

Comayagua, Honduras

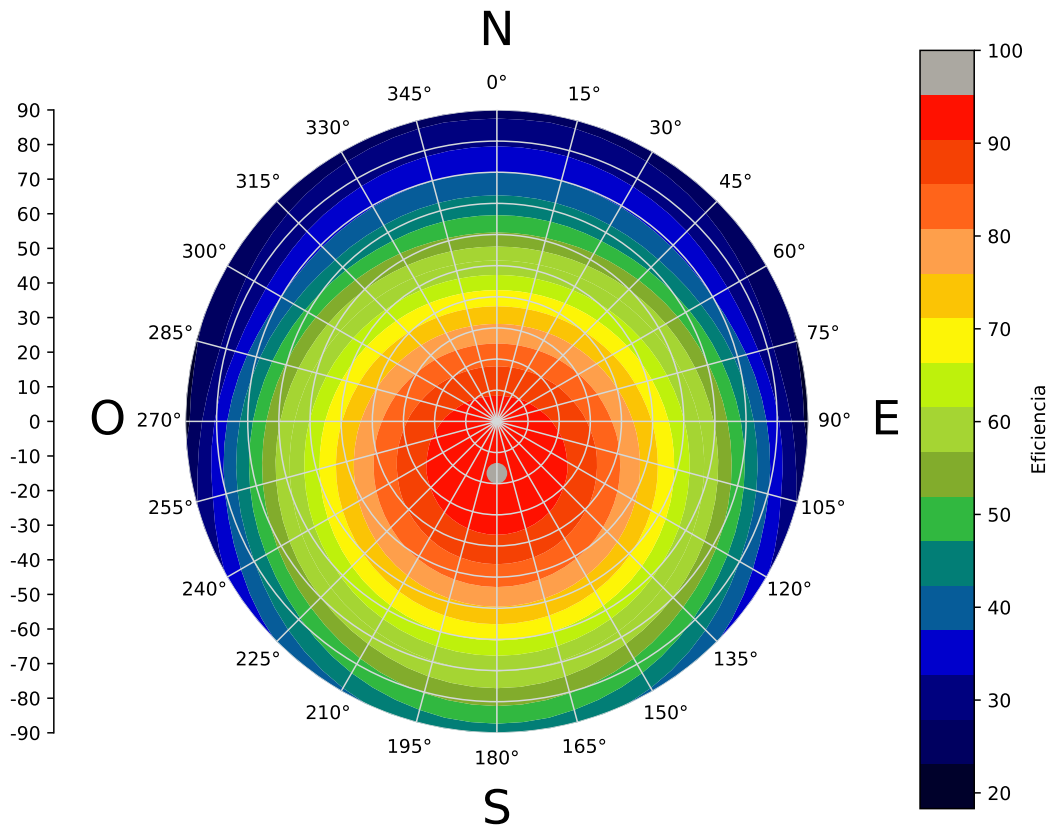
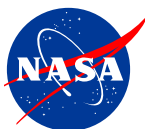


Tabla 1: Generalidades

Latitud	14.460165800806973
Longitud	-87.64153361320497
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	5.0106	11.2813	0.5498	0.1358	-20.8472	84.3594
Febrero	5.284	10.8397	0.5355	0.1264	-13.3253	86.49
Marzo	5.7792	9.5151	0.561	0.1366	-2.3892	89.3811
Abril	5.8647	9.3606	0.5641	0.1428	9.4932	92.4795
Mayo	5.5276	8.9649	0.5439	0.134	18.8058	95.0459
Junio	5.4922	9.2333	0.5385	0.1323	23.0771	96.3083
Julio	5.6018	9.3965	0.5506	0.1325	21.1015	95.7158
Agosto	5.6237	9.4445	0.5588	0.1373	13.296	93.5038
Septiembre	5.4408	9.3257	0.5679	0.1444	1.9936	90.5162
Octubre	5.1652	9.3383	0.5323	0.1321	-9.8485	87.4254
Noviembre	4.5643	7.8582	0.5175	0.1332	-19.0505	84.8841
Diciembre	4.4363	7.7153	0.5267	0.131	-23.0956	83.6861
Promedio	5.2449	8.7716	0.5416	0.129	—	89.983

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	1.0091	0.9925	0.9749	0.9563	0.9441	0.9379	0.9405	0.9469	0.9641	0.9874	1.0033	1.012	0.9724
10	1.0207	0.9881	0.9522	0.9148	0.8909	0.8789	0.8838	0.8959	0.9299	0.9776	1.0095	1.0268	0.9474
15	1.0259	0.978	0.9235	0.8677	0.8323	0.8146	0.8217	0.8391	0.8895	0.962	1.0096	1.0353	0.9166
20	1.0246	0.9622	0.8892	0.8153	0.7687	0.7454	0.7548	0.777	0.8432	0.9408	1.0035	1.0374	0.8802
25	1.0168	0.9409	0.8495	0.758	0.7007	0.672	0.6835	0.71	0.7913	0.9141	0.9915	1.0331	0.8384
30	1.0025	0.9143	0.8046	0.6962	0.6288	0.5949	0.6084	0.6386	0.7342	0.8821	0.9734	1.0226	0.7917
35	0.9819	0.8824	0.755	0.6305	0.5535	0.5147	0.53	0.5634	0.6724	0.8451	0.9496	1.0057	0.7404
40	0.9552	0.8457	0.701	0.5613	0.4754	0.432	0.4491	0.485	0.6062	0.8032	0.9201	0.9827	0.6847
45	0.9225	0.8043	0.643	0.4891	0.3951	0.3475	0.3661	0.4039	0.5364	0.7569	0.8852	0.9538	0.6253
50	0.8841	0.7586	0.5814	0.4146	0.3133	0.2619	0.2818	0.3209	0.4632	0.7066	0.8452	0.9191	0.5626
55	0.8402	0.7089	0.5168	0.3382	0.2306	0.2097	0.2054	0.2365	0.3874	0.6525	0.8003	0.8789	0.5005
60	0.7913	0.6557	0.4496	0.2607	0.2056	0.2061	0.202	0.1514	0.3095	0.5951	0.7509	0.8336	0.451
65	0.7376	0.5992	0.3803	0.1853	0.2019	0.2023	0.1984	0.1334	0.2301	0.5348	0.6974	0.7835	0.407
70	0.6797	0.54	0.3095	0.1828	0.1981	0.1983	0.1947	0.1336	0.1498	0.4721	0.6402	0.7289	0.369
75	0.6178	0.4784	0.2376	0.1804	0.1941	0.1942	0.1909	0.1339	0.1017	0.4075	0.5797	0.6703	0.3322
80	0.5526	0.415	0.1842	0.1778	0.19	0.1901	0.1869	0.1341	0.1046	0.3415	0.5164	0.6081	0.3001
85	0.4845	0.3503	0.1807	0.1752	0.1859	0.1858	0.1829	0.1343	0.1075	0.2257	0.4507	0.5429	0.2672
90	0.414	0.2362	0.1772	0.1726	0.1818	0.1815	0.1789	0.1346	0.1105	0.2182	0.3832	0.475	0.2386



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	1.009	0.9925	0.9749	0.9565	0.9443	0.9381	0.9407	0.947	0.9642	0.9874	1.0033	1.0119	0.9725
10	1.0206	0.9881	0.9523	0.9151	0.8912	0.8793	0.8841	0.8962	0.9301	0.9776	1.0094	1.0266	0.9475
15	1.0257	0.978	0.9237	0.8681	0.8328	0.8151	0.8222	0.8396	0.8898	0.962	1.0094	1.035	0.9168
20	1.0243	0.9622	0.8894	0.8158	0.7694	0.7462	0.7555	0.7776	0.8436	0.9408	1.0033	1.037	0.8804
25	1.0164	0.9409	0.8497	0.7586	0.7015	0.673	0.6844	0.7108	0.7917	0.9141	0.9912	1.0327	0.8387
30	1.0021	0.9142	0.8049	0.6969	0.6298	0.596	0.6094	0.6396	0.7347	0.8821	0.9731	1.022	0.7921
35	0.9814	0.8823	0.7554	0.6313	0.5546	0.516	0.5313	0.5645	0.673	0.8451	0.9492	1.0051	0.7408
40	0.9546	0.8456	0.7014	0.5622	0.4766	0.4335	0.4504	0.4862	0.607	0.8033	0.9197	0.982	0.6852
45	0.9218	0.8042	0.6434	0.4902	0.3965	0.3491	0.3676	0.4053	0.5372	0.757	0.8848	0.953	0.6258
50	0.8834	0.7585	0.5819	0.4157	0.3148	0.2636	0.2835	0.3223	0.4642	0.7066	0.8447	0.9183	0.5631
55	0.8395	0.7088	0.5173	0.3395	0.2322	0.2097	0.2054	0.238	0.3884	0.6525	0.7998	0.8781	0.5008
60	0.7905	0.6555	0.4501	0.262	0.2056	0.2061	0.202	0.1531	0.3106	0.5951	0.7504	0.8327	0.4511
65	0.7368	0.599	0.3808	0.1853	0.2019	0.2023	0.1984	0.1334	0.2314	0.5348	0.6968	0.7825	0.407
70	0.6788	0.5398	0.31	0.1828	0.1981	0.1983	0.1947	0.1336	0.1513	0.4722	0.6396	0.7279	0.3689
75	0.617	0.4782	0.2382	0.1804	0.1941	0.1942	0.1909	0.1339	0.1017	0.4075	0.5791	0.6693	0.332
80	0.5517	0.4148	0.1844	0.1778	0.19	0.1901	0.1869	0.1341	0.1048	0.3415	0.5157	0.6071	0.2999
85	0.4836	0.3501	0.1807	0.1752	0.1859	0.1858	0.1829	0.1343	0.1077	0.2257	0.45	0.5418	0.267
90	0.4131	0.2362	0.1772	0.1726	0.1818	0.1815	0.1789	0.1346	0.1106	0.2182	0.3825	0.4739	0.2384

