

Colón, Honduras

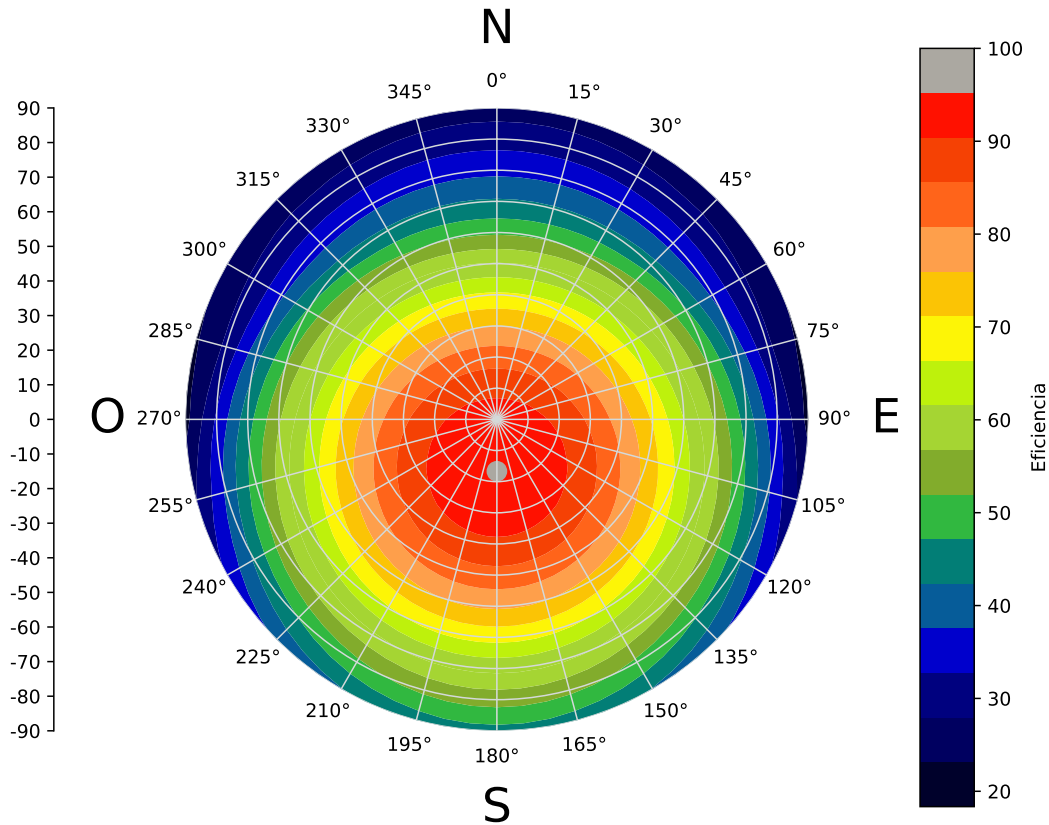


Tabla 1: Generalidades

Latitud	15.926749506339034
Longitud	-85.9384059906006
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	4.7076	11.5528	0.5083	0.1288	-20.8472	83.7558
Febrero	4.9407	11.1531	0.5074	0.119	-13.3253	86.1153
Marzo	5.3953	9.6573	0.526	0.1309	-2.3892	89.3151
Abril	5.7522	9.8851	0.5374	0.1345	9.4932	92.744
Mayo	5.4484	9.5276	0.5191	0.1213	18.8058	95.5854
Junio	5.142	9.4371	0.4977	0.123	23.0771	96.9839
Julio	5.0139	9.3447	0.4978	0.1253	21.1015	96.3274
Agosto	5.1967	9.6339	0.508	0.1266	13.296	93.8779
Septiembre	5.2537	9.77	0.5187	0.1376	1.9936	90.5713
Octubre	4.8501	9.5977	0.5011	0.1221	-9.8485	87.1507
Noviembre	4.192	8.113	0.4807	0.1267	-19.0505	84.337
Diciembre	4.0167	7.9051	0.4837	0.1302	-23.0956	83.0099
Promedio	4.9224	9.079	0.5114	0.1239	—	89.9811

Tabla 3: Azimut de 0°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0068	0.9907	0.9732	0.9546	0.9427	0.9375	0.9409	0.9456	0.9619	0.9855	1.0011	1.009	0.9708
10	1.0162	0.9845	0.9489	0.9115	0.8882	0.8782	0.8847	0.8934	0.9256	0.974	1.0051	1.0209	0.9442
15	1.0191	0.9727	0.9187	0.8626	0.8282	0.8136	0.8232	0.8354	0.883	0.9566	1.003	1.0267	0.9119
20	1.0156	0.9553	0.8828	0.8085	0.7633	0.7443	0.7569	0.772	0.8345	0.9337	0.995	1.0263	0.874
25	1.0057	0.9324	0.8417	0.7494	0.6939	0.6706	0.6863	0.7038	0.7805	0.9053	0.981	1.0197	0.8309
30	0.9894	0.9043	0.7955	0.686	0.6205	0.5933	0.6118	0.6313	0.7213	0.8716	0.9612	1.0071	0.7828
35	0.9669	0.8711	0.7446	0.6186	0.5438	0.5129	0.5342	0.5549	0.6575	0.833	0.9357	0.9884	0.7301
40	0.9384	0.8332	0.6894	0.5478	0.4643	0.43	0.454	0.4754	0.5894	0.7897	0.9047	0.9639	0.6733
45	0.904	0.7907	0.6304	0.4742	0.3827	0.3453	0.3718	0.3933	0.5177	0.742	0.8684	0.9336	0.6128
50	0.8641	0.744	0.5679	0.3982	0.2995	0.2595	0.2882	0.3093	0.4429	0.6903	0.8272	0.898	0.5491
55	0.8189	0.6935	0.5025	0.3205	0.2156	0.2144	0.2207	0.224	0.3655	0.635	0.7812	0.8571	0.4874
60	0.7687	0.6395	0.4346	0.2417	0.2005	0.2102	0.2163	0.1382	0.2861	0.5766	0.731	0.8114	0.4379
65	0.7141	0.5826	0.3648	0.1815	0.1964	0.2057	0.2116	0.1345	0.2054	0.5154	0.6768	0.7611	0.3958
70	0.6553	0.523	0.2936	0.1788	0.1922	0.201	0.2067	0.1341	0.124	0.4519	0.6191	0.7067	0.3572
75	0.5928	0.4612	0.2215	0.1761	0.1878	0.1962	0.2016	0.1336	0.0985	0.3867	0.5583	0.6486	0.3219
80	0.5272	0.3978	0.189	0.1733	0.1833	0.1912	0.1965	0.1331	0.1011	0.3201	0.4949	0.5872	0.2912
85	0.4588	0.3331	0.1847	0.1704	0.1787	0.1862	0.1912	0.1327	0.1038	0.2252	0.4294	0.5229	0.2598
90	0.3883	0.2403	0.1804	0.1675	0.1741	0.1811	0.1859	0.1322	0.1065	0.2169	0.3622	0.4564	0.2327



Tabla 4: Azimut de 5°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0067	0.9907	0.9733	0.9548	0.9429	0.9377	0.9411	0.9457	0.962	0.9855	1.001	1.009	0.9709
10	1.016	0.9845	0.949	0.9117	0.8885	0.8786	0.8851	0.8937	0.9258	0.974	1.005	1.0208	0.9444
15	1.0189	0.9727	0.9188	0.863	0.8287	0.8142	0.8238	0.8358	0.8833	0.9567	1.0029	1.0265	0.9121
20	1.0153	0.9552	0.8831	0.809	0.7639	0.745	0.7576	0.7727	0.8349	0.9337	0.9948	1.026	0.8743
25	1.0053	0.9324	0.8419	0.7501	0.6947	0.6716	0.6871	0.7046	0.781	0.9053	0.9808	1.0194	0.8312
30	0.989	0.9043	0.7958	0.6868	0.6215	0.5944	0.6129	0.6322	0.7219	0.8717	0.9609	1.0066	0.7832
35	0.9664	0.8711	0.745	0.6195	0.545	0.5142	0.5354	0.556	0.6582	0.8331	0.9354	0.9879	0.7306
40	0.9378	0.8331	0.6898	0.5488	0.4656	0.4314	0.4553	0.4767	0.5902	0.7897	0.9043	0.9633	0.6739
45	0.9034	0.7906	0.6308	0.4753	0.3841	0.3469	0.3733	0.3947	0.5186	0.7421	0.868	0.933	0.6134
50	0.8634	0.7439	0.5684	0.3994	0.3011	0.2612	0.2899	0.3108	0.4439	0.6904	0.8267	0.8973	0.5497
55	0.8182	0.6934	0.503	0.3218	0.2173	0.2144	0.2207	0.2256	0.3666	0.6351	0.7808	0.8563	0.4878
60	0.768	0.6395	0.4352	0.2431	0.2005	0.2102	0.2163	0.1398	0.2874	0.5767	0.7305	0.8106	0.4381
65	0.7133	0.5825	0.3654	0.1815	0.1964	0.2057	0.2116	0.1345	0.2068	0.5155	0.6763	0.7603	0.3958
70	0.6545	0.5229	0.2942	0.1788	0.1922	0.201	0.2067	0.1341	0.1256	0.452	0.6186	0.7058	0.3572
75	0.5921	0.4611	0.2222	0.1761	0.1878	0.1962	0.2016	0.1336	0.0989	0.3868	0.5578	0.6477	0.3218
80	0.5264	0.3977	0.1891	0.1733	0.1833	0.1912	0.1965	0.1331	0.1014	0.3202	0.4944	0.5863	0.2911
85	0.458	0.333	0.1847	0.1704	0.1787	0.1862	0.1912	0.1327	0.1041	0.2252	0.4288	0.522	0.2596
90	0.3875	0.2403	0.1804	0.1675	0.1741	0.1811	0.1859	0.1322	0.1067	0.2169	0.3616	0.4555	0.2325

Tabla 5: Azimut de 10°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0065	0.9907	0.9735	0.9552	0.9434	0.9383	0.9416	0.9462	0.9623	0.9856	1.0009	1.0087	0.9711
10	1.0156	0.9844	0.9493	0.9125	0.8896	0.8798	0.8861	0.8947	0.9264	0.974	1.0047	1.0203	0.9448
15	1.0182	0.9726	0.9193	0.8642	0.8303	0.8159	0.8254	0.8373	0.8842	0.9568	1.0025	1.0257	0.9127
20	1.0145	0.9551	0.8837	0.8105	0.766	0.7473	0.7597	0.7746	0.8361	0.9338	0.9942	1.0251	0.8751
25	1.0043	0.9322	0.8428	0.752	0.6973	0.6744	0.6898	0.707	0.7825	0.9055	0.9801	1.0182	0.8322
30	0.9877	0.9041	0.7968	0.6891	0.6246	0.5978	0.616	0.6351	0.7237	0.8719	0.9601	1.0053	0.7843
35	0.965	0.8709	0.7461	0.6222	0.5485	0.518	0.539	0.5593	0.6603	0.8333	0.9344	0.9863	0.7319
40	0.9363	0.8329	0.6911	0.5518	0.4696	0.4358	0.4594	0.4804	0.5926	0.79	0.9032	0.9615	0.6754
45	0.9017	0.7904	0.6322	0.4786	0.3885	0.3516	0.3777	0.3988	0.5213	0.7423	0.8668	0.9311	0.6151
50	0.8615	0.7437	0.5699	0.403	0.3058	0.2663	0.2947	0.3153	0.4468	0.6907	0.8254	0.8952	0.5515
55	0.8162	0.6932	0.5046	0.3257	0.2222	0.2144	0.2207	0.2304	0.3698	0.6354	0.7794	0.8541	0.4889
60	0.7659	0.6392	0.4369	0.2473	0.2005	0.2102	0.2163	0.1449	0.2909	0.577	0.729	0.8082	0.4389
65	0.7111	0.5822	0.3672	0.1815	0.1964	0.2057	0.2116	0.1345	0.2107	0.5158	0.6748	0.7578	0.3958
70	0.6522	0.5226	0.2961	0.1788	0.1922	0.201	0.2067	0.1341	0.1296	0.4524	0.617	0.7033	0.3572
75	0.5897	0.4608	0.2242	0.1761	0.1878	0.1962	0.2016	0.1336	0.0996	0.3871	0.5561	0.6451	0.3215
80	0.524	0.3974	0.1892	0.1733	0.1833	0.1912	0.1965	0.1331	0.1021	0.3206	0.4927	0.5836	0.2906
85	0.4556	0.3327	0.1848	0.1704	0.1787	0.1862	0.1912	0.1327	0.1047	0.2252	0.4271	0.5193	0.259
90	0.385	0.2403	0.1804	0.1675	0.1741	0.1811	0.1859	0.1322	0.1073	0.2169	0.3599	0.4527	0.232



