5355	0.7436	0.8856	0.9492	0.9236	0.8158	0.6055	0.4258	0.2305	0.2005	0.5722
80	0.1718	0.3107	0.4688	0.6808	0.8265	0.906	0.865	0.7519	0.5357	0.36	0.2126	0.1961	0.5238
85	0.1695	0.2442	0.3998	0.6141	0.7626	0.8425	0.8131	0.6834	0.4627	0.2931	0.2071	0.1917	0.4736
90	0.1671	0.2301	0.3292	0.5441	0.703	0.7739	0.744	0.6107	0.3871	0.2256	0.2016	0.1872	0.4253

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	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9662	0.9837	1.002	1.0214	1.0332	1.0386	1.0367	1.03	1.0125	0.9891	0.9722	0.9627	1.004
10	0.9352	0.9705	1.0062	1.0444	1.0683	1.0794	1.0755	1.0615	1.0264	0.9811	0.9474	0.9284	1.0104
15	0.8984	0.9516	1.004	1.0607	1.0966	1.1134	1.1075	1.0859	1.0334	0.9672	0.917	0.8885	1.0104
20	0.856	0.9273	0.9955	1.0703	1.118	1.1403	1.1324	1.1031	1.0333	0.9476	0.8811	0.8432	1.004
25	0.8084	0.8976	0.9807	1.0731	1.1323	1.1599	1.15	1.113	1.0262	0.9225	0.8401	0.7929	0.9914
30	0.7559	0.8629	0.9599	1.069	1.1394	1.1721	1.1602	1.1154	1.0121	0.892	0.7942	0.7381	0.9726
35	0.6989	0.8234	0.933	1.058	1.1392	1.1768	1.163	1.1103	0.9912	0.8563	0.7437	0.679	0.9477
40	0.6378	0.7793	0.9003	1.0403	1.1317	1.1739	1.1582	1.0978	0.9636	0.8158	0.6892	0.6162	0.917
45	0.5732	0.7311	0.8622	1.016	1.117	1.1635	1.146	1.078	0.9295	0.7707	0.6309	0.5501	0.8807
50	0.5055	0.679	0.8188	0.9853	1.0952	1.1456	1.1265	1.051	0.8892	0.7214	0.5694	0.4813	0.839
55	0.4352	0.6236	0.7705	0.9483	1.0665	1.1204	1.0997	1.017	0.8429	0.6683	0.5051	0.4102	0.7923
60	0.3629	0.5651	0.7176	0.9055	1.031	1.0881	1.066	0.9763	0.7911	0.6117	0.4385	0.3375	0.7409
65	0.289	0.5041	0.6606	0.857	0.9892	1.0489	1.0255	0.9293	0.7341	0.5521	0.37	0.2635	0.6853
70	0.2143	0.441	0.6	0.8033	0.9412	1.0032	0.9786	0.8762	0.6724	0.49	0.3003	0.2047	0.6271
75	0.174	0.3763	0.536	0.7449	0.8875	0.9514	0.9256	0.8175	0.6063	0.4258	0.2298	0.2005	0.573
80	0.1718	0.3105	0.4693	0.6821	0.8285	0.9082	0.8671	0.7536	0.5366	0.36	0.2126	0.1961	0.5247
85	0.1695	0.244	0.4004	0.6154	0.7737	0.8447	0.8152	0.6851	0.4636	0.2931	0.2071	0.1917	0.4753
90	0.1671	0.2301	0.3298	0.5454	0.705	0.7762	0.7462	0.6126	0.3879	0.2256	0.2016	0.1872	0.4262