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	1.0088	0.9925	0.9751	0.9568	0.9448	0.9387	0.9412	0.9475	0.9645	0.9874	1.0031	1.0117	0.9727
10	1.0201	0.988	0.9526	0.9158	0.8922	0.8804	0.8852	0.8971	0.9307	0.9776	1.009	1.0261	0.9479
15	1.025	0.9778	0.9241	0.8692	0.8343	0.8168	0.8239	0.841	0.8906	0.9621	1.0089	1.0342	0.9173
20	1.0233	0.962	0.89	0.8172	0.7714	0.7484	0.7577	0.7795	0.8447	0.9409	1.0026	1.036	0.8811
25	1.0152	0.9406	0.8505	0.7604	0.704	0.6758	0.687	0.7131	0.7931	0.9142	0.9903	1.0314	0.8396
30	1.0007	0.9139	0.8058	0.6991	0.6327	0.5994	0.6126	0.6423	0.7364	0.8822	0.9721	1.0205	0.7931
35	0.9798	0.882	0.7564	0.6338	0.558	0.5198	0.5349	0.5677	0.6749	0.8452	0.9481	1.0033	0.742
40	0.9528	0.8452	0.7025	0.5651	0.4805	0.4378	0.4545	0.4898	0.6092	0.8033	0.9184	0.98	0.6866
45	0.9199	0.8038	0.6447	0.4933	0.4007	0.3539	0.3722	0.4093	0.5397	0.7571	0.8834	0.9508	0.6274
50	0.8812	0.7581	0.5832	0.4192	0.3194	0.2687	0.2884	0.3267	0.4669	0.7067	0.8432	0.9159	0.5648
55	0.8372	0.7083	0.5187	0.3432	0.237	0.2097	0.2054	0.2427	0.3914	0.6526	0.7981	0.8755	0.5017
60	0.7881	0.655	0.4516	0.266	0.2056	0.2061	0.202	0.158	0.3139	0.5952	0.7486	0.83	0.4517
65	0.7343	0.5985	0.3824	0.1881	0.2019	0.2023	0.1984	0.1334	0.2349	0.535	0.695	0.7797	0.407
70	0.6762	0.5393	0.3118	0.1828	0.1981	0.1983	0.1947	0.1336	0.155	0.4723	0.6377	0.725	0.3687
75	0.6143	0.4777	0.2401	0.1804	0.1941	0.1942	0.1909	0.1339	0.1017	0.4077	0.5771	0.6663	0.3315
80	0.549	0.4143	0.1845	0.1778	0.19	0.1901	0.1869	0.1341	0.1055	0.3416	0.5138	0.604	0.2993
85	0.4808	0.3495	0.1809	0.1752	0.1859	0.1858	0.1829	0.1343	0.1083	0.2746	0.4481	0.5387	0.2704
90	0.4103	0.2362	0.1772	0.1726	0.1818	0.1815	0.1789	0.1346	0.1112	0.2182	0.3805	0.4708	0.2378



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	1.0084	0.9924	0.9754	0.9574	0.9457	0.9397	0.9421	0.9483	0.9649	0.9874	1.0028	1.0112	0.973
10	1.0193	0.9878	0.9531	0.9171	0.8939	0.8823	0.887	0.8987	0.9316	0.9776	1.0084	1.0252	0.9485
15	1.0238	0.9776	0.9249	0.871	0.8368	0.8197	0.8266	0.8434	0.892	0.9621	1.008	1.0329	0.9182
20	1.0218	0.9617	0.891	0.8197	0.7747	0.7522	0.7612	0.7826	0.8465	0.941	1.0015	1.0342	0.8823
25	1.0133	0.9402	0.8517	0.7634	0.7081	0.6804	0.6915	0.717	0.7955	0.9143	0.989	1.0292	0.8411
30	0.9984	0.9134	0.8073	0.7027	0.6376	0.6049	0.6179	0.6469	0.7392	0.8823	0.9705	1.0179	0.7949
35	0.9772	0.8815	0.7581	0.638	0.5636	0.5262	0.541	0.573	0.6781	0.8453	0.9462	1.0003	0.744
40	0.9499	0.8446	0.7044	0.5698	0.4868	0.4449	0.4613	0.4958	0.6128	0.8035	0.9163	0.9767	0.6889
45	0.9166	0.8032	0.6467	0.4985	0.4077	0.3617	0.3796	0.4159	0.5437	0.7572	0.881	0.9472	0.6299
50	0.8777	0.7574	0.5855	0.4249	0.3269	0.2772	0.2965	0.3339	0.4714	0.7069	0.8406	0.9119	0.5676
55	0.8334	0.7076	0.5211	0.3493	0.2451	0.2097	0.2125	0.2505	0.3963	0.6528	0.7954	0.8713	0.5038
60	0.7841	0.6542	0.4542	0.2725	0.2056	0.2061	0.202	0.1662	0.3191	0.5954	0.7458	0.8255	0.4526
65	0.7301	0.5977	0.3852	0.1949	0.2019	0.2023	0.1984	0.1334	0.2404	0.5351	0.692	0.775	0.4072
70	0.6719	0.5384	0.3147	0.1828	0.1981	0.1983	0.1947	0.1336	0.1606	0.4725	0.6346	0.7201	0.3684
75	0.6099	0.4768	0.2431	0.1804	0.1941	0.1942	0.1909	0.1339	0.1017	0.4079	0.574	0.6613	0.3307
80	0.5445	0.4134	0.1846	0.1778	0.19	0.1901	0.1869	0.1341	0.1062	0.3418	0.5105	0.5989	0.2982
85	0.4763	0.3486	0.181	0.1752	0.1859	0.1858	0.1829	0.1343	0.109	0.2748	0.4448	0.5335	0.2694
90	0.4057	0.2362	0.1774	0.1726	0.1818	0.1815	0.1789	0.1346	0.1118	0.2182	0.3772	0.4656	0.2368

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	1.0078	0.9923	0.9757	0.9583	0.9468	0.941	0.9434	0.9494	0.9656	0.9874	1.0024	1.0106	0.9734
10	1.0182	0.9876	0.9538	0.9188	0.8963	0.885	0.8895	0.9009	0.9329	0.9777	1.0077	1.0239	0.9493
15	1.0221	0.9772	0.926	0.8736	0.8403	0.8236	0.8303	0.8466	0.894	0.9622	1.0068	1.031	0.9195
20	1.0196	0.9612	0.8924	0.8231	0.7793	0.7574	0.7662	0.787	0.8491	0.9411	0.9999	1.0317	0.884
25	1.0106	0.9397	0.8535	0.7677	0.7139	0.6869	0.6976	0.7224	0.7987	0.9144	0.987	1.0261	0.8432
30	0.9952	0.9128	0.8093	0.7077	0.6444	0.6125	0.6252	0.6533	0.743	0.8824	0.9682	1.0143	0.7974
35	0.9735	0.8808	0.7604	0.6438	0.5714	0.535	0.5494	0.5804	0.6826	0.8454	0.9436	0.9962	0.7469
40	0.9458	0.8438	0.707	0.5763	0.4956	0.4548	0.4708	0.5041	0.6178	0.8037	0.9134	0.9721	0.6921
45	0.9121	0.8023	0.6496	0.5057	0.4174	0.3726	0.39	0.4251	0.5493	0.7574	0.8778	0.9421	0.6335
50	0.8729	0.7564	0.5886	0.4327	0.3374	0.289	0.3077	0.3439	0.4775	0.7071	0.8371	0.9064	0.5714
55	0.8282	0.7065	0.5245	0.3578	0.2563	0.2097	0.2245	0.2612	0.4029	0.653	0.7917	0.8654	0.5068
60	0.7786	0.6531	0.4578	0.2815	0.2056	0.2061	0.202	0.1775	0.3261	0.5957	0.7418	0.8193	0.4538
65	0.7244	0.5965	0.389	0.2043	0.2019	0.2023	0.1984	0.1334	0.2476	0.5354	0.6879	0.7685	0.4075
70	0.6659	0.5372	0.3186	0.1828	0.1981	0.1983	0.1947	0.1336	0.1681	0.4728	0.6303	0.7133	0.3678
75	0.6037	0.4756	0.2471	0.1804	0.1941	0.1942	0.1909	0.1339	0.1017	0.4082	0.5695	0.6543	0.3295
80	0.5382	0.4121	0.1848	0.1778	0.19	0.1901	0.1869	0.1341	0.1069	0.3421	0.506	0.5918	0.2967
85	0.4699	0.3474	0.1812	0.1752	0.1859	0.1858	0.1829	0.1343	0.1098	0.2751	0.4402	0.5263	0.2678
90	0.3994	0.2362	0.1775	0.1726	0.1818	0.1815	0.1789	0.1346	0.1125	0.2182	0.3727	0.4584	0.2354