Tabla 6: Azimut de 15°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Annual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0062	0.9906	0.9737	0.9558	0.9443	0.9393	0.9425	0.947	0.9628	0.9856	1.0006	1.0083	0.9714
10	1.0149	0.9844	0.9499	0.9138	0.8913	0.8817	0.8879	0.8963	0.9274	0.9741	1.0042	1.0195	0.9454
15	1.0172	0.9724	0.9202	0.8661	0.8328	0.8188	0.828	0.8397	0.8857	0.9569	1.0017	1.0246	0.9137
20	1.0131	0.955	0.8849	0.8131	0.7694	0.7511	0.7633	0.7778	0.8381	0.934	0.9933	1.0235	0.8764
25	1.0025	0.932	0.8442	0.7552	0.7015	0.6791	0.6942	0.711	0.785	0.9057	0.9789	1.0163	0.8338
30	0.9857	0.9038	0.7984	0.6929	0.6296	0.6033	0.6212	0.6398	0.7267	0.8722	0.9587	1.003	0.7863
35	0.9627	0.8706	0.748	0.6265	0.5542	0.5244	0.545	0.5648	0.6637	0.8336	0.9328	0.9837	0.7342
40	0.9336	0.8326	0.6932	0.5568	0.4761	0.4429	0.4661	0.4865	0.5966	0.7904	0.9014	0.9586	0.6779
45	0.8988	0.79	0.6346	0.4841	0.3956	0.3595	0.3852	0.4056	0.5257	0.7428	0.8648	0.9279	0.6179
50	0.8584	0.7433	0.5724	0.409	0.3136	0.2748	0.3027	0.3227	0.4517	0.6911	0.8233	0.8917	0.5546
55	0.8128	0.6927	0.5073	0.3322	0.2305	0.2144	0.2207	0.2384	0.3751	0.6359	0.7771	0.8504	0.4906
60	0.7624	0.6387	0.4397	0.2541	0.2005	0.2102	0.2163	0.1533	0.2966	0.5775	0.7266	0.8043	0.44
65	0.7074	0.5817	0.3702	0.1815	0.1964	0.2057	0.2116	0.1345	0.2165	0.5164	0.6722	0.7537	0.3957
70	0.6484	0.5221	0.2993	0.1788	0.1922	0.201	0.2067	0.1341	0.1356	0.4529	0.6144	0.699	0.357
75	0.5857	0.4603	0.2275	0.1761	0.1878	0.1962	0.2016	0.1336	0.1003	0.3877	0.5534	0.6407	0.3209
80	0.5199	0.3969	0.1893	0.1733	0.1833	0.1912	0.1965	0.1331	0.1029	0.3212	0.4899	0.5791	0.2897
85	0.4515	0.3322	0.1849	0.1704	0.1787	0.1862	0.1912	0.1327	0.1054	0.2252	0.4243	0.5148	0.2581
90	0.3809	0.2403	0.1805	0.1675	0.1741	0.1811	0.1859	0.1322	0.108	0.2169	0.3571	0.4482	0.2311

Tabla 7: Azimut de 20°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Annual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0057	0.9905	0.9741	0.9567	0.9455	0.9406	0.9437	0.9482	0.9635	0.9857	1.0003	1.0078	0.9719
10	1.0139	0.9842	0.9507	0.9156	0.8937	0.8843	0.8904	0.8985	0.9288	0.9743	1.0035	1.0184	0.9464
15	1.0157	0.9723	0.9214	0.8688	0.8364	0.8227	0.8318	0.8431	0.8878	0.9571	1.0007	1.023	0.9151
20	1.0111	0.9547	0.8864	0.8167	0.7742	0.7563	0.7682	0.7823	0.8409	0.9343	0.9919	1.0214	0.8782
25	1.0002	0.9317	0.8461	0.7596	0.7074	0.6856	0.7003	0.7165	0.7885	0.9061	0.9772	1.0136	0.8361
30	0.9829	0.9035	0.8007	0.6981	0.6366	0.611	0.6285	0.6464	0.7309	0.8726	0.9567	0.9999	0.789
35	0.9594	0.8702	0.7506	0.6326	0.5623	0.5332	0.5533	0.5724	0.6686	0.8341	0.9305	0.9801	0.7373
40	0.93	0.8321	0.6962	0.5636	0.4851	0.4528	0.4755	0.4951	0.602	0.7909	0.8989	0.9546	0.6814
45	0.8948	0.7895	0.6378	0.4916	0.4056	0.3705	0.3955	0.4151	0.5318	0.7433	0.8621	0.9234	0.6217
50	0.8541	0.7427	0.576	0.4173	0.3244	0.2867	0.3139	0.333	0.4583	0.6918	0.8203	0.8869	0.5588
55	0.8082	0.6921	0.5111	0.341	0.2421	0.2144	0.2314	0.2494	0.3823	0.6366	0.7739	0.8453	0.494
60	0.7575	0.6381	0.4437	0.2635	0.2005	0.2102	0.2163	0.165	0.3041	0.5782	0.7232	0.7989	0.4416
65	0.7023	0.581	0.3745	0.1853	0.1964	0.2057	0.2116	0.1345	0.2244	0.5171	0.6687	0.748	0.3958
70	0.6431	0.5214	0.3038	0.1788	0.1922	0.201	0.2067	0.1341	0.1438	0.4537	0.6107	0.6931	0.3569
75	0.5803	0.4596	0.232	0.1761	0.1878	0.1962	0.2016	0.1336	0.101	0.3885	0.5497	0.6346	0.3201
80	0.5144	0.3961	0.1894	0.1733	0.1833	0.1912	0.1965	0.1331	0.1036	0.322	0.4861	0.573	0.2885
85	0.4459	0.3315	0.1851	0.1704	0.1787	0.1862	0.1912	0.1327	0.1061	0.2252	0.4204	0.5086	0.2568
90	0.3753	0.2403	0.1806	0.1675	0.1741	0.1811	0.1859	0.1322	0.1087	0.2169	0.3532	0.442	0.2298



Tabla 8: Azimut de 25°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.005	0.9905	0.9746	0.9578	0.947	0.9423	0.9453	0.9496	0.9644	0.9858	0.9999	1.0071	0.9724
10	1.0126	0.9841	0.9517	0.9179	0.8967	0.8877	0.8936	0.9014	0.9306	0.9745	1.0027	1.017	0.9475
15	1.0139	0.972	0.9229	0.8722	0.841	0.8278	0.8365	0.8474	0.8905	0.9574	0.9994	1.0209	0.9168
20	1.0087	0.9544	0.8884	0.8212	0.7802	0.763	0.7745	0.7879	0.8445	0.9347	0.9902	1.0186	0.8805
25	0.9971	0.9313	0.8486	0.7652	0.7148	0.6938	0.708	0.7236	0.7929	0.9065	0.9751	1.0103	0.8389
30	0.9793	0.903	0.8037	0.7048	0.6454	0.6208	0.6377	0.6548	0.7362	0.8731	0.9542	0.9959	0.7924
35	0.9553	0.8697	0.754	0.6403	0.5725	0.5445	0.5639	0.582	0.6747	0.8347	0.9277	0.9755	0.7412
40	0.9254	0.8315	0.6999	0.5723	0.4965	0.4655	0.4874	0.5059	0.6089	0.7916	0.8957	0.9495	0.6858
45	0.8897	0.7889	0.6419	0.5012	0.4182	0.3844	0.4085	0.427	0.5394	0.7441	0.8586	0.9178	0.6266
50	0.8486	0.742	0.5804	0.4277	0.3381	0.3017	0.3281	0.346	0.4667	0.6926	0.8165	0.8808	0.5641
55	0.8023	0.6914	0.5159	0.3522	0.2567	0.2182	0.2466	0.2634	0.3912	0.6375	0.7698	0.8387	0.4987
60	0.7512	0.6373	0.4489	0.2754	0.2005	0.2102	0.2163	0.1797	0.3135	0.5792	0.7189	0.7919	0.4436
65	0.6957	0.5802	0.3799	0.1977	0.1964	0.2057	0.2116	0.1345	0.2342	0.5181	0.6642	0.7408	0.3966
70	0.6363	0.5205	0.3093	0.1788	0.1922	0.201	0.2067	0.1341	0.1539	0.4547	0.606	0.6856	0.3566
75	0.5733	0.4587	0.2378	0.1761	0.1878	0.1962	0.2016	0.1336	0.0985	0.3895	0.5449	0.6269	0.3187
80	0.5073	0.3952	0.1895	0.1736	0.1833	0.1912	0.1965	0.1331	0.1043	0.323	0.4812	0.5651	0.2869
85	0.4387	0.3306	0.1852	0.1706	0.1787	0.1862	0.1912	0.1327	0.1069	0.2252	0.4155	0.5006	0.2552
90	0.3681	0.2403	0.1808	0.1675	0.1741	0.1811	0.1859	0.1322	0.1094	0.2169	0.3483	0.434	0.2282

Tabla 9: Azimut de 30°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0043	0.9904	0.9753	0.9592	0.9489	0.9443	0.9472	0.9513	0.9655	0.9859	0.9993	1.0062	0.9732
10	1.0111	0.9839	0.9529	0.9206	0.9004	0.8918	0.8974	0.9048	0.9327	0.9747	1.0016	1.0153	0.9489
15	1.0116	0.9717	0.9247	0.8763	0.8465	0.8338	0.8422	0.8525	0.8937	0.9577	0.9979	1.0184	0.9189
20	1.0057	0.954	0.8908	0.8266	0.7875	0.771	0.782	0.7948	0.8488	0.9351	0.9882	1.0153	0.8833
25	0.9934	0.9309	0.8516	0.772	0.7239	0.7038	0.7174	0.7321	0.7982	0.9071	0.9726	1.0062	0.8424
30	0.9749	0.9025	0.8072	0.7128	0.6561	0.6326	0.6488	0.6648	0.7425	0.8737	0.9512	0.991	0.7965
35	0.9503	0.869	0.758	0.6496	0.5848	0.558	0.5767	0.5936	0.682	0.8354	0.9243	0.97	0.746
40	0.9198	0.8308	0.7045	0.5827	0.5103	0.4807	0.5017	0.519	0.6172	0.7924	0.8919	0.9433	0.6912
45	0.8835	0.7881	0.6469	0.5127	0.4334	0.4011	0.4243	0.4414	0.5486	0.745	0.8543	0.911	0.6325
50	0.8419	0.7412	0.5858	0.4402	0.3546	0.3199	0.3452	0.3616	0.4766	0.6936	0.8119	0.8734	0.5705
55	0.7952	0.6905	0.5217	0.3656	0.2744	0.2376	0.2648	0.2801	0.4017	0.6385	0.7649	0.8308	0.5055
60	0.7437	0.6364	0.4551	0.2896	0.2005	0.2102	0.2163	0.1974	0.3246	0.5803	0.7138	0.7836	0.4459
65	0.6879	0.5792	0.3864	0.2125	0.1964	0.2057	0.2116	0.1345	0.2459	0.5192	0.6588	0.732	0.3975
70	0.6281	0.5195	0.3161	0.1788	0.1922	0.201	0.2067	0.1341	0.166	0.4559	0.6004	0.6766	0.3563
75	0.5649	0.4576	0.2447	0.1761	0.1878	0.1962	0.2016	0.1336	0.0985	0.3908	0.5391	0.6176	0.3174
80	0.4987	0.3941	0.1896	0.1743	0.1833	0.1912	0.1965	0.1331	0.1049	0.3243	0.4753	0.5556	0.2851
85	0.43	0.3295	0.1853	0.1713	0.1787	0.1862	0.1912	0.1327	0.1076	0.2252	0.4095	0.491	0.2532
90	0.3594	0.2403	0.1809	0.1683	0.1741	0.1811	0.1859	0.1322	0.1101	0.2169	0.3423	0.4243	0.2263



Tabla 10: Azimut de 35°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0034	0.9903	0.976	0.9608	0.951	0.9467	0.9495	0.9533	0.9667	0.986	0.9987	1.0053	0.974
10	1.0094	0.9837	0.9544	0.9238	0.9047	0.8965	0.9018	0.9089	0.9352	0.975	1.0004	1.0134	0.9506
15	1.009	0.9714	0.9268	0.8811	0.8529	0.8409	0.8488	0.8585	0.8975	0.9581	0.9961	1.0155	0.9214
20	1.0022	0.9536	0.8936	0.833	0.7959	0.7804	0.7908	0.8027	0.8537	0.9356	0.9858	1.0115	0.8866
25	0.9891	0.9303	0.855	0.7799	0.7343	0.7153	0.7283	0.7419	0.8044	0.9077	0.9697	1.0015	0.8465
30	0.9699	0.9018	0.8113	0.7222	0.6685	0.6463	0.6616	0.6765	0.7499	0.8745	0.9478	0.9854	0.8013
35	0.9445	0.8683	0.7627	0.6603	0.599	0.5738	0.5915	0.6071	0.6905	0.8363	0.9203	0.9636	0.7515
40	0.9133	0.83	0.7097	0.5948	0.5264	0.4984	0.5183	0.5341	0.6268	0.7934	0.8874	0.936	0.6974
45	0.8764	0.7872	0.6527	0.5261	0.4511	0.4206	0.4426	0.4581	0.5591	0.7461	0.8494	0.903	0.6394
50	0.8341	0.7402	0.5921	0.4547	0.3737	0.341	0.365	0.3797	0.4879	0.6947	0.8066	0.8648	0.5779
55	0.7869	0.6894	0.5285	0.3811	0.2949	0.2602	0.2861	0.2994	0.4139	0.6397	0.7592	0.8216	0.5134
60	0.7349	0.6352	0.4623	0.3059	0.2151	0.2102	0.2163	0.2179	0.3375	0.5816	0.7077	0.7739	0.4499
65	0.6787	0.578	0.3939	0.2297	0.1964	0.2057	0.2116	0.1356	0.2593	0.5206	0.6525	0.7219	0.3987
70	0.6186	0.5183	0.3238	0.1788	0.1922	0.201	0.2067	0.1341	0.18	0.4573	0.5939	0.666	0.3559
75	0.5551	0.4564	0.2527	0.1761	0.1878	0.1962	0.2016	0.1336	0.1	0.3922	0.5324	0.6068	0.3159
80	0.4887	0.3929	0.1897	0.1751	0.1833	0.1912	0.1965	0.1331	0.1056	0.3258	0.4685	0.5445	0.2829
85	0.4199	0.3282	0.1854	0.1721	0.1787	0.1862	0.1912	0.1327	0.1082	0.2252	0.4026	0.4798	0.2509
90	0.3492	0.2403	0.181	0.1691	0.1741	0.1811	0.1859	0.1322	0.1108	0.2169	0.3353	0.4131	0.2241