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	1.0071	0.9921	0.9762	0.9594	0.9483	0.9427	0.945	0.9508	0.9664	0.9874	1.0019	1.0098	0.9739
10	1.0168	0.9873	0.9547	0.9209	0.8992	0.8883	0.8927	0.9037	0.9345	0.9778	1.0066	1.0223	0.9504
15	1.02	0.9768	0.9273	0.8768	0.8447	0.8286	0.8351	0.8508	0.8964	0.9623	1.0053	1.0286	0.9211
20	1.0168	0.9607	0.8942	0.8274	0.7852	0.764	0.7725	0.7925	0.8524	0.9412	0.9979	1.0286	0.8861
25	1.0072	0.939	0.8556	0.773	0.7211	0.6951	0.7055	0.7292	0.8027	0.9146	0.9846	1.0223	0.8458
30	0.9912	0.912	0.8119	0.7141	0.653	0.6223	0.6345	0.6615	0.7479	0.8826	0.9653	1.0097	0.8005
35	0.9689	0.8798	0.7634	0.6511	0.5814	0.5462	0.56	0.5898	0.6882	0.8457	0.9402	0.9909	0.7505
40	0.9406	0.8428	0.7104	0.5845	0.5067	0.4674	0.4828	0.5147	0.6242	0.8039	0.9096	0.9662	0.6961
45	0.9064	0.8011	0.6533	0.5149	0.4297	0.3864	0.4033	0.4367	0.5564	0.7577	0.8737	0.9356	0.6379
50	0.8667	0.7551	0.5926	0.4427	0.3508	0.304	0.3221	0.3565	0.4851	0.7074	0.8327	0.8994	0.5762
55	0.8216	0.7052	0.5288	0.3684	0.2706	0.2206	0.2398	0.2747	0.4111	0.6533	0.7869	0.8579	0.5116
60	0.7716	0.6517	0.4624	0.2928	0.2056	0.2061	0.202	0.1919	0.3347	0.596	0.7368	0.8113	0.4552
65	0.717	0.5951	0.3938	0.2162	0.2019	0.2023	0.1984	0.1334	0.2566	0.5357	0.6826	0.7602	0.4078
70	0.6583	0.5357	0.3236	0.1828	0.1981	0.1983	0.1947	0.1336	0.1774	0.4731	0.6249	0.7047	0.3671
75	0.5959	0.474	0.2523	0.1804	0.1941	0.1942	0.1909	0.1339	0.1017	0.4085	0.5639	0.6454	0.3279
80	0.5303	0.4106	0.1849	0.1783	0.19	0.1901	0.1869	0.1341	0.1076	0.3425	0.5003	0.5828	0.2949
85	0.4619	0.3457	0.1813	0.1756	0.1859	0.1858	0.1829	0.1343	0.1104	0.2755	0.4344	0.5172	0.2659
90	0.3913	0.2362	0.1777	0.1728	0.1818	0.1815	0.1789	0.1346	0.1132	0.2182	0.3669	0.4492	0.2335

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	1.0063	0.992	0.9767	0.9607	0.9501	0.9447	0.9469	0.9524	0.9674	0.9875	1.0013	1.0088	0.9746
10	1.0151	0.987	0.9558	0.9236	0.9028	0.8924	0.8966	0.907	0.9365	0.9778	1.0054	1.0204	0.9517
15	1.0175	0.9763	0.9289	0.8807	0.8501	0.8347	0.8409	0.8558	0.8994	0.9624	1.0035	1.0257	0.923
20	1.0135	0.96	0.8963	0.8326	0.7923	0.772	0.7801	0.7991	0.8563	0.9413	0.9955	1.0248	0.8887
25	1.003	0.9382	0.8583	0.7795	0.7299	0.705	0.7149	0.7375	0.8076	0.9147	0.9816	1.0176	0.849
30	0.9863	0.911	0.8151	0.7218	0.6634	0.634	0.6456	0.6712	0.7537	0.8829	0.9618	1.0041	0.8042
35	0.9633	0.8787	0.767	0.6599	0.5933	0.5597	0.5729	0.601	0.695	0.8459	0.9362	0.9846	0.7548
40	0.9343	0.8415	0.7144	0.5944	0.5201	0.4825	0.4972	0.5273	0.6318	0.8042	0.9051	0.959	0.701
45	0.8995	0.7997	0.6577	0.5258	0.4444	0.4031	0.4192	0.4507	0.5648	0.758	0.8687	0.9277	0.6433
50	0.8592	0.7536	0.5974	0.4546	0.3668	0.322	0.3393	0.3717	0.4942	0.7077	0.8273	0.8909	0.5821
55	0.8136	0.7036	0.534	0.3812	0.2878	0.2399	0.2583	0.291	0.4208	0.6537	0.7812	0.8488	0.5178
60	0.7632	0.65	0.4679	0.3063	0.2079	0.2061	0.202	0.2091	0.345	0.5964	0.7307	0.8017	0.4572
65	0.7082	0.5933	0.3996	0.2303	0.2019	0.2023	0.1984	0.1334	0.2674	0.5362	0.6763	0.7501	0.4081
70	0.6491	0.5339	0.3296	0.1828	0.1981	0.1983	0.1947	0.1336	0.1886	0.4735	0.6183	0.6943	0.3662
75	0.5865	0.4721	0.2584	0.1804	0.1941	0.1942	0.1909	0.1339	0.1091	0.409	0.5571	0.6347	0.3267
80	0.5206	0.4086	0.185	0.1791	0.19	0.1901	0.1869	0.1341	0.1082	0.3429	0.4934	0.5719	0.2926
85	0.4521	0.3438	0.1815	0.1764	0.1859	0.1858	0.1829	0.1343	0.1111	0.276	0.4274	0.5062	0.2636
90	0.3815	0.2362	0.1779	0.1736	0.1818	0.1815	0.1789	0.1346	0.1139	0.2182	0.3598	0.4381	0.2313



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	1.0053	0.9918	0.9773	0.9622	0.9522	0.9471	0.9491	0.9544	0.9685	0.9875	1.0006	1.0077	0.9753
10	1.0131	0.9866	0.957	0.9266	0.907	0.8971	0.9011	0.9109	0.9388	0.9779	1.004	1.0182	0.9532
15	1.0146	0.9757	0.9308	0.8853	0.8563	0.8417	0.8476	0.8616	0.9028	0.9626	1.0014	1.0224	0.9252
20	1.0096	0.9592	0.8988	0.8386	0.8005	0.7814	0.789	0.8069	0.8609	0.9415	0.9928	1.0204	0.8916
25	0.9982	0.9372	0.8614	0.7869	0.7401	0.7165	0.7259	0.747	0.8133	0.915	0.9781	1.0121	0.8527
30	0.9806	0.9099	0.8187	0.7306	0.6755	0.6477	0.6587	0.6826	0.7605	0.8831	0.9577	0.9977	0.8086
35	0.9568	0.8774	0.7712	0.6702	0.6072	0.5753	0.5878	0.6141	0.7028	0.8462	0.9315	0.9772	0.7598
40	0.927	0.8401	0.7191	0.606	0.5357	0.5001	0.514	0.542	0.6406	0.8045	0.8999	0.9508	0.7066
45	0.8915	0.7981	0.6629	0.5385	0.4616	0.4224	0.4376	0.4669	0.5744	0.7584	0.8629	0.9186	0.6495
50	0.8505	0.7519	0.6031	0.4683	0.3854	0.343	0.3594	0.3893	0.5047	0.7081	0.821	0.881	0.5888
55	0.8043	0.7018	0.5401	0.396	0.3077	0.2624	0.2797	0.3098	0.432	0.6541	0.7745	0.8382	0.525
60	0.7533	0.6481	0.4744	0.3219	0.229	0.2061	0.202	0.229	0.3568	0.5968	0.7236	0.7906	0.461
65	0.6979	0.5912	0.4064	0.2466	0.2019	0.2023	0.1984	0.1474	0.2798	0.5366	0.6689	0.7384	0.4097
70	0.6385	0.5317	0.3366	0.1828	0.1981	0.1983	0.1947	0.1336	0.2014	0.474	0.6106	0.6822	0.3652
75	0.5755	0.4699	0.2656	0.1804	0.1941	0.1942	0.1909	0.1339	0.1223	0.4095	0.5492	0.6223	0.3256
80	0.5094	0.4064	0.1851	0.1798	0.19	0.1901	0.1869	0.1341	0.1088	0.3434	0.4853	0.5592	0.2899
85	0.4408	0.3415	0.1816	0.1772	0.1859	0.1858	0.1829	0.1343	0.1117	0.2765	0.4193	0.4933	0.2609
90	0.3701	0.2362	0.178	0.1744	0.1818	0.1815	0.1789	0.1346	0.1146	0.2182	0.3517	0.4253	0.2288

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	1.0042	0.9915	0.9781	0.9639	0.9545	0.9497	0.9517	0.9566	0.9698	0.9876	0.9998	1.0064	0.9762
10	1.0109	0.9862	0.9585	0.9301	0.9117	0.9024	0.9062	0.9154	0.9414	0.978	1.0024	1.0156	0.9549
15	1.0112	0.9751	0.933	0.8905	0.8633	0.8497	0.8551	0.8682	0.9067	0.9627	0.999	1.0186	0.9278
20	1.0052	0.9583	0.9017	0.8455	0.8098	0.7919	0.7991	0.8156	0.8661	0.9417	0.9896	1.0154	0.895
25	0.9928	0.9361	0.8649	0.7954	0.7516	0.7295	0.7383	0.7579	0.8198	0.9152	0.9742	1.006	0.8568
30	0.9742	0.9086	0.8228	0.7407	0.6892	0.6631	0.6734	0.6955	0.7681	0.8834	0.9531	0.9904	0.8135
35	0.9494	0.8759	0.7759	0.6817	0.6229	0.5931	0.6048	0.6289	0.7116	0.8466	0.9262	0.9688	0.7655
40	0.9187	0.8384	0.7244	0.619	0.5533	0.52	0.533	0.5586	0.6505	0.8049	0.8939	0.9414	0.713
45	0.8824	0.7963	0.6687	0.5528	0.481	0.4444	0.4585	0.4852	0.5853	0.7588	0.8564	0.9083	0.6565
50	0.8406	0.7499	0.6095	0.4839	0.4065	0.3668	0.382	0.4091	0.5164	0.7086	0.814	0.8698	0.5964
55	0.7938	0.6997	0.547	0.4126	0.3302	0.2878	0.3039	0.331	0.4445	0.6546	0.7669	0.8263	0.5332
60	0.7422	0.6458	0.4816	0.3395	0.2528	0.2079	0.2249	0.2514	0.3701	0.5973	0.7156	0.7779	0.4673
65	0.6862	0.5889	0.414	0.265	0.2019	0.2023	0.1984	0.1709	0.2937	0.5372	0.6605	0.7252	0.412
70	0.6264	0.5293	0.3445	0.1898	0.1981	0.1983	0.1947	0.1336	0.2158	0.4746	0.6019	0.6685	0.3646
75	0.5631	0.4675	0.2737	0.1804	0.1941	0.1942	0.1909	0.1339	0.1371	0.41	0.5403	0.6082	0.3244
80	0.4968	0.4039	0.2021	0.1806	0.19	0.1901	0.1869	0.1346	0.1094	0.344	0.4762	0.5448	0.2883
85	0.428	0.339	0.1817	0.1779	0.1859	0.1858	0.1829	0.1347	0.1123	0.2771	0.4101	0.4788	0.2578
90	0.3573	0.2362	0.1781	0.1752	0.1818	0.1815	0.1789	0.1348	0.1152	0.2182	0.3424	0.4107	0.2258



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	1.0029	0.9913	0.9789	0.9659	0.9572	0.9527	0.9545	0.9591	0.9712	0.9876	0.9989	1.005	0.9771
10	1.0084	0.9857	0.9601	0.9339	0.9169	0.9083	0.9118	0.9203	0.9443	0.9782	1.0006	1.0128	0.9568
15	1.0075	0.9743	0.9353	0.8962	0.8711	0.8585	0.8636	0.8756	0.911	0.9629	0.9963	1.0144	0.9306
20	1.0003	0.9574	0.9048	0.8531	0.8202	0.8036	0.8102	0.8253	0.8718	0.9419	0.9861	1.0099	0.8987
25	0.9868	0.9349	0.8687	0.8048	0.7644	0.744	0.7521	0.7699	0.8269	0.9155	0.9699	0.9991	0.8614
30	0.967	0.9072	0.8274	0.7518	0.7043	0.6802	0.6897	0.7097	0.7766	0.8837	0.9479	0.9823	0.819
35	0.9412	0.8743	0.7812	0.6945	0.6403	0.6127	0.6235	0.6453	0.7213	0.8469	0.9203	0.9595	0.7718
40	0.9095	0.8366	0.7303	0.6333	0.5729	0.542	0.554	0.577	0.6614	0.8053	0.8873	0.931	0.7201
45	0.8723	0.7943	0.6753	0.5687	0.5025	0.4686	0.4817	0.5054	0.5972	0.7593	0.8491	0.8968	0.6643
50	0.8297	0.7477	0.6166	0.501	0.4297	0.3931	0.4071	0.4311	0.5294	0.7091	0.8061	0.8574	0.6048
55	0.782	0.6973	0.5546	0.4309	0.3551	0.3159	0.3308	0.3545	0.4584	0.6552	0.7585	0.813	0.5422
60	0.7298	0.6434	0.4897	0.3589	0.2791	0.2377	0.2533	0.2762	0.3848	0.5979	0.7067	0.7639	0.4768
65	0.6733	0.5863	0.4224	0.2853	0.2024	0.2023	0.1984	0.1968	0.309	0.5378	0.6512	0.7105	0.4146
70	0.6129	0.5266	0.3532	0.2109	0.1981	0.1983	0.1947	0.1336	0.2317	0.4752	0.5922	0.6533	0.3651
75	0.5493	0.4647	0.2826	0.1804	0.1941	0.1942	0.1909	0.1339	0.1535	0.4107	0.5304	0.5926	0.3231
80	0.4827	0.401	0.2113	0.1813	0.19	0.1901	0.1869	0.1356	0.1099	0.3447	0.4661	0.5289	0.2857
85	0.4138	0.3361	0.1818	0.1787	0.1859	0.1858	0.1829	0.1358	0.1128	0.2777	0.3998	0.4627	0.2545
90	0.343	0.2362	0.1782	0.1759	0.1818	0.1815	0.1789	0.1358	0.1157	0.2182	0.3321	0.3945	0.2226