Tabla 11: Azimut de 40°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0024	0.9901	0.9768	0.9626	0.9534	0.9494	0.952	0.9556	0.9681	0.9862	0.998	1.0042	0.9749
10	1.0074	0.9834	0.956	0.9274	0.9095	0.9018	0.9069	0.9134	0.938	0.9753	0.999	1.0112	0.9524
15	1.006	0.971	0.9292	0.8865	0.8601	0.8489	0.8563	0.8653	0.9017	0.9586	0.994	1.0122	0.9242
20	0.9983	0.9531	0.8968	0.8402	0.8055	0.791	0.8008	0.8117	0.8594	0.9362	0.9831	1.0071	0.8903
25	0.9843	0.9297	0.859	0.7888	0.7462	0.7284	0.7406	0.7531	0.8114	0.9084	0.9663	0.9961	0.851
30	0.9641	0.9011	0.8159	0.7328	0.6826	0.6618	0.6762	0.6898	0.7582	0.8753	0.9438	0.9791	0.8067
35	0.9379	0.8674	0.768	0.6725	0.6152	0.5916	0.6082	0.6223	0.7001	0.8373	0.9157	0.9563	0.7577
40	0.9059	0.829	0.7157	0.6084	0.5445	0.5184	0.5371	0.5511	0.6375	0.7944	0.8823	0.9279	0.7044
45	0.8683	0.7861	0.6593	0.5411	0.471	0.4426	0.4633	0.4769	0.5709	0.7472	0.8438	0.894	0.647
50	0.8254	0.7391	0.5993	0.471	0.3954	0.3649	0.3874	0.4001	0.5007	0.696	0.8005	0.8551	0.5862
55	0.7775	0.6882	0.5362	0.3986	0.318	0.2857	0.3101	0.3212	0.4276	0.6411	0.7528	0.8112	0.5223
60	0.725	0.634	0.4704	0.3244	0.2395	0.2102	0.2317	0.2409	0.352	0.583	0.7009	0.7629	0.4562
65	0.6683	0.5767	0.4024	0.249	0.1964	0.2057	0.2116	0.1598	0.2745	0.5221	0.6453	0.7103	0.4018
70	0.6078	0.5169	0.3326	0.1788	0.1922	0.201	0.2067	0.1341	0.1956	0.4589	0.5865	0.6541	0.3554
75	0.544	0.455	0.2617	0.1761	0.1878	0.1962	0.2016	0.1336	0.1161	0.3938	0.5248	0.5945	0.3154
80	0.4774	0.3914	0.1898	0.1759	0.1833	0.1912	0.1965	0.1332	0.1062	0.3274	0.4607	0.532	0.2804
85	0.4085	0.3267	0.1855	0.1729	0.1787	0.1862	0.1912	0.1327	0.1088	0.2252	0.3948	0.4672	0.2482
90	0.3378	0.2403	0.1811	0.1699	0.1741	0.1811	0.1859	0.1322	0.1114	0.2169	0.3274	0.4004	0.2216



Tabla 12: Azimut de 45°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0013	0.99	0.9777	0.9647	0.9561	0.9523	0.9548	0.9581	0.9697	0.9863	0.9973	1.0029	0.9759
10	1.0052	0.9831	0.9578	0.9315	0.9149	0.9078	0.9125	0.9184	0.9412	0.9756	0.9975	1.0087	0.9545
15	1.0027	0.9706	0.9319	0.8925	0.8681	0.8578	0.8647	0.8729	0.9064	0.959	0.9918	1.0085	0.9272
20	0.9939	0.9525	0.9003	0.8481	0.8161	0.8027	0.8118	0.8217	0.8656	0.9369	0.9801	1.0023	0.8944
25	0.9789	0.929	0.8633	0.7987	0.7593	0.743	0.7542	0.7654	0.8192	0.9092	0.9626	0.9901	0.8561
30	0.9578	0.9003	0.8211	0.7445	0.6982	0.679	0.6924	0.7044	0.7674	0.8763	0.9394	0.972	0.8127
35	0.9306	0.8665	0.7739	0.6859	0.6331	0.6114	0.6268	0.6391	0.7107	0.8383	0.9107	0.9482	0.7646
40	0.8977	0.828	0.7223	0.6235	0.5646	0.5405	0.5579	0.5701	0.6494	0.7956	0.8767	0.9188	0.7121
45	0.8593	0.785	0.6666	0.5577	0.4931	0.467	0.4862	0.4977	0.5839	0.7486	0.8376	0.8841	0.6556
50	0.8156	0.7378	0.6072	0.489	0.4193	0.3913	0.4123	0.4226	0.5148	0.6974	0.7938	0.8443	0.5955
55	0.767	0.6869	0.5447	0.4178	0.3436	0.314	0.3366	0.3454	0.4426	0.6427	0.7456	0.7997	0.5322
60	0.714	0.6326	0.4794	0.3448	0.2666	0.2357	0.2598	0.2665	0.3679	0.5846	0.6933	0.7506	0.4663
65	0.6568	0.5753	0.4118	0.2703	0.1964	0.2057	0.2116	0.1865	0.2911	0.5238	0.6374	0.6976	0.4054
70	0.5959	0.5154	0.3424	0.195	0.1922	0.201	0.2067	0.1341	0.2129	0.4607	0.5782	0.6408	0.3563
75	0.5317	0.4534	0.2717	0.1761	0.1878	0.1962	0.2016	0.1336	0.1339	0.3956	0.5163	0.5809	0.3149
80	0.4649	0.3898	0.2004	0.1766	0.1833	0.1912	0.1965	0.1343	0.1067	0.3293	0.4521	0.5181	0.2786
85	0.3958	0.3251	0.1856	0.1737	0.1787	0.1862	0.1912	0.1337	0.1094	0.262	0.386	0.4531	0.2484
90	0.325	0.2403	0.1812	0.1706	0.1741	0.1811	0.1859	0.133	0.112	0.2169	0.3187	0.3863	0.2188

Tabla 13: Azimut de 50°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0001	0.9898	0.9787	0.9669	0.9591	0.9556	0.9578	0.9609	0.9714	0.9865	0.9965	1.0016	0.9771
10	1.0028	0.9828	0.9597	0.9358	0.9208	0.9143	0.9185	0.924	0.9446	0.9759	0.9959	1.0061	0.9568
15	0.9991	0.9701	0.9348	0.8991	0.8769	0.8675	0.8738	0.8811	0.9115	0.9596	0.9893	1.0046	0.9306
20	0.9892	0.9519	0.9042	0.8568	0.8277	0.8155	0.8238	0.8326	0.8724	0.9376	0.9769	0.9971	0.8988
25	0.9731	0.9283	0.8681	0.8094	0.7737	0.7588	0.7691	0.7789	0.8276	0.9101	0.9586	0.9836	0.8616
30	0.9508	0.8994	0.8267	0.7572	0.7151	0.6978	0.71	0.7204	0.7774	0.8773	0.9347	0.9643	0.8193
35	0.9226	0.8655	0.7804	0.7006	0.6526	0.6329	0.647	0.6575	0.7222	0.8395	0.9052	0.9394	0.7721
40	0.8888	0.8268	0.7295	0.64	0.5864	0.5647	0.5806	0.5906	0.6622	0.797	0.8706	0.9089	0.7205
45	0.8494	0.7837	0.6745	0.5758	0.5172	0.4935	0.5112	0.5204	0.5981	0.75	0.8309	0.8732	0.6648
50	0.805	0.7365	0.6159	0.5086	0.4454	0.4201	0.4393	0.4472	0.5301	0.699	0.7865	0.8325	0.6055
55	0.7557	0.6855	0.554	0.4388	0.3715	0.3448	0.3656	0.3716	0.459	0.6443	0.7378	0.7871	0.543
60	0.7019	0.631	0.4892	0.3669	0.2961	0.2682	0.2904	0.2942	0.3852	0.5864	0.685	0.7373	0.4777
65	0.6442	0.5737	0.422	0.2935	0.2197	0.2057	0.2144	0.2155	0.3093	0.5257	0.6287	0.6836	0.4113
70	0.5828	0.5137	0.353	0.2191	0.1922	0.201	0.2067	0.1362	0.2317	0.4626	0.5693	0.6264	0.3579
75	0.5183	0.4517	0.2827	0.1761	0.1878	0.1962	0.2016	0.1336	0.1532	0.3976	0.5071	0.566	0.3143
80	0.4512	0.3881	0.2115	0.1773	0.1833	0.1912	0.1965	0.1353	0.1072	0.3313	0.4427	0.503	0.2765
85	0.382	0.3234	0.1857	0.1744	0.1787	0.1862	0.1912	0.1347	0.1099	0.2641	0.3765	0.4378	0.2454
90	0.3111	0.2403	0.1813	0.1714	0.1741	0.1811	0.1859	0.134	0.1126	0.2169	0.3091	0.3709	0.2157



Tabla 14: Azimut de 55°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9988	0.9897	0.9797	0.9692	0.9622	0.9591	0.9611	0.9639	0.9733	0.9867	0.9956	1.0001	0.9783
10	1.0002	0.9825	0.9618	0.9406	0.9271	0.9213	0.9251	0.9299	0.9483	0.9763	0.9941	1.0032	0.9592
15	0.9953	0.9696	0.938	0.9061	0.8863	0.8779	0.8835	0.8899	0.917	0.9601	0.9866	1.0003	0.9342
20	0.9841	0.9513	0.9083	0.8662	0.8402	0.8293	0.8367	0.8443	0.8797	0.9383	0.9733	0.9914	0.9036
25	0.9667	0.9275	0.8732	0.821	0.7891	0.7758	0.7851	0.7934	0.8366	0.911	0.9543	0.9766	0.8675
30	0.9433	0.8984	0.8327	0.7709	0.7334	0.7179	0.7289	0.7375	0.7881	0.8784	0.9295	0.9561	0.8263
35	0.9141	0.8644	0.7873	0.7163	0.6735	0.656	0.6687	0.6772	0.7345	0.8408	0.8994	0.9299	0.7802
40	0.8792	0.8256	0.7373	0.6576	0.6099	0.5906	0.6049	0.6127	0.676	0.7984	0.864	0.8983	0.7295
45	0.8389	0.7824	0.6831	0.5952	0.543	0.5221	0.538	0.5447	0.6132	0.7516	0.8236	0.8615	0.6748
50	0.7935	0.735	0.6252	0.5296	0.4734	0.451	0.4684	0.4735	0.5466	0.7007	0.7786	0.8198	0.6163
55	0.7434	0.6839	0.5639	0.4613	0.4014	0.3779	0.3966	0.3998	0.4766	0.6461	0.7294	0.7735	0.5545
60	0.689	0.6294	0.4997	0.3907	0.3277	0.3032	0.3233	0.324	0.4038	0.5883	0.6761	0.723	0.4899
65	0.6306	0.5719	0.4331	0.3184	0.2529	0.2276	0.2488	0.2467	0.3287	0.5277	0.6194	0.6686	0.4229
70	0.5688	0.5119	0.3645	0.2449	0.1922	0.201	0.2067	0.1685	0.2519	0.4646	0.5596	0.6108	0.3621
75	0.5039	0.4499	0.2944	0.1761	0.1878	0.1962	0.2016	0.1336	0.1739	0.3997	0.4972	0.55	0.3137
80	0.4365	0.3862	0.2235	0.1733	0.1833	0.1912	0.1965	0.1331	0.1011	0.3334	0.4326	0.4867	0.2731
85	0.3671	0.3215	0.1858	0.1751	0.1787	0.1862	0.1912	0.1357	0.1104	0.2663	0.3663	0.4213	0.2421
90	0.2962	0.2403	0.1814	0.1721	0.1741	0.1811	0.1859	0.1351	0.1131	0.2169	0.2988	0.3543	0.2125

Tabla 15: Azimut de 60°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9974	0.9895	0.9808	0.9717	0.9656	0.9628	0.9646	0.967	0.9752	0.9869	0.9946	0.9986	0.9796
10	0.9974	0.9821	0.964	0.9456	0.9338	0.9287	0.9321	0.9362	0.9522	0.9767	0.9922	1.0001	0.9618
15	0.9911	0.9691	0.9413	0.9136	0.8963	0.8889	0.8939	0.8993	0.9229	0.9607	0.9838	0.9957	0.9381
20	0.9786	0.9506	0.9127	0.8761	0.8534	0.8439	0.8505	0.8567	0.8874	0.9391	0.9696	0.9854	0.9087
25	0.96	0.9266	0.8786	0.8332	0.8054	0.7939	0.8021	0.8088	0.8462	0.912	0.9496	0.9692	0.8738
30	0.9354	0.8974	0.8392	0.7854	0.7527	0.7394	0.7491	0.7557	0.7995	0.8796	0.9241	0.9472	0.8337
35	0.905	0.8632	0.7947	0.733	0.6957	0.6806	0.6918	0.6981	0.7475	0.8421	0.8931	0.9198	0.7887
40	0.8689	0.8243	0.7456	0.6763	0.6348	0.6181	0.6308	0.6361	0.6906	0.7999	0.8569	0.8869	0.7391
45	0.8276	0.781	0.6922	0.6158	0.5704	0.5524	0.5665	0.5704	0.6293	0.7532	0.8159	0.849	0.6853
50	0.7813	0.7335	0.6351	0.5519	0.5031	0.4838	0.4992	0.5015	0.564	0.7025	0.7703	0.8063	0.6277
55	0.7304	0.6822	0.5745	0.4851	0.4332	0.413	0.4296	0.4297	0.4952	0.648	0.7204	0.7591	0.5667
60	0.6752	0.6276	0.5109	0.4159	0.3613	0.3403	0.3581	0.3556	0.4235	0.5903	0.6667	0.7077	0.5028
65	0.6162	0.5701	0.4448	0.3448	0.288	0.2664	0.2853	0.2798	0.3493	0.5298	0.6095	0.6526	0.4364
70	0.5538	0.51	0.3766	0.2722	0.2138	0.201	0.2117	0.2028	0.2732	0.4668	0.5493	0.5942	0.3688
75	0.4885	0.4479	0.3069	0.1988	0.1878	0.1962	0.2016	0.1336	0.1959	0.402	0.4866	0.533	0.3149
80	0.4208	0.3842	0.2362	0.1733	0.1833	0.1912	0.1965	0.1331	0.1178	0.3357	0.4218	0.4693	0.2719
85	0.3513	0.3195	0.1858	0.1757	0.1789	0.1862	0.1912	0.1367	0.1108	0.2686	0.3554	0.4037	0.2387
90	0.2803	0.2403	0.1815	0.1727	0.1741	0.1811	0.1859	0.1361	0.1135	0.2169	0.2879	0.3367	0.2089



Tabla 16: Azimut de 65°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9959	0.9893	0.982	0.9744	0.9691	0.9667	0.9683	0.9703	0.9773	0.9871	0.9936	0.997	0.9809
10	0.9945	0.9818	0.9664	0.9509	0.9408	0.9365	0.9394	0.9428	0.9563	0.9771	0.9902	0.9969	0.9645
15	0.9868	0.9686	0.9448	0.9215	0.9068	0.9006	0.9048	0.9092	0.929	0.9614	0.9808	0.9909	0.9421
20	0.9729	0.9498	0.9174	0.8865	0.8673	0.8593	0.8649	0.8698	0.8956	0.94	0.9657	0.979	0.914
25	0.953	0.9257	0.8843	0.8461	0.8226	0.8129	0.8199	0.8249	0.8563	0.913	0.9448	0.9613	0.8804
30	0.927	0.8964	0.8459	0.8007	0.7731	0.7619	0.7702	0.7748	0.8114	0.8808	0.9183	0.938	0.8415
35	0.8954	0.862	0.8025	0.7505	0.7191	0.7064	0.7161	0.72	0.7612	0.8435	0.8865	0.9091	0.7977
40	0.8582	0.823	0.7543	0.6959	0.661	0.6471	0.658	0.6607	0.7059	0.8015	0.8495	0.875	0.7492
45	0.8158	0.7795	0.7018	0.6374	0.5992	0.5842	0.5963	0.5975	0.6461	0.755	0.8078	0.8359	0.6964
50	0.7685	0.7318	0.6455	0.5753	0.5342	0.5183	0.5316	0.5308	0.5822	0.7044	0.7615	0.7921	0.6397
55	0.7167	0.6805	0.5856	0.5101	0.4665	0.4498	0.4642	0.461	0.5147	0.6501	0.711	0.7439	0.5795
60	0.6608	0.6258	0.5226	0.4423	0.3966	0.3793	0.3948	0.3887	0.4441	0.5925	0.6567	0.6917	0.5163
65	0.6011	0.5682	0.457	0.3724	0.3249	0.3073	0.3236	0.3145	0.3709	0.532	0.5991	0.6359	0.4506
70	0.5381	0.508	0.3893	0.3009	0.2521	0.2342	0.2514	0.2388	0.2956	0.4691	0.5385	0.5768	0.3828
75	0.4724	0.4459	0.32	0.2283	0.1878	0.1962	0.2016	0.1622	0.2189	0.4044	0.4755	0.5151	0.319
80	0.4044	0.3821	0.2496	0.1733	0.1833	0.1912	0.1965	0.1331	0.1412	0.3382	0.4105	0.4511	0.2712
85	0.3346	0.3173	0.1859	0.1763	0.1802	0.1862	0.1913	0.1377	0.1112	0.271	0.3439	0.3853	0.2351
90	0.2636	0.2403	0.1815	0.1734	0.1754	0.1811	0.1859	0.1371	0.1139	0.2169	0.2764	0.3182	0.2053

Tabla 17: Azimut de 70°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9944	0.9891	0.9832	0.9771	0.9728	0.9708	0.9721	0.9738	0.9794	0.9873	0.9926	0.9953	0.9823
10	0.9915	0.9814	0.9688	0.9563	0.9482	0.9446	0.947	0.9497	0.9606	0.9776	0.9881	0.9936	0.9673
15	0.9823	0.968	0.9484	0.9297	0.9177	0.9127	0.9162	0.9194	0.9354	0.962	0.9777	0.9859	0.9463
20	0.967	0.9491	0.9222	0.8973	0.8818	0.8753	0.8799	0.8834	0.904	0.9408	0.9616	0.9724	0.9196
25	0.9456	0.9248	0.8903	0.8595	0.8405	0.8327	0.8385	0.8417	0.8667	0.9141	0.9397	0.9532	0.8873
30	0.9183	0.8953	0.853	0.8165	0.7942	0.7853	0.7922	0.7947	0.8237	0.8821	0.9123	0.9283	0.8497
35	0.8854	0.8608	0.8106	0.7687	0.7434	0.7333	0.7413	0.7428	0.7754	0.845	0.8796	0.8981	0.807
40	0.847	0.8215	0.7633	0.7163	0.6882	0.6772	0.6862	0.6863	0.7218	0.8031	0.8419	0.8626	0.7596
45	0.8035	0.7779	0.7118	0.6598	0.6292	0.6173	0.6274	0.6256	0.6636	0.7568	0.7993	0.8223	0.7079
50	0.7552	0.7301	0.6563	0.5996	0.5667	0.5542	0.5653	0.5612	0.6011	0.7063	0.7523	0.7773	0.6521
55	0.7025	0.6787	0.5972	0.5361	0.5012	0.4882	0.5003	0.4936	0.5349	0.6522	0.7012	0.7281	0.5928
60	0.6457	0.6239	0.5349	0.4698	0.4333	0.4199	0.4328	0.4232	0.4655	0.5947	0.6464	0.675	0.5304
65	0.5853	0.5662	0.4698	0.4012	0.3633	0.3497	0.3635	0.3505	0.3933	0.5343	0.5883	0.6184	0.4653
70	0.5218	0.506	0.4026	0.3307	0.2919	0.2782	0.2928	0.2761	0.3188	0.4715	0.5273	0.5587	0.398
75	0.4556	0.4437	0.3337	0.259	0.2195	0.2059	0.2212	0.2006	0.2428	0.4068	0.4639	0.4965	0.3291
80	0.3872	0.38	0.2635	0.1865	0.1833	0.1912	0.1965	0.1331	0.1656	0.3407	0.3987	0.4321	0.2715
85	0.3173	0.3151	0.1927	0.1769	0.1815	0.1867	0.1928	0.1386	0.1115	0.2736	0.332	0.3661	0.2321
90	0.2462	0.2403	0.1816	0.1739	0.1767	0.1813	0.1873	0.138	0.1142	0.2169	0.2645	0.2989	0.2017



Tabla 18: Azimut de 75°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9928	0.9889	0.9845	0.98	0.9766	0.975	0.9761	0.9773	0.9816	0.9876	0.9915	0.9936	0.9838
10	0.9884	0.981	0.9714	0.962	0.9557	0.953	0.9549	0.9568	0.965	0.978	0.986	0.9901	0.9702
15	0.9777	0.9674	0.9522	0.9381	0.929	0.9252	0.9279	0.93	0.9419	0.9627	0.9745	0.9808	0.9506
20	0.9608	0.9483	0.9271	0.9085	0.8967	0.8918	0.8954	0.8974	0.9127	0.9417	0.9574	0.9656	0.9253
25	0.938	0.9238	0.8964	0.8733	0.8589	0.8531	0.8576	0.859	0.8775	0.9152	0.9345	0.9448	0.8943
30	0.9093	0.8941	0.8602	0.8328	0.8161	0.8094	0.8148	0.8152	0.8365	0.8834	0.9062	0.9184	0.858
35	0.8751	0.8594	0.8189	0.7874	0.7684	0.761	0.7673	0.7663	0.7899	0.8465	0.8725	0.8867	0.8166
40	0.8355	0.8201	0.7727	0.7373	0.7162	0.7082	0.7154	0.7126	0.7381	0.8048	0.8339	0.8498	0.7704
45	0.7908	0.7763	0.7221	0.6829	0.66	0.6515	0.6595	0.6546	0.6816	0.7586	0.7906	0.8082	0.7197
50	0.7414	0.7284	0.6675	0.6246	0.6001	0.5912	0.6	0.5926	0.6206	0.7083	0.7428	0.7621	0.665
55	0.6877	0.6768	0.6091	0.5629	0.537	0.5277	0.5374	0.5272	0.5558	0.6543	0.6911	0.7118	0.6066
60	0.6301	0.6219	0.5475	0.4981	0.4711	0.4617	0.4721	0.4587	0.4875	0.597	0.6357	0.6577	0.5449
65	0.569	0.5641	0.483	0.4308	0.4029	0.3935	0.4046	0.3877	0.4163	0.5367	0.5771	0.6003	0.4805
70	0.5049	0.5038	0.4163	0.3615	0.3329	0.3236	0.3354	0.3147	0.3428	0.474	0.5157	0.54	0.4138
75	0.4382	0.4415	0.3477	0.2906	0.2617	0.2526	0.265	0.2402	0.2674	0.4094	0.452	0.4772	0.3453
80	0.3695	0.3777	0.2779	0.2187	0.1898	0.1912	0.1965	0.1649	0.1907	0.3433	0.3865	0.4125	0.2766
85	0.2994	0.3128	0.2072	0.1704	0.1787	0.1862	0.1912	0.1327	0.1134	0.2762	0.3197	0.3462	0.2278
90	0.2282	0.2403	0.1816	0.1744	0.178	0.1831	0.1888	0.1389	0.1144	0.2169	0.2521	0.279	0.198

Tabla 19: Azimut de 80°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9912	0.9887	0.9858	0.9829	0.9805	0.9793	0.9801	0.981	0.9839	0.9878	0.9904	0.9918	0.9853
10	0.9852	0.9806	0.9739	0.9678	0.9635	0.9615	0.9629	0.964	0.9695	0.9785	0.9838	0.9866	0.9731
15	0.9729	0.9668	0.956	0.9467	0.9406	0.9379	0.9399	0.9409	0.9487	0.9634	0.9713	0.9755	0.9551
20	0.9545	0.9475	0.9322	0.9199	0.9119	0.9087	0.9113	0.9117	0.9216	0.9427	0.953	0.9586	0.9311
25	0.9302	0.9228	0.9027	0.8874	0.8778	0.874	0.8772	0.8767	0.8884	0.9164	0.9291	0.9362	0.9016
30	0.9001	0.8929	0.8677	0.8495	0.8384	0.8341	0.838	0.8361	0.8495	0.8847	0.8998	0.9082	0.8666
35	0.8645	0.8581	0.8274	0.8065	0.794	0.7893	0.7939	0.7903	0.8048	0.848	0.8653	0.875	0.8264
40	0.8236	0.8186	0.7823	0.7588	0.7449	0.7399	0.7452	0.7396	0.7548	0.8065	0.8258	0.8367	0.7814
45	0.7778	0.7746	0.7326	0.7065	0.6916	0.6864	0.6923	0.6842	0.6999	0.7605	0.7816	0.7938	0.7318
50	0.7273	0.7266	0.6789	0.6502	0.6343	0.629	0.6355	0.6247	0.6405	0.7104	0.7331	0.7464	0.6781
55	0.6727	0.6749	0.6213	0.5902	0.5735	0.5682	0.5754	0.5615	0.5771	0.6565	0.6807	0.6951	0.6206
60	0.6142	0.6199	0.5604	0.527	0.5097	0.5044	0.5122	0.4949	0.51	0.5993	0.6247	0.6401	0.5597
65	0.5523	0.562	0.4965	0.4611	0.4433	0.4382	0.4466	0.4256	0.4399	0.5392	0.5656	0.5818	0.496
70	0.4876	0.5016	0.4303	0.3928	0.3749	0.37	0.379	0.354	0.3672	0.4766	0.5038	0.5208	0.4299
75	0.4205	0.4393	0.3621	0.3228	0.3048	0.3003	0.3098	0.2807	0.2925	0.412	0.4398	0.4575	0.3618
80	0.3514	0.3754	0.2925	0.2516	0.2338	0.2297	0.2397	0.2062	0.2163	0.346	0.3741	0.3924	0.2924
85	0.281	0.3105	0.2221	0.1797	0.1787	0.1862	0.1912	0.1327	0.1393	0.2789	0.3071	0.3259	0.2278
90	0.2098	0.2403	0.1816	0.1749	0.1792	0.1849	0.1902	0.1397	0.1146	0.2169	0.2394	0.2586	0.1942



Tabla 20: Azimut de 85°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9896	0.9885	0.9871	0.9858	0.9844	0.9837	0.9842	0.9847	0.9862	0.9881	0.9893	0.99	0.9868
10	0.9819	0.9802	0.9766	0.9737	0.9713	0.9702	0.9711	0.9714	0.974	0.979	0.9815	0.983	0.9762
15	0.9681	0.9662	0.96	0.9555	0.9523	0.9509	0.9521	0.9519	0.9555	0.9641	0.9679	0.9701	0.9595
20	0.9482	0.9467	0.9374	0.9315	0.9274	0.9258	0.9274	0.9262	0.9306	0.9436	0.9486	0.9516	0.9371
25	0.9223	0.9218	0.9091	0.9017	0.8969	0.8952	0.8971	0.8947	0.8996	0.9175	0.9237	0.9274	0.9089
30	0.8908	0.8918	0.8753	0.8664	0.861	0.8591	0.8615	0.8574	0.8626	0.8861	0.8934	0.8978	0.8753
35	0.8538	0.8567	0.8361	0.826	0.82	0.818	0.8209	0.8147	0.8199	0.8496	0.8579	0.8631	0.8364
40	0.8116	0.817	0.792	0.7805	0.774	0.7721	0.7754	0.7668	0.7718	0.8083	0.8175	0.8234	0.7925
45	0.7646	0.7729	0.7433	0.7304	0.7236	0.7218	0.7255	0.7142	0.7185	0.7625	0.7725	0.7791	0.7441
50	0.713	0.7248	0.6904	0.6761	0.669	0.6673	0.6715	0.6572	0.6607	0.7125	0.7233	0.7306	0.6914
55	0.6574	0.6729	0.6337	0.6179	0.6106	0.6092	0.6139	0.5962	0.5986	0.6588	0.6702	0.6781	0.6348
60	0.598	0.6178	0.5735	0.5563	0.5489	0.5478	0.553	0.5317	0.5328	0.6017	0.6136	0.6221	0.5748
65	0.5354	0.5598	0.5102	0.4917	0.4844	0.4836	0.4892	0.4641	0.4637	0.5417	0.5539	0.5631	0.5117
70	0.47	0.4994	0.4445	0.4246	0.4174	0.4171	0.4232	0.3939	0.3919	0.4792	0.4917	0.5014	0.4462
75	0.4024	0.437	0.3767	0.3555	0.3486	0.3487	0.3553	0.3217	0.3179	0.4147	0.4274	0.4375	0.3786
80	0.333	0.3731	0.3074	0.285	0.2784	0.279	0.286	0.2481	0.2422	0.3487	0.3614	0.372	0.3095
85	0.2624	0.3081	0.2372	0.2135	0.2073	0.2085	0.216	0.1734	0.1655	0.2817	0.2943	0.3053	0.2394
90	0.1911	0.2403	0.1817	0.1753	0.1804	0.1866	0.1917	0.1405	0.1148	0.2169	0.2266	0.2379	0.1903