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	1.0016	0.991	0.9797	0.9679	0.96	0.9559	0.9576	0.9617	0.9728	0.9877	0.9979	1.0035	0.9781
10	1.0057	0.9851	0.9618	0.9381	0.9226	0.9148	0.9179	0.9256	0.9474	0.9783	0.9987	1.0098	0.9588
15	1.0035	0.9735	0.9379	0.9024	0.8796	0.8681	0.8727	0.8836	0.9158	0.9631	0.9934	1.0099	0.9336
20	0.995	0.9563	0.9082	0.8613	0.8314	0.8163	0.8223	0.8359	0.8781	0.9422	0.9822	1.0038	0.9028
25	0.9802	0.9336	0.873	0.815	0.7784	0.7598	0.7671	0.783	0.8346	0.9158	0.9652	0.9917	0.8664
30	0.9592	0.9056	0.8324	0.764	0.7208	0.6989	0.7075	0.7252	0.7858	0.8841	0.9423	0.9735	0.8249
35	0.9323	0.8725	0.7869	0.7085	0.6593	0.6342	0.6439	0.6631	0.7319	0.8473	0.9139	0.9494	0.7786
40	0.8995	0.8346	0.7367	0.649	0.5941	0.5661	0.5769	0.597	0.6732	0.8058	0.8801	0.9196	0.7277
45	0.8612	0.7921	0.6824	0.5859	0.5259	0.4951	0.5069	0.5274	0.6102	0.7598	0.8412	0.8843	0.6727
50	0.8177	0.7454	0.6243	0.5197	0.4551	0.4217	0.4344	0.4549	0.5435	0.7096	0.7975	0.8439	0.614
55	0.7693	0.6948	0.5628	0.4509	0.3822	0.3466	0.36	0.38	0.4735	0.6557	0.7493	0.7985	0.552
60	0.7163	0.6407	0.4984	0.38	0.3078	0.2701	0.2842	0.3032	0.4007	0.5985	0.697	0.7486	0.4871
65	0.6591	0.5835	0.4315	0.3074	0.2324	0.2023	0.2075	0.2251	0.3257	0.5384	0.641	0.6945	0.4207
70	0.5983	0.5237	0.3627	0.2338	0.1981	0.1983	0.1947	0.1462	0.249	0.4759	0.5817	0.6367	0.3666
75	0.5342	0.4617	0.2924	0.1804	0.1941	0.1942	0.1909	0.1339	0.1712	0.4114	0.5196	0.5755	0.3216
80	0.4673	0.398	0.2212	0.1778	0.19	0.1901	0.1869	0.1341	0.1046	0.3454	0.4551	0.5114	0.2818
85	0.3982	0.333	0.1819	0.1793	0.1859	0.1858	0.1829	0.1368	0.1133	0.2784	0.3887	0.445	0.2508
90	0.3274	0.2362	0.1783	0.1766	0.1818	0.1815	0.1789	0.1369	0.1162	0.2182	0.3209	0.3768	0.2191



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	1.0001	0.9907	0.9807	0.9702	0.9631	0.9594	0.9609	0.9646	0.9745	0.9878	0.9968	1.0018	0.9792
10	1.0028	0.9845	0.9637	0.9425	0.9287	0.9217	0.9246	0.9314	0.9508	0.9784	0.9966	1.0065	0.961
15	0.9992	0.9727	0.9407	0.9091	0.8888	0.8785	0.8826	0.8921	0.9208	0.9633	0.9903	1.0049	0.9369
20	0.9892	0.9552	0.9119	0.8702	0.8435	0.83	0.8354	0.8473	0.8848	0.9425	0.9781	0.9973	0.9071
25	0.9731	0.9322	0.8775	0.826	0.7933	0.7767	0.7833	0.7971	0.843	0.9161	0.9601	0.9836	0.8718
30	0.9508	0.9039	0.8378	0.777	0.7386	0.719	0.7266	0.7419	0.7957	0.8845	0.9363	0.9639	0.8313
35	0.9226	0.8706	0.7931	0.7234	0.6796	0.6572	0.6659	0.6822	0.7432	0.8478	0.907	0.9385	0.7859
40	0.8887	0.8324	0.7437	0.6658	0.617	0.5919	0.6015	0.6185	0.6859	0.8063	0.8724	0.9074	0.7359
45	0.8494	0.7897	0.6901	0.6044	0.5511	0.5235	0.534	0.5511	0.6242	0.7603	0.8327	0.8709	0.6818
50	0.8049	0.7428	0.6326	0.5397	0.4824	0.4525	0.4637	0.4805	0.5586	0.7102	0.7883	0.8293	0.6238
55	0.7555	0.692	0.5717	0.4723	0.4114	0.3795	0.3914	0.4074	0.4896	0.6564	0.7394	0.7829	0.5625
60	0.7017	0.6378	0.5078	0.4026	0.3386	0.3049	0.3174	0.3322	0.4178	0.5992	0.6866	0.7321	0.4982
65	0.6439	0.5805	0.4414	0.3311	0.2647	0.2294	0.2422	0.2554	0.3436	0.5391	0.6301	0.6773	0.4315
70	0.5825	0.5205	0.3729	0.2584	0.1981	0.1983	0.1947	0.1776	0.2675	0.4766	0.5704	0.6188	0.3697
75	0.518	0.4584	0.3029	0.1849	0.1941	0.1942	0.1909	0.1339	0.1903	0.4121	0.5079	0.5571	0.3204
80	0.4508	0.3947	0.2319	0.1778	0.19	0.1901	0.1869	0.1341	0.1123	0.3461	0.4432	0.4927	0.2792
85	0.3815	0.3297	0.182	0.18	0.1859	0.1858	0.1829	0.1378	0.1138	0.2792	0.3767	0.4261	0.2468
90	0.3106	0.2362	0.1784	0.1773	0.1818	0.1815	0.1789	0.1379	0.1167	0.2182	0.3089	0.3578	0.2153

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	0.9985	0.9904	0.9817	0.9726	0.9664	0.9631	0.9644	0.9677	0.9763	0.9878	0.9957	1.0001	0.9804
10	0.9997	0.9839	0.9657	0.9473	0.9353	0.9291	0.9316	0.9375	0.9544	0.9786	0.9943	1.0029	0.9634
15	0.9945	0.9717	0.9437	0.9163	0.8985	0.8895	0.8931	0.9013	0.9262	0.9635	0.987	0.9997	0.9404
20	0.9831	0.9539	0.9158	0.8796	0.8564	0.8446	0.8493	0.8593	0.8919	0.9427	0.9737	0.9904	0.9117
25	0.9655	0.9307	0.8824	0.8377	0.8093	0.7947	0.8004	0.812	0.8518	0.9165	0.9546	0.9751	0.8776
30	0.9419	0.9021	0.8435	0.7908	0.7574	0.7403	0.7469	0.7596	0.8061	0.8849	0.9299	0.9538	0.8381
35	0.9124	0.8685	0.7996	0.7393	0.7013	0.6817	0.6892	0.7025	0.7552	0.8483	0.8996	0.9269	0.7937
40	0.8773	0.8301	0.7511	0.6836	0.6412	0.6193	0.6276	0.6412	0.6993	0.8068	0.8641	0.8944	0.7447
45	0.8368	0.7872	0.6982	0.624	0.5777	0.5536	0.5627	0.5761	0.6389	0.7609	0.8236	0.8566	0.6914
50	0.7912	0.7401	0.6415	0.561	0.5113	0.4852	0.4949	0.5077	0.5746	0.7108	0.7784	0.8138	0.6342
55	0.7409	0.6891	0.5812	0.495	0.4423	0.4144	0.4247	0.4364	0.5067	0.657	0.7289	0.7664	0.5736
60	0.6863	0.6347	0.5178	0.4266	0.3713	0.3419	0.3526	0.3629	0.4359	0.5999	0.6755	0.7146	0.51
65	0.6278	0.5772	0.4518	0.3562	0.2989	0.2681	0.2791	0.2875	0.3625	0.5399	0.6184	0.6589	0.4439
70	0.5658	0.5172	0.3837	0.2844	0.2255	0.1983	0.2048	0.211	0.2871	0.4774	0.5583	0.5998	0.3761
75	0.5008	0.455	0.314	0.2117	0.1941	0.1942	0.1909	0.1339	0.2104	0.4129	0.4955	0.5376	0.3209
80	0.4332	0.3911	0.2432	0.1778	0.19	0.1901	0.1869	0.1341	0.1329	0.347	0.4305	0.4728	0.2775
85	0.3637	0.3261	0.1821	0.1806	0.1866	0.1858	0.1829	0.1387	0.1142	0.28	0.3639	0.4059	0.2426
90	0.2928	0.2362	0.1785	0.1779	0.1823	0.1815	0.1789	0.1388	0.1171	0.2182	0.296	0.3375	0.2113