Tabla 21: Azimut de 90°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.988	0.9883	0.9885	0.9888	0.9884	0.9881	0.9883	0.9884	0.9885	0.9883	0.9881	0.9882	0.9883
10	0.9787	0.9797	0.9792	0.9796	0.9793	0.979	0.9793	0.9788	0.9786	0.9795	0.9793	0.9794	0.9792
15	0.9632	0.9656	0.9639	0.9643	0.9641	0.964	0.9644	0.9629	0.9623	0.9649	0.9646	0.9647	0.9641
20	0.9417	0.9459	0.9426	0.9431	0.943	0.9431	0.9436	0.9408	0.9396	0.9445	0.9442	0.9444	0.9431
25	0.9144	0.9208	0.9155	0.9161	0.9162	0.9165	0.9171	0.9127	0.9107	0.9187	0.9182	0.9186	0.9163
30	0.8814	0.8906	0.8829	0.8835	0.8838	0.8844	0.8852	0.8787	0.8758	0.8875	0.8869	0.8874	0.884
35	0.843	0.8554	0.8448	0.8455	0.8461	0.847	0.848	0.8392	0.8351	0.8512	0.8505	0.8511	0.8464
40	0.7995	0.8155	0.8018	0.8024	0.8033	0.8045	0.8058	0.7943	0.7888	0.8101	0.8092	0.81	0.8038
45	0.7513	0.7712	0.7541	0.7545	0.7558	0.7574	0.759	0.7444	0.7372	0.7644	0.7634	0.7644	0.7564
50	0.6986	0.7229	0.7021	0.7022	0.7039	0.7059	0.7078	0.6899	0.6809	0.7146	0.7134	0.7146	0.7047
55	0.6419	0.671	0.6461	0.6458	0.6479	0.6505	0.6526	0.6312	0.6203	0.6611	0.6596	0.661	0.6491
60	0.5817	0.6157	0.5866	0.5858	0.5883	0.5914	0.5939	0.5687	0.5557	0.6041	0.6024	0.6041	0.5899
65	0.5183	0.5576	0.524	0.5226	0.5256	0.5293	0.5321	0.5028	0.4877	0.5442	0.5422	0.5442	0.5276
70	0.4524	0.4971	0.4588	0.4566	0.4602	0.4644	0.4676	0.4341	0.4168	0.4818	0.4796	0.4818	0.4626
75	0.3842	0.4347	0.3914	0.3884	0.3926	0.3974	0.401	0.363	0.3435	0.4173	0.4149	0.4174	0.3955
80	0.3145	0.3707	0.3224	0.3185	0.3232	0.3287	0.3326	0.2901	0.2683	0.3514	0.3487	0.3515	0.3267
85	0.2437	0.3058	0.2523	0.2474	0.2527	0.2588	0.2631	0.216	0.1919	0.2844	0.2814	0.2845	0.2568
90	0.1723	0.2403	0.1817	0.1756	0.1815	0.1883	0.193	0.1412	0.1148	0.2169	0.2137	0.217	0.1864



Tabla 22: Azimut de 95°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9863	0.9881	0.9898	0.9917	0.9924	0.9925	0.9925	0.9921	0.9908	0.9885	0.987	0.9864	0.9898
10	0.9754	0.9793	0.9819	0.9855	0.9872	0.9878	0.9875	0.9862	0.9832	0.98	0.977	0.9757	0.9822
15	0.9583	0.9649	0.9678	0.9731	0.9759	0.977	0.9766	0.974	0.9692	0.9656	0.9612	0.9593	0.9686
20	0.9353	0.9451	0.9478	0.9547	0.9586	0.9603	0.9598	0.9555	0.9487	0.9455	0.9398	0.9373	0.949
25	0.9064	0.9198	0.922	0.9305	0.9355	0.9378	0.9372	0.9308	0.9219	0.9199	0.9128	0.9098	0.9237
30	0.872	0.8894	0.8905	0.9005	0.9066	0.9096	0.9089	0.9001	0.889	0.8889	0.8805	0.877	0.8927
35	0.8322	0.854	0.8536	0.865	0.8722	0.8759	0.8751	0.8637	0.8503	0.8528	0.8431	0.8392	0.8564
40	0.7874	0.814	0.8116	0.8242	0.8326	0.8369	0.8362	0.8217	0.8057	0.8119	0.8009	0.7966	0.815
45	0.738	0.7695	0.7648	0.7785	0.788	0.793	0.7924	0.7746	0.7559	0.7664	0.7542	0.7496	0.7688
50	0.6842	0.7211	0.7137	0.7282	0.7387	0.7445	0.744	0.7226	0.7012	0.7168	0.7035	0.6986	0.7181
55	0.6265	0.669	0.6586	0.6736	0.6852	0.6917	0.6913	0.6661	0.6419	0.6633	0.649	0.6439	0.6633
60	0.5654	0.6137	0.5998	0.6152	0.6277	0.635	0.6349	0.6056	0.5785	0.6065	0.5912	0.586	0.605
65	0.5013	0.5555	0.5378	0.5533	0.5668	0.5749	0.5749	0.5414	0.5116	0.5467	0.5305	0.5253	0.5433
70	0.4347	0.4949	0.4731	0.4885	0.5029	0.5117	0.512	0.4741	0.4416	0.4844	0.4674	0.4622	0.479
75	0.366	0.4323	0.4061	0.4212	0.4365	0.446	0.4466	0.4042	0.369	0.42	0.4024	0.3972	0.4123
80	0.296	0.3683	0.3374	0.352	0.368	0.3783	0.3792	0.3322	0.2943	0.3541	0.3359	0.3309	0.3439
85	0.2249	0.3034	0.2675	0.2813	0.2981	0.309	0.3103	0.2585	0.2182	0.2872	0.2685	0.2637	0.2742
90	0.1723	0.2403	0.1969	0.2096	0.2271	0.2386	0.2403	0.1839	0.1413	0.2197	0.2137	0.217	0.2084

Tabla 23: Azimut de 100°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9847	0.9879	0.9911	0.9947	0.9963	0.9968	0.9966	0.9958	0.9931	0.9888	0.9859	0.9845	0.9913
10	0.9721	0.9789	0.9845	0.9914	0.995	0.9965	0.9957	0.9936	0.9878	0.9804	0.9748	0.9721	0.9852
15	0.9535	0.9643	0.9718	0.9819	0.9876	0.99	0.9888	0.985	0.9759	0.9663	0.9579	0.954	0.9731
20	0.9289	0.9442	0.953	0.9663	0.9741	0.9774	0.9759	0.9699	0.9576	0.9464	0.9354	0.9302	0.9549
25	0.8985	0.9188	0.9284	0.9447	0.9545	0.9589	0.957	0.9486	0.933	0.921	0.9074	0.901	0.931
30	0.8626	0.8882	0.898	0.9173	0.9292	0.9346	0.9323	0.9212	0.9021	0.8903	0.874	0.8666	0.9014
35	0.8215	0.8526	0.8623	0.8843	0.8981	0.9045	0.902	0.8879	0.8653	0.8544	0.8357	0.8273	0.8663
40	0.7754	0.8124	0.8213	0.8459	0.8616	0.869	0.8664	0.8489	0.8225	0.8136	0.7926	0.7833	0.8261
45	0.7248	0.7679	0.7755	0.8023	0.8198	0.8283	0.8255	0.8044	0.7744	0.7683	0.7451	0.735	0.781
50	0.6699	0.7193	0.7253	0.754	0.7732	0.7827	0.7799	0.7549	0.7212	0.7189	0.6936	0.6828	0.7313
55	0.6112	0.6671	0.6709	0.7012	0.7221	0.7326	0.7297	0.7007	0.6633	0.6656	0.6384	0.627	0.6775
60	0.5492	0.6116	0.6129	0.6443	0.6668	0.6782	0.6754	0.6421	0.6012	0.6089	0.58	0.5681	0.6199
65	0.4844	0.5533	0.5515	0.5838	0.6077	0.6201	0.6174	0.5797	0.5353	0.5492	0.5188	0.5065	0.559
70	0.4171	0.4926	0.4873	0.5201	0.5453	0.5586	0.5561	0.5138	0.4661	0.4869	0.4553	0.4427	0.4952
75	0.348	0.43	0.4207	0.4538	0.4801	0.4942	0.4919	0.445	0.3942	0.4227	0.39	0.3772	0.429
80	0.2776	0.366	0.3523	0.3851	0.4125	0.4274	0.4254	0.3738	0.3201	0.3568	0.3233	0.3105	0.3609
85	0.2063	0.301	0.2825	0.3148	0.343	0.3587	0.357	0.3007	0.2443	0.2899	0.2557	0.2431	0.2914
90	0.1723	0.2403	0.212	0.2433	0.2722	0.2886	0.2872	0.2262	0.1674	0.2224	0.2137	0.217	0.2302



Tabla 24: Azimut de 105°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9831	0.9877	0.9924	0.9976	1.0002	1.0011	1.0006	0.9995	0.9953	0.989	0.9848	0.9828	0.9928
10	0.9689	0.9785	0.9871	0.9971	1.0028	1.005	1.0037	1.0009	0.9923	0.9809	0.9726	0.9686	0.9882
15	0.9487	0.9637	0.9756	0.9905	0.9991	1.0027	1.0008	0.9958	0.9826	0.967	0.9546	0.9487	0.9775
20	0.9226	0.9434	0.9581	0.9776	0.9893	0.9943	0.9917	0.9842	0.9664	0.9474	0.9311	0.9232	0.9608
25	0.8908	0.9178	0.9347	0.9587	0.9733	0.9797	0.9765	0.9662	0.9438	0.9222	0.902	0.8924	0.9382
30	0.8534	0.887	0.9055	0.9339	0.9514	0.9592	0.9554	0.942	0.9149	0.8916	0.8677	0.8564	0.9099
35	0.811	0.8513	0.8708	0.9033	0.9235	0.9327	0.9285	0.9117	0.88	0.8559	0.8284	0.8156	0.8761
40	0.7636	0.8109	0.8309	0.8671	0.8901	0.9006	0.896	0.8756	0.839	0.8154	0.7845	0.7702	0.837
45	0.7118	0.7662	0.786	0.8257	0.8512	0.8631	0.8581	0.8338	0.7925	0.7703	0.7362	0.7206	0.793
50	0.6558	0.7175	0.7366	0.7793	0.8072	0.8204	0.8152	0.7867	0.7408	0.7209	0.6839	0.6672	0.7443
55	0.5962	0.6652	0.6831	0.7282	0.7584	0.7728	0.7675	0.7347	0.6843	0.6678	0.6281	0.6103	0.6914
60	0.5333	0.6096	0.6257	0.6729	0.7051	0.7207	0.7153	0.6781	0.6234	0.6112	0.5691	0.5504	0.6346
65	0.4677	0.5512	0.5649	0.6138	0.6479	0.6646	0.6591	0.6173	0.5585	0.5516	0.5074	0.488	0.5743
70	0.3998	0.4904	0.5012	0.5512	0.587	0.6047	0.5994	0.5528	0.4902	0.4895	0.4434	0.4236	0.5111
75	0.3302	0.4278	0.435	0.4857	0.5229	0.5416	0.5364	0.4851	0.419	0.4253	0.3777	0.3575	0.4454
80	0.2594	0.3637	0.3669	0.4177	0.4561	0.4758	0.4707	0.4147	0.3454	0.3595	0.3108	0.2904	0.3776
85	0.188	0.2987	0.2973	0.3478	0.3872	0.4076	0.4029	0.3421	0.2699	0.2926	0.2431	0.2246	0.3085
90	0.1723	0.2403	0.2269	0.2765	0.3166	0.3377	0.3333	0.2678	0.1931	0.2251	0.2137	0.217	0.2517

Tabla 25: Azimut de 110°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9815	0.9875	0.9937	1.0004	1.004	1.0053	1.0045	1.003	0.9975	0.9892	0.9837	0.981	0.9943
10	0.9658	0.9781	0.9896	1.0028	1.0103	1.0134	1.0116	1.0079	0.9966	0.9814	0.9705	0.9651	0.9911
15	0.9441	0.9631	0.9794	0.9988	1.0104	1.0152	1.0124	1.0063	0.9891	0.9677	0.9515	0.9436	0.9818
20	0.9164	0.9427	0.9631	0.9887	1.0041	1.0107	1.0071	0.9981	0.975	0.9483	0.9268	0.9164	0.9665
25	0.8832	0.9168	0.9408	0.9724	0.9917	1	0.9956	0.9834	0.9544	0.9233	0.8968	0.884	0.9452
30	0.8445	0.8859	0.9128	0.95	0.973	0.9832	0.9779	0.9623	0.9274	0.8929	0.8615	0.8465	0.9182
35	0.8006	0.85	0.8791	0.9218	0.9484	0.9602	0.9543	0.935	0.8943	0.8574	0.8214	0.8042	0.8856
40	0.7521	0.8094	0.8402	0.8879	0.9179	0.9314	0.9249	0.9016	0.8551	0.8171	0.7766	0.7574	0.8476
45	0.699	0.7646	0.7962	0.8485	0.8818	0.897	0.89	0.8625	0.8102	0.7721	0.7275	0.7065	0.8047
50	0.642	0.7157	0.7477	0.804	0.8403	0.8571	0.8496	0.8178	0.76	0.723	0.6745	0.6519	0.757
55	0.5814	0.6633	0.6949	0.7546	0.7938	0.812	0.8043	0.7679	0.7048	0.67	0.618	0.594	0.7049
60	0.5177	0.6076	0.6382	0.7008	0.7426	0.7622	0.7543	0.7131	0.645	0.6135	0.5584	0.5332	0.6489
65	0.4514	0.5491	0.578	0.643	0.6871	0.708	0.6999	0.654	0.5812	0.554	0.4962	0.47	0.5893
70	0.3829	0.4883	0.5148	0.5815	0.6276	0.6497	0.6416	0.5909	0.5137	0.492	0.4318	0.4049	0.5266
75	0.3129	0.4256	0.449	0.5168	0.5647	0.5879	0.5798	0.5242	0.4431	0.4278	0.3658	0.3383	0.4613
80	0.2417	0.3614	0.3812	0.4495	0.4987	0.5229	0.515	0.4546	0.37	0.3621	0.2986	0.2708	0.3939
85	0.1761	0.2964	0.3118	0.3799	0.4303	0.4553	0.4477	0.3824	0.2948	0.2952	0.2308	0.2246	0.3271
90	0.1723	0.2403	0.2414	0.3087	0.3598	0.3856	0.3783	0.3083	0.2181	0.2278	0.2137	0.217	0.2726



Tabla 26: Azimut de 115°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.98	0.9873	0.9949	1.0032	1.0077	1.0094	1.0083	1.0065	0.9996	0.9895	0.9827	0.9794	0.9957
10	0.9628	0.9777	0.992	1.0082	1.0176	1.0215	1.0192	1.0148	1.0009	0.9818	0.9684	0.9618	0.9939
15	0.9396	0.9626	0.983	1.007	1.0212	1.0272	1.0238	1.0165	0.9954	0.9683	0.9484	0.9386	0.986
20	0.9105	0.9419	0.9679	0.9994	1.0185	1.0267	1.022	1.0116	0.9833	0.9491	0.9227	0.9098	0.972
25	0.8758	0.9159	0.9468	0.9856	1.0094	1.0197	1.014	1	0.9646	0.9244	0.8917	0.8758	0.952
30	0.8358	0.8848	0.9198	0.9657	0.994	1.0064	0.9998	0.982	0.9395	0.8942	0.8555	0.8368	0.9262
35	0.7907	0.8487	0.8872	0.9397	0.9724	0.9869	0.9793	0.9575	0.9081	0.8589	0.8145	0.7931	0.8948
40	0.7409	0.808	0.8493	0.9079	0.9448	0.9613	0.953	0.9268	0.8706	0.8187	0.7689	0.745	0.8579
45	0.6867	0.763	0.8062	0.8705	0.9114	0.9298	0.9208	0.8902	0.8273	0.7739	0.719	0.6929	0.816
50	0.6287	0.714	0.7585	0.8278	0.8724	0.8926	0.883	0.8478	0.7784	0.7249	0.6653	0.6371	0.7692
55	0.5672	0.6615	0.7064	0.7801	0.8281	0.85	0.8399	0.7999	0.7245	0.672	0.6082	0.5782	0.718
60	0.5027	0.6057	0.6504	0.7278	0.7788	0.8024	0.7919	0.747	0.6659	0.6157	0.548	0.5165	0.6627
65	0.4356	0.5471	0.5907	0.6712	0.725	0.75	0.7393	0.6895	0.603	0.5563	0.4853	0.4525	0.6038
70	0.3666	0.4862	0.528	0.6108	0.6669	0.6933	0.6825	0.6277	0.5364	0.4944	0.4206	0.3867	0.5417
75	0.2961	0.4234	0.4626	0.5469	0.6051	0.6326	0.6218	0.5621	0.4665	0.4303	0.3542	0.3197	0.4768
80	0.2246	0.3593	0.395	0.4802	0.5399	0.5686	0.5578	0.4931	0.3938	0.3646	0.2868	0.2518	0.4096
85	0.1761	0.2942	0.3258	0.411	0.472	0.5015	0.491	0.4214	0.3189	0.2978	0.2212	0.2246	0.3463
90	0.1723	0.2403	0.2554	0.3399	0.4017	0.4319	0.4218	0.3475	0.2423	0.2303	0.2137	0.217	0.2929

Tabla 27: Azimut de 120°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9786	0.9871	0.9961	1.0058	1.0112	1.0133	1.012	1.0098	1.0017	0.9897	0.9817	0.9777	0.997
10	0.9599	0.9774	0.9944	1.0135	1.0246	1.0292	1.0265	1.0214	1.0049	0.9822	0.9664	0.9586	0.9966
15	0.9352	0.962	0.9865	1.0148	1.0317	1.0388	1.0346	1.0263	1.0014	0.969	0.9454	0.9338	0.99
20	0.9048	0.9412	0.9725	1.0097	1.0323	1.0419	1.0364	1.0245	0.9912	0.95	0.9188	0.9035	0.9772
25	0.8687	0.915	0.9525	0.9983	1.0264	1.0385	1.0317	1.016	0.9744	0.9254	0.8869	0.868	0.9585
30	0.8274	0.8837	0.9266	0.9806	1.0141	1.0287	1.0207	1.0008	0.9511	0.8954	0.8498	0.8276	0.9339
35	0.7811	0.8475	0.895	0.9569	0.9955	1.0124	1.0033	0.9791	0.9214	0.8603	0.8079	0.7825	0.9036
40	0.7301	0.8067	0.858	0.9271	0.9707	0.9899	0.9798	0.951	0.8855	0.8203	0.7615	0.7331	0.8678
45	0.6749	0.7615	0.8158	0.8916	0.9398	0.9612	0.9503	0.9167	0.8436	0.7757	0.7109	0.6798	0.8268
50	0.6159	0.7124	0.7688	0.8507	0.9032	0.9267	0.915	0.8765	0.7962	0.7268	0.6565	0.6229	0.781
55	0.5535	0.6597	0.7174	0.8046	0.861	0.8864	0.8741	0.8307	0.7435	0.6741	0.5987	0.563	0.7306
60	0.4882	0.6038	0.662	0.7536	0.8136	0.8409	0.828	0.7795	0.6859	0.6178	0.5381	0.5004	0.676
65	0.4205	0.5452	0.6029	0.6982	0.7613	0.7903	0.7771	0.7235	0.624	0.5586	0.4749	0.4357	0.6177
70	0.3509	0.4842	0.5406	0.6388	0.7046	0.735	0.7216	0.6629	0.5581	0.4967	0.4098	0.3693	0.556
75	0.2799	0.4214	0.4756	0.5757	0.6438	0.6756	0.6621	0.5983	0.4888	0.4327	0.3431	0.3018	0.4916
80	0.2081	0.3572	0.4082	0.5096	0.5794	0.6123	0.5989	0.5301	0.4165	0.367	0.2755	0.2336	0.4247
85	0.1761	0.2921	0.3392	0.4408	0.5119	0.5457	0.5325	0.4588	0.3419	0.3002	0.2212	0.2246	0.3654
90	0.1723	0.2403	0.2689	0.3698	0.4418	0.4764	0.4635	0.385	0.2655	0.2328	0.2137	0.217	0.3123



Tabla 28: Azimut de 125°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9772	0.9869	0.9972	1.0083	1.0145	1.017	1.0155	1.0129	1.0036	0.9899	0.9807	0.9762	0.9983
10	0.9571	0.977	0.9966	1.0184	1.0313	1.0366	1.0334	1.0276	1.0088	0.9826	0.9645	0.9555	0.9991
15	0.9311	0.9615	0.9899	1.0222	1.0416	1.0498	1.0449	1.0356	1.0072	0.9696	0.9426	0.9292	0.9938
20	0.8993	0.9405	0.9769	1.0195	1.0454	1.0564	1.05	1.0367	0.9988	0.9508	0.9151	0.8975	0.9822
25	0.862	0.9141	0.9579	1.0103	1.0426	1.0565	1.0485	1.0311	0.9837	0.9264	0.8822	0.8606	0.9647
30	0.8195	0.8827	0.933	0.9949	1.0333	1.0499	1.0406	1.0187	0.962	0.8966	0.8443	0.8188	0.9412
35	0.772	0.8463	0.9024	0.9732	1.0174	1.0367	1.0261	0.9996	0.9339	0.8617	0.8016	0.7724	0.9119
40	0.7199	0.8054	0.8662	0.9454	0.9952	1.0171	1.0053	0.9739	0.8996	0.8218	0.7544	0.7218	0.8772
45	0.6637	0.7601	0.8249	0.9117	0.9668	0.9911	0.9783	0.9419	0.8591	0.7773	0.7031	0.6673	0.8371
50	0.6037	0.7109	0.7786	0.8724	0.9324	0.959	0.9453	0.9038	0.8129	0.7286	0.6481	0.6094	0.7921
55	0.5405	0.6581	0.7279	0.8278	0.8922	0.921	0.9066	0.8598	0.7614	0.676	0.5898	0.5486	0.7425
60	0.4744	0.6021	0.6731	0.7781	0.8465	0.8774	0.8624	0.8103	0.7049	0.6199	0.5286	0.4852	0.6886
65	0.4061	0.5433	0.6145	0.7239	0.7958	0.8285	0.813	0.7557	0.6438	0.5607	0.465	0.4198	0.6308
70	0.3359	0.4823	0.5526	0.6654	0.7403	0.7747	0.7588	0.6963	0.5787	0.4989	0.3995	0.3528	0.5697
75	0.2646	0.4194	0.4879	0.6031	0.6806	0.7163	0.7003	0.6326	0.5099	0.4349	0.3326	0.2848	0.5056
80	0.1925	0.3552	0.4208	0.5374	0.6169	0.6538	0.6379	0.5651	0.4381	0.3693	0.2648	0.2321	0.4403
85	0.1761	0.2901	0.3519	0.469	0.5498	0.5878	0.572	0.4943	0.3637	0.3026	0.2212	0.2246	0.3836
90	0.1723	0.2403	0.2817	0.3982	0.4799	0.5186	0.5031	0.4206	0.2874	0.2351	0.2137	0.217	0.3307

Tabla 29: Azimut de 130°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9759	0.9868	0.9982	1.0107	1.0177	1.0205	1.0188	1.0159	1.0055	0.9901	0.9798	0.9748	0.9995
10	0.9545	0.9767	0.9987	1.0231	1.0376	1.0436	1.0399	1.0335	1.0124	0.983	0.9627	0.9526	1.0015
15	0.9273	0.961	0.993	1.0291	1.051	1.0602	1.0546	1.0443	1.0125	0.9701	0.9399	0.9249	0.9973
20	0.8942	0.9398	0.9811	1.0286	1.0577	1.0701	1.0628	1.0483	1.0059	0.9515	0.9116	0.8918	0.987
25	0.8557	0.9133	0.963	1.0217	1.0578	1.0733	1.0644	1.0453	0.9924	0.9273	0.8779	0.8536	0.9705
30	0.812	0.8817	0.9391	1.0082	1.0512	1.0698	1.0593	1.0355	0.9723	0.8977	0.8392	0.8105	0.948
35	0.7634	0.8452	0.9093	0.9885	1.038	1.0596	1.0475	1.0188	0.9457	0.8629	0.7957	0.7629	0.9198
40	0.7103	0.8041	0.874	0.9625	1.0183	1.0427	1.0293	0.9955	0.9127	0.8232	0.7478	0.7111	0.886
45	0.6531	0.7587	0.8334	0.9305	0.9921	1.0193	1.0047	0.9656	0.8737	0.7789	0.6959	0.6556	0.8468
50	0.5923	0.7094	0.7879	0.8928	0.9598	0.9895	0.9739	0.9294	0.8287	0.7303	0.6403	0.5968	0.8026
55	0.5282	0.6565	0.7377	0.8495	0.9215	0.9536	0.9371	0.8872	0.7782	0.6778	0.5814	0.535	0.7536
60	0.4615	0.6004	0.6834	0.8011	0.8775	0.9118	0.8946	0.8393	0.7226	0.6218	0.5197	0.4708	0.7004
65	0.3925	0.5416	0.6254	0.7479	0.8282	0.8645	0.8467	0.786	0.6624	0.5627	0.4557	0.4047	0.6432
70	0.3219	0.4805	0.5639	0.6903	0.7739	0.8119	0.7938	0.7277	0.5979	0.5009	0.3898	0.3372	0.5825
75	0.2501	0.4176	0.4995	0.6287	0.7151	0.7546	0.7362	0.6649	0.5297	0.4371	0.3227	0.2688	0.5187
80	0.1799	0.3533	0.4327	0.5636	0.6521	0.6929	0.6745	0.598	0.4583	0.3715	0.2546	0.2321	0.4553
85	0.1761	0.2882	0.3639	0.4954	0.5854	0.6272	0.609	0.5276	0.3842	0.3047	0.2212	0.2246	0.4006
90	0.1723	0.2403	0.2937	0.4247	0.5156	0.5582	0.5403	0.454	0.3079	0.2373	0.2137	0.217	0.3479