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	0.9969	0.9901	0.9827	0.9751	0.9698	0.967	0.9681	0.9709	0.9782	0.9879	0.9945	0.9982	0.9816
10	0.9964	0.9833	0.9678	0.9523	0.9421	0.9368	0.939	0.9439	0.9582	0.9787	0.992	0.9992	0.9658
15	0.9897	0.9708	0.9468	0.9237	0.9087	0.9011	0.9041	0.9109	0.9318	0.9637	0.9835	0.9942	0.9441
20	0.9767	0.9527	0.9199	0.8895	0.8699	0.8599	0.8638	0.872	0.8994	0.943	0.9691	0.9831	0.9166
25	0.9576	0.9291	0.8875	0.85	0.826	0.8136	0.8184	0.8277	0.861	0.9168	0.9489	0.9661	0.8836
30	0.9325	0.9003	0.8496	0.8053	0.7772	0.7627	0.7683	0.7782	0.8171	0.8853	0.9231	0.9432	0.8452
35	0.9016	0.8664	0.8066	0.756	0.724	0.7073	0.7137	0.7239	0.7677	0.8488	0.8919	0.9147	0.8019
40	0.8652	0.8277	0.7588	0.7022	0.6667	0.6481	0.6551	0.6651	0.7133	0.8074	0.8554	0.8807	0.7538
45	0.8235	0.7845	0.7068	0.6445	0.6057	0.5853	0.5929	0.6024	0.6544	0.7615	0.8141	0.8416	0.7014
50	0.7768	0.7372	0.6507	0.5832	0.5416	0.5195	0.5276	0.5362	0.5914	0.7115	0.7681	0.7975	0.6451
55	0.7255	0.686	0.5911	0.5188	0.4747	0.4511	0.4596	0.4669	0.5247	0.6578	0.7179	0.7489	0.5853
60	0.6701	0.6314	0.5282	0.4518	0.4056	0.3807	0.3896	0.3951	0.4548	0.6007	0.6638	0.6962	0.5223
65	0.6108	0.5738	0.4628	0.3826	0.3348	0.3087	0.3178	0.3212	0.3823	0.5406	0.6062	0.6397	0.4568
70	0.5481	0.5137	0.3951	0.3117	0.2627	0.2357	0.245	0.2459	0.3077	0.4782	0.5456	0.5798	0.3891
75	0.4826	0.4514	0.3257	0.2398	0.1941	0.1942	0.1909	0.1697	0.2316	0.4137	0.4825	0.517	0.3244
80	0.4148	0.3875	0.2552	0.1778	0.19	0.1901	0.1869	0.1341	0.1545	0.3478	0.4173	0.4518	0.2756
85	0.345	0.3224	0.1821	0.1812	0.1878	0.1858	0.1835	0.1397	0.1145	0.2809	0.3504	0.3848	0.2382
90	0.274	0.2362	0.1786	0.1785	0.1835	0.1815	0.1792	0.1398	0.1175	0.2182	0.2826	0.3163	0.2072

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	0.9952	0.9898	0.9838	0.9777	0.9734	0.971	0.972	0.9743	0.9802	0.988	0.9933	0.9963	0.9829
10	0.993	0.9826	0.9699	0.9576	0.9493	0.9449	0.9467	0.9506	0.9621	0.9789	0.9896	0.9954	0.9684
15	0.9846	0.9697	0.95	0.9315	0.9194	0.9131	0.9156	0.9208	0.9377	0.9639	0.9799	0.9885	0.9479
20	0.97	0.9513	0.9242	0.8998	0.884	0.8758	0.879	0.8852	0.9071	0.9433	0.9643	0.9755	0.9216
25	0.9493	0.9274	0.8928	0.8627	0.8434	0.8333	0.8372	0.844	0.8706	0.9172	0.943	0.9567	0.8898
30	0.9228	0.8983	0.8558	0.8204	0.7978	0.786	0.7905	0.7975	0.8284	0.8858	0.9161	0.9321	0.8526
35	0.8904	0.8641	0.8137	0.7733	0.7476	0.7341	0.7391	0.746	0.7807	0.8493	0.8838	0.902	0.8104
40	0.8527	0.8252	0.7669	0.7216	0.6932	0.678	0.6836	0.69	0.7279	0.808	0.8464	0.8665	0.7633
45	0.8097	0.7818	0.7157	0.6658	0.6349	0.6183	0.6243	0.6298	0.6705	0.7621	0.8041	0.8259	0.7119
50	0.7619	0.7342	0.6604	0.6063	0.5732	0.5552	0.5616	0.5658	0.6088	0.7122	0.7573	0.7806	0.6564
55	0.7095	0.6828	0.6014	0.5435	0.5085	0.4893	0.496	0.4986	0.5433	0.6585	0.7064	0.7308	0.5974
60	0.6531	0.628	0.5391	0.4779	0.4413	0.4211	0.428	0.4286	0.4745	0.6014	0.6516	0.677	0.5351
65	0.5931	0.5703	0.4742	0.4099	0.3721	0.351	0.3581	0.3563	0.4029	0.5415	0.5935	0.6196	0.4702
70	0.5298	0.51	0.4069	0.3401	0.3015	0.2795	0.2867	0.2823	0.3291	0.479	0.5324	0.559	0.403
75	0.4638	0.4476	0.3378	0.269	0.2298	0.2073	0.2145	0.2071	0.2535	0.4146	0.4689	0.4956	0.3341
80	0.3955	0.3836	0.2676	0.197	0.19	0.1901	0.1869	0.1341	0.1769	0.3487	0.4034	0.43	0.2753
85	0.3256	0.3185	0.1965	0.1817	0.189	0.1868	0.1849	0.1405	0.1148	0.2818	0.3365	0.3627	0.2349
90	0.2545	0.2362	0.1786	0.1791	0.1847	0.1822	0.1807	0.1407	0.1178	0.2182	0.2685	0.2941	0.2029



Tabla 18: Azimut de 75°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9934	0.9894	0.9849	0.9804	0.9771	0.9752	0.976	0.9777	0.9822	0.9881	0.9921	0.9943	0.9842
10	0.9895	0.9819	0.9722	0.9629	0.9566	0.9533	0.9546	0.9575	0.9661	0.979	0.987	0.9914	0.971
15	0.9794	0.9687	0.9534	0.9396	0.9304	0.9255	0.9274	0.9311	0.9437	0.9642	0.9761	0.9826	0.9518
20	0.9631	0.9499	0.9287	0.9105	0.8985	0.8922	0.8947	0.8988	0.9151	0.9437	0.9594	0.9677	0.9269
25	0.9408	0.9257	0.8982	0.8758	0.8613	0.8536	0.8565	0.8608	0.8805	0.9176	0.9369	0.947	0.8962
30	0.9127	0.8963	0.8623	0.836	0.819	0.81	0.8133	0.8174	0.8401	0.8863	0.9089	0.9207	0.8602
35	0.8789	0.8618	0.8212	0.7911	0.772	0.7616	0.7654	0.7689	0.7941	0.8498	0.8755	0.8888	0.8191
40	0.8397	0.8226	0.7752	0.7416	0.7205	0.7089	0.713	0.7156	0.743	0.8086	0.8371	0.8518	0.7731
45	0.7954	0.7789	0.7248	0.6878	0.6649	0.6523	0.6567	0.6579	0.687	0.7628	0.7939	0.8097	0.7227
50	0.7464	0.7311	0.6703	0.6302	0.6057	0.592	0.5967	0.5963	0.6267	0.7129	0.7462	0.763	0.6681
55	0.693	0.6795	0.612	0.569	0.5433	0.5287	0.5335	0.5312	0.5624	0.6593	0.6945	0.7121	0.6099
60	0.6357	0.6245	0.5504	0.5049	0.4781	0.4627	0.4677	0.463	0.4947	0.6022	0.6391	0.6572	0.5483
65	0.5748	0.5666	0.4859	0.4381	0.4106	0.3945	0.3996	0.3924	0.4241	0.5423	0.5804	0.5989	0.484
70	0.5108	0.5062	0.4191	0.3694	0.3414	0.3247	0.3298	0.3197	0.351	0.4799	0.5188	0.5375	0.4174
75	0.4443	0.4437	0.3504	0.299	0.2709	0.2537	0.2588	0.2456	0.2761	0.4155	0.4549	0.4735	0.3489
80	0.3757	0.3796	0.2803	0.2277	0.1997	0.1901	0.1871	0.1705	0.1999	0.3496	0.3891	0.4075	0.2797
85	0.3055	0.3145	0.2095	0.1752	0.1859	0.1858	0.1829	0.1343	0.123	0.2827	0.322	0.3399	0.2301
90	0.2343	0.2362	0.1787	0.1796	0.1859	0.1839	0.1822	0.1415	0.118	0.2182	0.254	0.2712	0.1986