Tabla 30: Azimut de 135°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9747	0.9866	0.9992	1.0128	1.0206	1.0237	1.0218	1.0186	1.0072	0.9902	0.979	0.9734	1.0007
10	0.9521	0.9764	1.0007	1.0275	1.0434	1.05	1.046	1.0389	1.0158	0.9834	0.961	0.95	1.0038
15	0.9237	0.9605	0.9959	1.0356	1.0596	1.0698	1.0637	1.0524	1.0175	0.9707	0.9374	0.9209	1.0006
20	0.8895	0.9392	0.9849	1.0372	1.0692	1.0828	1.0747	1.059	1.0124	0.9522	0.9083	0.8865	0.9913
25	0.8498	0.9126	0.9678	1.0322	1.0719	1.089	1.079	1.0585	1.0005	0.9282	0.8739	0.8471	0.9759
30	0.805	0.8808	0.9447	1.0206	1.0679	1.0883	1.0766	1.0511	0.9819	0.8987	0.8344	0.8028	0.9544
35	0.7554	0.8442	0.9157	1.0027	1.0571	1.0808	1.0674	1.0367	0.9566	0.8641	0.7903	0.7541	0.9271
40	0.7014	0.803	0.8812	0.9784	1.0397	1.0664	1.0516	1.0155	0.9249	0.8245	0.7417	0.7012	0.8941
45	0.6433	0.7575	0.8414	0.948	1.0157	1.0454	1.0292	0.9876	0.8871	0.7803	0.6891	0.6447	0.8558
50	0.5816	0.7081	0.7965	0.9117	0.9853	1.0177	1.0004	0.9532	0.8433	0.7318	0.6329	0.585	0.8123
55	0.5168	0.6551	0.7469	0.8697	0.9487	0.9838	0.9654	0.9126	0.7938	0.6795	0.5735	0.5224	0.764
60	0.4494	0.5989	0.6931	0.8224	0.9063	0.9437	0.9245	0.8661	0.7391	0.6235	0.5114	0.4575	0.7113
65	0.3799	0.54	0.6354	0.7702	0.8583	0.8978	0.878	0.814	0.6796	0.5645	0.447	0.3908	0.6546
70	0.3088	0.4789	0.5743	0.7134	0.8051	0.8465	0.8262	0.7568	0.6158	0.5029	0.3809	0.3228	0.5944
75	0.2367	0.4159	0.5102	0.6525	0.7471	0.7901	0.7696	0.6948	0.5481	0.439	0.3134	0.2539	0.5309
80	0.1799	0.3516	0.4436	0.5878	0.6847	0.7291	0.7085	0.6285	0.477	0.3735	0.2452	0.2321	0.4701
85	0.1761	0.2864	0.375	0.5199	0.6185	0.6638	0.6434	0.5584	0.4031	0.3068	0.2212	0.2246	0.4164
90	0.1723	0.2403	0.3049	0.4493	0.5488	0.5949	0.5747	0.485	0.3269	0.2394	0.2137	0.217	0.3639

Tabla 31: Azimut de 140°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9736	0.9865	1.0001	1.0148	1.0233	1.0267	1.0246	1.0211	1.0087	0.9904	0.9782	0.9722	1.0017
10	0.9499	0.9761	1.0025	1.0314	1.0487	1.0559	1.0515	1.0439	1.0188	0.9837	0.9595	0.9475	1.0058
15	0.9204	0.9601	0.9986	1.0415	1.0676	1.0786	1.0719	1.0599	1.0221	0.9712	0.9352	0.9173	1.0037
20	0.8851	0.9387	0.9884	1.045	1.0797	1.0944	1.0856	1.0688	1.0185	0.9529	0.9053	0.8817	0.9953
25	0.8445	0.9119	0.9721	1.0418	1.0849	1.1033	1.0925	1.0706	1.0079	0.929	0.8702	0.8411	0.9808
30	0.7987	0.88	0.9498	1.032	1.0832	1.1053	1.0925	1.0654	0.9906	0.8997	0.83	0.7957	0.9602
35	0.7481	0.8433	0.9217	1.0157	1.0747	1.1002	1.0857	1.053	0.9666	0.8652	0.7852	0.746	0.9338
40	0.6932	0.802	0.8878	0.9929	1.0593	1.0882	1.072	1.0338	0.9361	0.8257	0.7361	0.6922	0.9016
45	0.6343	0.7563	0.8487	0.9639	1.0372	1.0693	1.0516	1.0077	0.8993	0.7817	0.6829	0.6347	0.864
50	0.5719	0.7068	0.8044	0.9289	1.0086	1.0436	1.0246	0.9749	0.8565	0.7333	0.6262	0.5742	0.8212
55	0.5064	0.6537	0.7553	0.8881	0.9736	1.0114	0.9913	0.9358	0.808	0.681	0.5664	0.5108	0.7735
60	0.4384	0.5975	0.7019	0.8419	0.9326	0.9729	0.9519	0.8906	0.7541	0.6252	0.5038	0.4453	0.7213
65	0.3684	0.5386	0.6447	0.7906	0.8858	0.9284	0.9066	0.8397	0.6953	0.5662	0.4391	0.378	0.6651
70	0.2969	0.4773	0.5839	0.7345	0.8336	0.8782	0.8559	0.7833	0.632	0.5046	0.3726	0.3095	0.6052
75	0.2244	0.4143	0.5201	0.6741	0.7764	0.8226	0.8001	0.7221	0.5648	0.4408	0.305	0.2403	0.5421
80	0.1799	0.35	0.4536	0.6099	0.7146	0.7622	0.7395	0.6563	0.4941	0.3753	0.2366	0.2321	0.4837
85	0.1761	0.2848	0.3851	0.5423	0.6487	0.6973	0.6748	0.5865	0.4204	0.3086	0.2212	0.2246	0.4309
90	0.1723	0.2403	0.3151	0.4718	0.5791	0.6285	0.6062	0.5133	0.3443	0.2413	0.2137	0.217	0.3786



Tabla 32: Azimut de 145°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9726	0.9863	1.0009	1.0166	1.0257	1.0294	1.0271	1.0234	1.0101	0.9906	0.9775	0.9711	1.0026
10	0.9479	0.9758	1.0041	1.035	1.0536	1.0613	1.0565	1.0484	1.0216	0.984	0.9582	0.9453	1.0076
15	0.9174	0.9597	1.001	1.0468	1.0747	1.0865	1.0794	1.0666	1.0262	0.9716	0.9331	0.914	1.0064
20	0.8812	0.9382	0.9916	1.052	1.0891	1.1049	1.0954	1.0776	1.0239	0.9534	0.9026	0.8774	0.9989
25	0.8396	0.9113	0.9761	1.0504	1.0965	1.1162	1.1046	1.0815	1.0146	0.9297	0.8668	0.8357	0.9853
30	0.7929	0.8793	0.9545	1.0422	1.097	1.1205	1.1068	1.0782	0.9984	0.9005	0.8261	0.7894	0.9655
35	0.7415	0.8424	0.927	1.0274	1.0904	1.1177	1.1021	1.0678	0.9755	0.8661	0.7807	0.7387	0.9398
40	0.6858	0.801	0.8938	1.006	1.0769	1.1078	1.0904	1.0502	0.9461	0.8268	0.731	0.684	0.9083
45	0.6262	0.7553	0.8552	0.9783	1.0566	1.0908	1.0718	1.0257	0.9103	0.7828	0.6774	0.6258	0.8713
50	0.5631	0.7057	0.8115	0.9444	1.0296	1.0669	1.0465	0.9945	0.8684	0.7346	0.6202	0.5644	0.8291
55	0.497	0.6525	0.7629	0.9047	0.996	1.0363	1.0147	0.9567	0.8207	0.6824	0.5599	0.5004	0.782
60	0.4285	0.5962	0.71	0.8594	0.9563	0.9992	0.9766	0.9126	0.7676	0.6266	0.497	0.4343	0.7304
65	0.358	0.5372	0.653	0.8088	0.9106	0.9559	0.9324	0.8627	0.7094	0.5677	0.432	0.3665	0.6745
70	0.2861	0.476	0.5925	0.7534	0.8593	0.9067	0.8826	0.8072	0.6466	0.5062	0.3652	0.2976	0.6149
75	0.2133	0.4129	0.5289	0.6936	0.8028	0.8519	0.8275	0.7466	0.5798	0.4425	0.2974	0.2395	0.5531
80	0.1799	0.3485	0.4627	0.6297	0.7414	0.792	0.7675	0.6813	0.5093	0.377	0.2288	0.2321	0.4959
85	0.1761	0.2833	0.3943	0.5623	0.6758	0.7275	0.703	0.6118	0.4358	0.3103	0.2212	0.2246	0.4438
90	0.1723	0.2403	0.3242	0.4919	0.6063	0.6587	0.6346	0.5386	0.3598	0.2429	0.2137	0.217	0.3917

Tabla 33: Azimut de 150°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9717	0.9862	1.0016	1.0182	1.0279	1.0318	1.0293	1.0254	1.0113	0.9907	0.9769	0.9701	1.0034
10	0.9462	0.9756	1.0055	1.0382	1.0578	1.066	1.0609	1.0524	1.0241	0.9843	0.9569	0.9434	1.0093
15	0.9148	0.9594	1.0031	1.0515	1.0811	1.0935	1.0859	1.0725	1.0299	0.972	0.9313	0.9111	1.0088
20	0.8777	0.9377	0.9944	1.0582	1.0974	1.1141	1.1041	1.0854	1.0287	0.9539	0.9002	0.8735	1.0021
25	0.8353	0.9107	0.9795	1.0581	1.1068	1.1276	1.1153	1.0911	1.0205	0.9303	0.8639	0.831	0.9892
30	0.7879	0.8787	0.9586	1.0512	1.1091	1.134	1.1195	1.0896	1.0054	0.9013	0.8226	0.7838	0.9701
35	0.7357	0.8417	0.9317	1.0377	1.1043	1.1331	1.1165	1.0807	0.9834	0.867	0.7767	0.7322	0.9451
40	0.6793	0.8002	0.8991	1.0175	1.0925	1.125	1.1066	1.0647	0.9549	0.8278	0.7265	0.6768	0.9142
45	0.619	0.7544	0.861	0.9909	1.0737	1.1098	1.0896	1.0417	0.9199	0.7839	0.6724	0.6178	0.8778
50	0.5553	0.7047	0.8178	0.9581	1.0481	1.0875	1.0658	1.0117	0.8788	0.7357	0.6149	0.5558	0.8362
55	0.4887	0.6515	0.7697	0.9193	1.0158	1.0583	1.0353	0.9751	0.8318	0.6836	0.5542	0.4912	0.7895
60	0.4197	0.5951	0.7171	0.8748	0.9771	1.0224	0.9983	0.9321	0.7794	0.6279	0.491	0.4246	0.7383
65	0.3488	0.5361	0.6604	0.8249	0.9324	0.9802	0.9552	0.883	0.7217	0.5691	0.4256	0.3563	0.6828
70	0.2766	0.4748	0.6001	0.7701	0.8819	0.9318	0.9062	0.8282	0.6594	0.5076	0.3587	0.287	0.6235
75	0.2036	0.4117	0.5367	0.7107	0.826	0.8778	0.8517	0.7682	0.5929	0.4439	0.2906	0.2395	0.5628
80	0.1799	0.3473	0.4706	0.6471	0.7651	0.8184	0.7922	0.7033	0.5227	0.3785	0.2288	0.2321	0.5071
85	0.1761	0.282	0.4023	0.5799	0.6997	0.7541	0.7279	0.634	0.4493	0.3118	0.2212	0.2246	0.4553
90	0.1723	0.2403	0.3323	0.5096	0.6303	0.6853	0.6595	0.5609	0.3733	0.2444	0.2137	0.217	0.4033



Tabla 34: Azimut de 150°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9709	0.9861	1.0023	1.0196	1.0297	1.0338	1.0312	1.0271	1.0124	0.9908	0.9764	0.9693	1.0041
10	0.9447	0.9754	1.0067	1.0409	1.0614	1.07	1.0647	1.0558	1.0262	0.9845	0.9559	0.9417	1.0107
15	0.9125	0.9591	1.0049	1.0556	1.0865	1.0995	1.0916	1.0775	1.033	0.9723	0.9298	0.9086	1.0109
20	0.8748	0.9373	0.9968	1.0635	1.1046	1.122	1.1115	1.0921	1.0327	0.9544	0.8982	0.8702	1.0049
25	0.8317	0.9103	0.9825	1.0646	1.1156	1.1374	1.1245	1.0994	1.0255	0.9309	0.8614	0.8269	0.9926
30	0.7835	0.8781	0.9621	1.059	1.1195	1.1456	1.1303	1.0993	1.0113	0.9019	0.8196	0.7789	0.9741
35	0.7307	0.8411	0.9357	1.0465	1.1163	1.1464	1.129	1.0919	0.9902	0.8677	0.7733	0.7267	0.9496
40	0.6737	0.7995	0.9036	1.0274	1.1059	1.1399	1.1205	1.0772	0.9624	0.8286	0.7227	0.6706	0.9193
45	0.6129	0.7536	0.866	1.0018	1.0884	1.1261	1.1049	1.0553	0.9282	0.7848	0.6682	0.611	0.8834
50	0.5487	0.7039	0.8232	0.9698	1.0639	1.1051	1.0823	1.0265	0.8877	0.7367	0.6103	0.5484	0.8422
55	0.4816	0.6506	0.7754	0.9318	1.0328	1.0772	1.0529	0.9908	0.8413	0.6846	0.5493	0.4833	0.796
60	0.4122	0.5942	0.7232	0.888	0.9951	1.0424	1.017	0.9487	0.7893	0.629	0.4858	0.4162	0.7451
65	0.3409	0.5351	0.6668	0.8387	0.9511	1.001	0.9747	0.9004	0.7322	0.5703	0.4202	0.3476	0.6899
70	0.2684	0.4737	0.6067	0.7843	0.9013	0.9535	0.9264	0.8462	0.6703	0.5088	0.3531	0.2779	0.6309
75	0.1952	0.4106	0.5434	0.7253	0.8459	0.9	0.8725	0.7866	0.604	0.4451	0.2849	0.2395	0.5711
80	0.1799	0.3462	0.4774	0.662	0.7854	0.841	0.8133	0.7221	0.534	0.3797	0.2288	0.2321	0.5168
85	0.1761	0.2809	0.4092	0.595	0.7202	0.7769	0.7493	0.653	0.4608	0.3131	0.2212	0.2246	0.465
90	0.1723	0.2403	0.3392	0.5247	0.6508	0.7082	0.681	0.58	0.3849	0.2457	0.2137	0.217	0.4131