Tabla 19: Azimut de 80°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9916	0.989	0.9861	0.9832	0.9809	0.9795	0.9801	0.9813	0.9843	0.9882	0.9908	0.9922	0.9856
10	0.9859	0.9812	0.9745	0.9684	0.9642	0.9618	0.9627	0.9645	0.9703	0.9792	0.9845	0.9874	0.9737
15	0.9741	0.9676	0.9568	0.9478	0.9416	0.9382	0.9395	0.9416	0.9499	0.9644	0.9723	0.9765	0.9559
20	0.9561	0.9485	0.9332	0.9213	0.9134	0.909	0.9107	0.9127	0.9233	0.944	0.9543	0.9597	0.9322
25	0.9321	0.924	0.9038	0.8893	0.8797	0.8744	0.8763	0.878	0.8906	0.918	0.9306	0.9372	0.9028
30	0.9023	0.8942	0.8689	0.8518	0.8407	0.8346	0.8367	0.8377	0.8521	0.8867	0.9014	0.909	0.868
35	0.867	0.8595	0.8288	0.8093	0.7969	0.7898	0.7922	0.7922	0.8078	0.8504	0.867	0.8754	0.828
40	0.8264	0.82	0.7838	0.762	0.7484	0.7405	0.7431	0.7417	0.7583	0.8092	0.8275	0.8367	0.7831
45	0.7808	0.776	0.7342	0.7103	0.6956	0.687	0.6898	0.6867	0.7039	0.7635	0.7834	0.7932	0.7337
50	0.7306	0.7279	0.6805	0.6545	0.639	0.6297	0.6325	0.6275	0.6449	0.7136	0.7349	0.7451	0.6801
55	0.6761	0.6761	0.6229	0.595	0.5788	0.5689	0.5719	0.5645	0.582	0.66	0.6823	0.6929	0.6226
60	0.6178	0.621	0.5619	0.5324	0.5157	0.5052	0.5082	0.4983	0.5154	0.6031	0.6262	0.6369	0.5618
65	0.5561	0.5629	0.4979	0.4669	0.45	0.439	0.442	0.4293	0.4457	0.5432	0.5669	0.5776	0.4981
70	0.4914	0.5023	0.4316	0.3992	0.3822	0.3709	0.3738	0.358	0.3735	0.4808	0.5049	0.5155	0.432
75	0.4243	0.4397	0.3632	0.3297	0.3129	0.3012	0.304	0.2849	0.2992	0.4164	0.4406	0.4509	0.3639
80	0.3553	0.3756	0.2934	0.259	0.2425	0.2306	0.2333	0.2106	0.2234	0.3506	0.3745	0.3845	0.2944
85	0.2849	0.3104	0.2227	0.1876	0.1859	0.1858	0.1829	0.1357	0.1468	0.2837	0.3072	0.3166	0.2292
90	0.2137	0.2362	0.1787	0.18	0.187	0.1856	0.1836	0.1423	0.1182	0.2182	0.2392	0.2478	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	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9898	0.9887	0.9873	0.986	0.9847	0.9839	0.9842	0.9849	0.9864	0.9882	0.9894	0.9902	0.987
10	0.9823	0.9804	0.9768	0.974	0.9718	0.9705	0.971	0.9717	0.9745	0.9794	0.9818	0.9832	0.9765
15	0.9686	0.9665	0.9603	0.9561	0.953	0.9512	0.9518	0.9523	0.9561	0.9647	0.9684	0.9703	0.96
20	0.9489	0.9471	0.9378	0.9323	0.9284	0.9261	0.9269	0.9268	0.9315	0.9443	0.9491	0.9516	0.9376
25	0.9232	0.9222	0.9095	0.9029	0.8983	0.8955	0.8964	0.8955	0.9008	0.9184	0.9242	0.9271	0.9095
30	0.8919	0.8921	0.8757	0.8679	0.8628	0.8595	0.8605	0.8584	0.8642	0.8872	0.8939	0.8971	0.8759
35	0.855	0.8571	0.8365	0.8278	0.8221	0.8184	0.8195	0.8159	0.8217	0.8509	0.8583	0.8618	0.8371
40	0.8129	0.8173	0.7924	0.7827	0.7767	0.7726	0.7736	0.7682	0.7738	0.8098	0.8179	0.8214	0.7933
45	0.766	0.773	0.7437	0.7331	0.7267	0.7222	0.7233	0.7159	0.721	0.7642	0.7727	0.7764	0.7449
50	0.7145	0.7247	0.6908	0.6792	0.6727	0.6678	0.6689	0.6591	0.6635	0.7144	0.7233	0.7269	0.6921
55	0.6589	0.6727	0.6339	0.6214	0.6149	0.6097	0.6107	0.5983	0.6018	0.6608	0.67	0.6734	0.6355
60	0.5996	0.6173	0.5735	0.5602	0.5538	0.5484	0.5493	0.534	0.5363	0.6039	0.6132	0.6163	0.5755
65	0.5371	0.5591	0.5101	0.4961	0.4899	0.4842	0.485	0.4667	0.4676	0.544	0.5532	0.5561	0.5124
70	0.4717	0.4984	0.4442	0.4295	0.4236	0.4177	0.4184	0.3967	0.3962	0.4817	0.4907	0.4931	0.4468
75	0.4041	0.4357	0.3762	0.3609	0.3554	0.3494	0.3499	0.3248	0.3225	0.4174	0.426	0.428	0.3792
80	0.3347	0.3714	0.3067	0.2907	0.2859	0.2797	0.28	0.2513	0.2473	0.3515	0.3597	0.361	0.31
85	0.264	0.3062	0.2362	0.2197	0.2155	0.2093	0.2094	0.1769	0.1709	0.2846	0.2922	0.2929	0.2398
90	0.1927	0.2362	0.1787	0.1804	0.1881	0.1872	0.1849	0.143	0.1183	0.2182	0.2241	0.2241	0.1897

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	0.9885	0.9888	0.9886	0.9882	0.9884	0.9885	0.9885	0.9883	0.9881	0.9881	0.9883
10	0.9786	0.9797	0.9792	0.9797	0.9795	0.9792	0.9793	0.9789	0.9787	0.9795	0.9792	0.9791	0.9792
15	0.9632	0.9655	0.9638	0.9645	0.9645	0.9642	0.9642	0.9631	0.9624	0.9649	0.9644	0.9641	0.9641
20	0.9417	0.9456	0.9424	0.9434	0.9436	0.9433	0.9433	0.9411	0.9399	0.9446	0.9439	0.9434	0.943
25	0.9143	0.9204	0.9153	0.9166	0.917	0.9167	0.9166	0.913	0.9111	0.9188	0.9178	0.917	0.9162
30	0.8813	0.89	0.8824	0.8841	0.8849	0.8846	0.8844	0.8791	0.8763	0.8877	0.8863	0.8851	0.8839
35	0.8429	0.8546	0.8443	0.8464	0.8476	0.8472	0.8469	0.8397	0.8356	0.8515	0.8496	0.848	0.8462
40	0.7994	0.8145	0.8011	0.8035	0.8052	0.8048	0.8044	0.7949	0.7895	0.8104	0.8081	0.806	0.8035
45	0.7511	0.77	0.7533	0.756	0.7581	0.7577	0.7571	0.7452	0.7381	0.7648	0.762	0.7594	0.7561
50	0.6983	0.7215	0.7011	0.704	0.7066	0.7063	0.7055	0.6909	0.6821	0.7151	0.7117	0.7085	0.7043
55	0.6416	0.6692	0.645	0.6479	0.6512	0.6508	0.6499	0.6323	0.6217	0.6616	0.6575	0.6538	0.6485
60	0.5813	0.6137	0.5853	0.5883	0.5922	0.5918	0.5907	0.5699	0.5574	0.6047	0.6	0.5956	0.5892
65	0.5179	0.5552	0.5224	0.5254	0.53	0.5297	0.5283	0.5043	0.4896	0.5449	0.5395	0.5344	0.5268
70	0.4518	0.4944	0.4569	0.4599	0.4652	0.4649	0.4633	0.4357	0.419	0.4826	0.4764	0.4706	0.4617
75	0.3837	0.4316	0.3893	0.3921	0.3982	0.3978	0.396	0.3649	0.346	0.4183	0.4113	0.4048	0.3945
80	0.3139	0.3673	0.32	0.3227	0.3295	0.3291	0.3271	0.2922	0.2712	0.3525	0.3447	0.3375	0.3256
85	0.243	0.302	0.2497	0.252	0.2596	0.2593	0.257	0.2183	0.1951	0.2856	0.2771	0.269	0.2556
90	0.1716	0.2362	0.1787	0.1807	0.1891	0.1888	0.1863	0.1437	0.1184	0.2182	0.2089	0.2001	0.185