Tabla 35: Azimut de 160°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9703	0.986	1.0028	1.0207	1.0312	1.0355	1.0328	1.0285	1.0133	0.9909	0.976	0.9686	1.0047
10	0.9434	0.9753	1.0077	1.0431	1.0645	1.0734	1.0679	1.0587	1.0279	0.9847	0.955	0.9403	1.0118
15	0.9107	0.9589	1.0064	1.0589	1.091	1.1045	1.0962	1.0817	1.0356	0.9726	0.9285	0.9065	1.0126
20	0.8723	0.937	0.9988	1.0679	1.1105	1.1286	1.1177	1.0976	1.0361	0.9547	0.8965	0.8675	1.0071
25	0.8286	0.9099	0.985	1.0701	1.123	1.1455	1.1321	1.1062	1.0297	0.9313	0.8593	0.8235	0.9953
30	0.7799	0.8776	0.965	1.0654	1.1282	1.1552	1.1393	1.1073	1.0162	0.9024	0.8172	0.775	0.9774
35	0.7266	0.8405	0.9391	1.0538	1.1262	1.1574	1.1393	1.1011	0.9958	0.8683	0.7704	0.7221	0.9534
40	0.6691	0.7989	0.9074	1.0356	1.1169	1.1522	1.132	1.0875	0.9687	0.8293	0.7195	0.6654	0.9235
45	0.6078	0.753	0.8701	1.0108	1.1005	1.1396	1.1176	1.0667	0.935	0.7856	0.6647	0.6054	0.888
50	0.5431	0.7032	0.8276	0.9795	1.0771	1.1198	1.096	1.0387	0.895	0.7375	0.6065	0.5423	0.8472
55	0.4757	0.6498	0.7802	0.9421	1.0468	1.0928	1.0676	1.0039	0.8491	0.6855	0.5453	0.4768	0.8013
60	0.4059	0.5934	0.7282	0.8988	1.0099	1.0589	1.0325	0.9625	0.7975	0.6299	0.4815	0.4093	0.7507
65	0.3344	0.5342	0.6721	0.85	0.9666	1.0183	0.9909	0.9147	0.7408	0.5712	0.4157	0.3403	0.6958
70	0.2616	0.4728	0.6122	0.796	0.9174	0.9714	0.9432	0.8611	0.6792	0.5098	0.3484	0.2704	0.637
75	0.1882	0.4097	0.549	0.7373	0.8624	0.9184	0.8898	0.8019	0.6132	0.4462	0.2801	0.2395	0.578
80	0.1799	0.3453	0.483	0.6742	0.8022	0.8598	0.8309	0.7376	0.5434	0.3808	0.2288	0.2321	0.5248
85	0.1761	0.28	0.4148	0.6073	0.7372	0.7959	0.7671	0.6687	0.4702	0.3141	0.2212	0.2246	0.4731
90	0.1723	0.2403	0.3449	0.5371	0.6678	0.7271	0.6987	0.5957	0.3943	0.2468	0.2137	0.217	0.4213



Tabla 36: Azimut de 165°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9698	0.986	1.0032	1.0216	1.0324	1.0368	1.0341	1.0296	1.014	0.991	0.9756	0.968	1.0052
10	0.9424	0.9751	1.0085	1.0449	1.0668	1.076	1.0703	1.0609	1.0293	0.9848	0.9544	0.9392	1.0127
15	0.9092	0.9587	1.0076	1.0615	1.0945	1.1084	1.0999	1.0851	1.0376	0.9728	0.9275	0.9049	1.014
20	0.8704	0.9368	1.0004	1.0714	1.1152	1.1338	1.1226	1.102	1.0388	0.955	0.8951	0.8654	1.0089
25	0.8262	0.9096	0.9869	1.0743	1.1287	1.1519	1.1381	1.1116	1.0329	0.9317	0.8576	0.8209	0.9975
30	0.7771	0.8773	0.9673	1.0704	1.135	1.1627	1.1464	1.1137	1.02	0.9028	0.8152	0.7718	0.98
35	0.7234	0.8401	0.9417	1.0596	1.1339	1.166	1.1474	1.1083	1.0002	0.8688	0.7682	0.7185	0.9563
40	0.6654	0.7984	0.9103	1.042	1.1256	1.1618	1.1411	1.0956	0.9736	0.8298	0.717	0.6614	0.9268
45	0.6038	0.7525	0.8734	1.0178	1.1101	1.1502	1.1275	1.0755	0.9403	0.7861	0.6619	0.6009	0.8917
50	0.5388	0.7026	0.8311	0.9871	1.0874	1.1313	1.1068	1.0483	0.9008	0.7381	0.6035	0.5375	0.8511
55	0.4711	0.6492	0.784	0.9502	1.0579	1.1051	1.0791	1.0141	0.8552	0.6862	0.5421	0.4716	0.8055
60	0.401	0.5927	0.7322	0.9074	1.0216	1.0719	1.0446	0.9732	0.804	0.6307	0.4781	0.4039	0.7551
65	0.3293	0.5336	0.6762	0.8589	0.9788	1.032	1.0036	0.926	0.7474	0.572	0.4122	0.3346	0.7004
70	0.2563	0.4722	0.6165	0.8052	0.93	0.9855	0.9564	0.8727	0.686	0.5106	0.3448	0.2645	0.6417
75	0.1836	0.409	0.5534	0.7467	0.8754	0.933	0.9034	0.8138	0.6202	0.447	0.2763	0.2395	0.5834
80	0.1799	0.3446	0.4875	0.6838	0.8155	0.8747	0.8448	0.7497	0.5506	0.3816	0.2288	0.2321	0.5311
85	0.1761	0.2793	0.4193	0.6169	0.7507	0.811	0.7812	0.681	0.4775	0.315	0.2212	0.2246	0.4795
90	0.1723	0.2403	0.3493	0.5467	0.6813	0.758	0.7127	0.608	0.4015	0.2476	0.2137	0.217	0.429

Tabla 37: Azimut de 170°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9694	0.9859	1.0035	1.0223	1.0333	1.0377	1.035	1.0305	1.0145	0.991	0.9754	0.9676	1.0055
10	0.9417	0.975	1.0091	1.0462	1.0686	1.0779	1.0721	1.0625	1.0303	0.9849	0.9539	0.9384	1.0134
15	0.9081	0.9586	1.0085	1.0634	1.097	1.1112	1.1026	1.0874	1.039	0.973	0.9267	0.9037	1.0149
20	0.869	0.9366	1.0015	1.0739	1.1185	1.1375	1.126	1.1051	1.0407	0.9552	0.8942	0.8638	1.0102
25	0.8245	0.9094	0.9883	1.0774	1.1328	1.1565	1.1424	1.1154	1.0353	0.9319	0.8564	0.819	0.9991
30	0.775	0.877	0.9689	1.074	1.1399	1.1681	1.1515	1.1182	1.0228	0.9031	0.8138	0.7696	0.9818
35	0.721	0.8398	0.9436	1.0637	1.1395	1.1722	1.1532	1.1136	1.0034	0.8691	0.7666	0.7159	0.9585
40	0.6628	0.7981	0.9124	1.0466	1.1319	1.1688	1.1476	1.1014	0.9771	0.8302	0.7152	0.6585	0.9292
45	0.6009	0.7521	0.8757	1.0229	1.117	1.1579	1.1347	1.0819	0.9442	0.7866	0.66	0.5977	0.8943
50	0.5357	0.7022	0.8337	0.9926	1.0949	1.1395	1.1146	1.0552	0.9049	0.7386	0.6013	0.534	0.8539
55	0.4677	0.6488	0.7867	0.956	1.0658	1.1139	1.0874	1.0215	0.8596	0.6867	0.5398	0.4679	0.8085
60	0.3975	0.5923	0.7351	0.9135	1.0299	1.0813	1.0534	0.981	0.8085	0.6312	0.4757	0.3999	0.7583
65	0.3256	0.5331	0.6792	0.8653	0.9876	1.0418	1.0128	0.9341	0.7522	0.5725	0.4097	0.3306	0.7037
70	0.2525	0.4717	0.6196	0.8118	0.9391	0.9957	0.9659	0.8811	0.6909	0.5111	0.3421	0.2603	0.6452
75	0.1836	0.4085	0.5566	0.7534	0.8848	0.9435	0.9132	0.8224	0.6252	0.4475	0.2736	0.2395	0.5877
80	0.1799	0.344	0.4908	0.6906	0.8251	0.8855	0.8549	0.7585	0.5555	0.3822	0.2288	0.2321	0.5357
85	0.1761	0.2788	0.4226	0.6238	0.7604	0.8379	0.7915	0.6898	0.4825	0.3156	0.2212	0.2246	0.4854
90	0.1723	0.2403	0.3526	0.5536	0.7014	0.7693	0.7359	0.6169	0.4066	0.2482	0.2137	0.217	0.4356



Tabla 38: Azimut de 175°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9692	0.9859	1.0036	1.0227	1.0338	1.0383	1.0355	1.0309	1.0148	0.991	0.9752	0.9674	1.0057
10	0.9413	0.975	1.0095	1.047	1.0696	1.079	1.0732	1.0634	1.0309	0.985	0.9536	0.938	1.0138
15	0.9075	0.9585	1.009	1.0646	1.0986	1.1129	1.1042	1.0889	1.0399	0.973	0.9263	0.903	1.0155
20	0.8681	0.9365	1.0022	1.0754	1.1206	1.1397	1.1281	1.107	1.0419	0.9554	0.8936	0.8629	1.0109
25	0.8235	0.9092	0.9891	1.0792	1.1353	1.1593	1.145	1.1177	1.0367	0.9321	0.8557	0.8178	1.0001
30	0.7738	0.8769	0.9699	1.0762	1.1428	1.1714	1.1545	1.121	1.0245	0.9033	0.813	0.7682	0.983
35	0.7196	0.8397	0.9447	1.0662	1.1429	1.176	1.1567	1.1167	1.0053	0.8694	0.7656	0.7144	0.9598
40	0.6612	0.7979	0.9137	1.0494	1.1357	1.173	1.1515	1.1049	0.9792	0.8304	0.7141	0.6568	0.9307
45	0.5991	0.7519	0.8771	1.0259	1.1211	1.1625	1.139	1.0858	0.9465	0.7868	0.6588	0.5958	0.8959
50	0.5338	0.702	0.8352	0.9959	1.0994	1.1445	1.1192	1.0594	0.9074	0.7389	0.6	0.532	0.8556
55	0.4657	0.6485	0.7883	0.9595	1.0706	1.1193	1.0924	1.0259	0.8622	0.687	0.5384	0.4657	0.8103
60	0.3954	0.592	0.7368	0.9172	1.035	1.0869	1.0587	0.9857	0.8113	0.6315	0.4742	0.3976	0.7602
65	0.3234	0.5328	0.681	0.8691	0.9929	1.0477	1.0183	0.9389	0.755	0.5728	0.4081	0.3281	0.7057
70	0.2502	0.4714	0.6215	0.8158	0.9446	1.0019	0.9717	0.8861	0.6938	0.5115	0.3405	0.2577	0.6472
75	0.1836	0.4082	0.5585	0.7575	0.8905	0.9499	0.9191	0.8275	0.6281	0.4479	0.272	0.2395	0.5902
80	0.1799	0.3437	0.4927	0.6947	0.8309	0.8922	0.8611	0.7637	0.5584	0.3825	0.2288	0.2321	0.5384
85	0.1761	0.2785	0.4246	0.6279	0.7665	0.8447	0.8106	0.6952	0.4854	0.3159	0.2212	0.2246	0.4893
90	0.1723	0.2403	0.3545	0.5577	0.7075	0.7761	0.7423	0.6224	0.4094	0.2486	0.2137	0.217	0.4385

Tabla 39: Azimut de 180°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9914	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9692	0.9859	1.0037	1.0228	1.034	1.0385	1.0357	1.0311	1.0149	0.9911	0.9752	0.9673	1.0058
10	0.9411	0.975	1.0096	1.0472	1.0699	1.0794	1.0736	1.0638	1.0311	0.985	0.9535	0.9378	1.0139
15	0.9073	0.9585	1.0091	1.065	1.0991	1.1135	1.1047	1.0893	1.0402	0.9731	0.9262	0.9028	1.0157
20	0.8678	0.9365	1.0024	1.0759	1.1212	1.1405	1.1288	1.1076	1.0423	0.9554	0.8934	0.8626	1.0112
25	0.8231	0.9092	0.9894	1.0799	1.1362	1.1602	1.1458	1.1185	1.0372	0.9321	0.8555	0.8174	1.0004
30	0.7734	0.8768	0.9703	1.0769	1.1438	1.1725	1.1555	1.1219	1.025	0.9034	0.8127	0.7677	0.9833
35	0.7191	0.8396	0.9451	1.0671	1.144	1.1772	1.1579	1.1178	1.0059	0.8694	0.7653	0.7138	0.9602
40	0.6607	0.7978	0.9141	1.0504	1.1369	1.1744	1.1528	1.1061	0.9799	0.8305	0.7137	0.6562	0.9311
45	0.5986	0.7518	0.8776	1.0269	1.1225	1.164	1.1404	1.0871	0.9473	0.7869	0.6584	0.5951	0.8964
50	0.5332	0.7019	0.8357	0.997	1.1009	1.1462	1.1208	1.0608	0.9082	0.739	0.5996	0.5313	0.8562
55	0.465	0.6485	0.7888	0.9607	1.0722	1.1211	1.094	1.0274	0.8631	0.6871	0.5379	0.465	0.8109
60	0.3947	0.5919	0.7374	0.9184	1.0367	1.0888	1.0604	0.9872	0.8122	0.6316	0.4738	0.3968	0.7608
65	0.3226	0.5327	0.6816	0.8704	0.9947	1.0497	1.0202	0.9406	0.756	0.573	0.4076	0.3273	0.7064
70	0.2494	0.4713	0.6221	0.8171	0.9464	1.004	0.9736	0.8878	0.6947	0.5116	0.34	0.2569	0.6479
75	0.1836	0.4081	0.5592	0.7588	0.8924	0.9521	0.9211	0.8293	0.6291	0.448	0.2714	0.2395	0.591
80	0.1799	0.3436	0.4934	0.696	0.8329	0.8944	0.8631	0.7655	0.5594	0.3827	0.2288	0.2321	0.5393
85	0.1761	0.2784	0.4252	0.6293	0.7685	0.8469	0.8127	0.697	0.4863	0.3161	0.2212	0.2246	0.4902
90	0.1723	0.2403	0.3552	0.5591	0.7095	0.7784	0.7444	0.6243	0.4103	0.2487	0.2137	0.217	0.4394