Tabla 22: Azimut de 95°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9919	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	0.9925	0.9921	0.9906	0.9884	0.9868	0.986	0.9897
10	0.975	0.979	0.9815	0.9853	0.9872	0.9879	0.9876	0.9861	0.9829	0.9797	0.9766	0.9749	0.982
15	0.9577	0.9644	0.9673	0.9729	0.976	0.9772	0.9766	0.9738	0.9687	0.9652	0.9605	0.9579	0.9682
20	0.9344	0.9442	0.9471	0.9545	0.9588	0.9604	0.9596	0.9553	0.9481	0.945	0.9387	0.9352	0.9484
25	0.9054	0.9187	0.921	0.9302	0.9358	0.9379	0.9368	0.9305	0.9213	0.9193	0.9114	0.9069	0.9229
30	0.8707	0.8879	0.8892	0.9003	0.9071	0.9097	0.9083	0.8999	0.8884	0.8882	0.8787	0.8731	0.8918
35	0.8308	0.8522	0.8521	0.8649	0.873	0.876	0.8743	0.8635	0.8495	0.852	0.8409	0.8343	0.8553
40	0.7858	0.8118	0.8098	0.8243	0.8336	0.837	0.8351	0.8216	0.805	0.811	0.7983	0.7906	0.8137
45	0.7361	0.7671	0.7629	0.7788	0.7894	0.7932	0.7909	0.7745	0.7553	0.7655	0.7513	0.7425	0.7673
50	0.6822	0.7182	0.7115	0.7287	0.7405	0.7446	0.742	0.7226	0.7006	0.7159	0.7	0.6902	0.7164
55	0.6243	0.6658	0.6561	0.6744	0.6874	0.6919	0.689	0.6662	0.6415	0.6624	0.6451	0.6342	0.6615
60	0.563	0.61	0.597	0.6163	0.6305	0.6352	0.632	0.6058	0.5783	0.6056	0.5868	0.5748	0.6029
65	0.4988	0.5514	0.5347	0.5547	0.5702	0.5751	0.5716	0.5418	0.5116	0.5458	0.5257	0.5127	0.5412
70	0.432	0.4904	0.4697	0.4903	0.5068	0.5119	0.5081	0.4747	0.4418	0.4835	0.4622	0.4481	0.4766
75	0.3633	0.4275	0.4024	0.4234	0.441	0.4462	0.4421	0.4049	0.3694	0.4192	0.3967	0.3817	0.4098
80	0.2931	0.3631	0.3334	0.3545	0.3731	0.3785	0.3741	0.333	0.2951	0.3534	0.3298	0.3139	0.3412
85	0.2219	0.2978	0.2632	0.2842	0.3038	0.3092	0.3046	0.2596	0.2193	0.2866	0.2619	0.2452	0.2714
90	0.1716	0.2362	0.1923	0.213	0.2334	0.2389	0.234	0.1851	0.1427	0.2192	0.2089	0.2001	0.2063

Tabla 23: Azimut de 100°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9916	0.9919	0.9916	0.9913	0.9914	0.9917	0.9918	0.9913	0.9911	0.9911	0.9914
5	0.9843	0.9876	0.9908	0.9944	0.9963	0.997	0.9967	0.9957	0.9927	0.9885	0.9855	0.9839	0.9911
10	0.9713	0.9782	0.9839	0.9909	0.9948	0.9966	0.9958	0.9933	0.9871	0.9799	0.974	0.9708	0.9847
15	0.9523	0.9633	0.9708	0.9812	0.9873	0.99	0.9889	0.9845	0.9749	0.9654	0.9566	0.9518	0.9723
20	0.9273	0.9428	0.9517	0.9655	0.9738	0.9775	0.9758	0.9693	0.9564	0.9453	0.9336	0.9271	0.9538
25	0.8965	0.9169	0.9267	0.9438	0.9543	0.9589	0.9568	0.9479	0.9315	0.9197	0.905	0.8968	0.9296
30	0.8602	0.8858	0.896	0.9163	0.9291	0.9345	0.932	0.9204	0.9004	0.8887	0.8712	0.8613	0.8997
35	0.8187	0.8498	0.8598	0.8833	0.8981	0.9045	0.9014	0.887	0.8633	0.8526	0.8323	0.8207	0.8643
40	0.7723	0.8091	0.8185	0.8449	0.8618	0.869	0.8655	0.848	0.8205	0.8117	0.7886	0.7754	0.8238
45	0.7213	0.7641	0.7724	0.8014	0.8204	0.8283	0.8243	0.8035	0.7722	0.7662	0.7406	0.7257	0.7784
50	0.6661	0.715	0.7218	0.7532	0.7741	0.7827	0.7783	0.754	0.719	0.7166	0.6885	0.672	0.7284
55	0.6071	0.6623	0.6671	0.7006	0.7234	0.7325	0.7277	0.6998	0.6611	0.6632	0.6328	0.6147	0.6744
60	0.5449	0.6064	0.6086	0.644	0.6685	0.6782	0.6729	0.6413	0.5991	0.6064	0.5738	0.5543	0.6165
65	0.4797	0.5476	0.5468	0.5837	0.6099	0.6201	0.6144	0.579	0.5333	0.5467	0.512	0.4911	0.5554
70	0.4123	0.4865	0.4823	0.5204	0.548	0.5586	0.5526	0.5132	0.4643	0.4844	0.448	0.4258	0.4914
75	0.343	0.4234	0.4154	0.4543	0.4833	0.4942	0.4878	0.4445	0.3926	0.4202	0.3821	0.3587	0.425
80	0.2724	0.359	0.3466	0.3861	0.4163	0.4274	0.4207	0.3735	0.3187	0.3544	0.3149	0.2904	0.3567
85	0.201	0.2936	0.2766	0.3161	0.3475	0.3587	0.3517	0.3005	0.2432	0.2875	0.2469	0.2215	0.2871
90	0.1716	0.2362	0.2057	0.2451	0.2773	0.2886	0.2814	0.2262	0.1667	0.2202	0.2089	0.2001	0.2273



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	0.9825	0.9872	0.992	0.9972	1	1.0012	1.0008	0.9992	0.9948	0.9886	0.9842	0.9819	0.9925
10	0.9677	0.9775	0.9862	0.9964	1.0024	1.0051	1.0039	1.0003	0.9912	0.98	0.9714	0.9667	0.9874
15	0.9469	0.9622	0.9742	0.9894	0.9986	1.0027	1.001	0.995	0.9811	0.9657	0.9528	0.9457	0.9763
20	0.9202	0.9414	0.9562	0.9763	0.9886	0.9942	0.9918	0.9832	0.9644	0.9456	0.9285	0.9191	0.9591
25	0.8878	0.9151	0.9323	0.9571	0.9726	0.9796	0.9765	0.965	0.9414	0.9201	0.8987	0.8869	0.9361
30	0.8499	0.8838	0.9026	0.9321	0.9507	0.959	0.9553	0.9406	0.9122	0.8891	0.8637	0.8496	0.9074
35	0.8069	0.8474	0.8674	0.9014	0.9229	0.9326	0.9282	0.9102	0.8768	0.8531	0.8238	0.8072	0.8732
40	0.759	0.8065	0.8269	0.8651	0.8896	0.9004	0.8954	0.8739	0.8356	0.8123	0.7791	0.7603	0.8337
45	0.7067	0.7612	0.7817	0.8237	0.8509	0.8629	0.8572	0.832	0.7889	0.7669	0.7301	0.7091	0.7893
50	0.6503	0.7119	0.7319	0.7773	0.8072	0.8201	0.8139	0.7849	0.737	0.7173	0.6771	0.654	0.7403
55	0.5902	0.6589	0.6779	0.7264	0.7587	0.7726	0.7658	0.7329	0.6804	0.664	0.6206	0.5955	0.687
60	0.527	0.6028	0.62	0.6712	0.7058	0.7205	0.7132	0.6763	0.6195	0.6073	0.5609	0.534	0.6299
65	0.461	0.5439	0.5588	0.6122	0.649	0.6643	0.6566	0.6155	0.5547	0.5475	0.4986	0.4699	0.5693
70	0.3929	0.4826	0.4947	0.5499	0.5885	0.6045	0.5963	0.5511	0.4865	0.4853	0.434	0.4038	0.5058
75	0.3231	0.4195	0.4281	0.4847	0.525	0.5414	0.5328	0.4835	0.4154	0.4211	0.3678	0.3361	0.4399
80	0.2521	0.3549	0.3596	0.417	0.4588	0.4755	0.4665	0.4132	0.342	0.3553	0.3003	0.2674	0.3719
85	0.1805	0.2895	0.2897	0.3475	0.3905	0.4074	0.3981	0.3407	0.2667	0.2885	0.2321	0.2061	0.3031
90	0.1716	0.2362	0.2189	0.2766	0.3205	0.3375	0.3279	0.2666	0.1903	0.2211	0.2089	0.2001	0.248

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	0.9807	0.9869	0.9931	0.9999	1.0037	1.0054	1.0047	1.0027	0.9968	0.9887	0.9829	0.9799	0.9938
10	0.9642	0.9768	0.9884	1.0017	1.0097	1.0134	1.0119	1.0072	0.9952	0.9802	0.9689	0.9628	0.99
15	0.9417	0.9612	0.9776	0.9973	1.0095	1.0151	1.0127	1.0052	0.987	0.9659	0.949	0.9398	0.9802
20	0.9133	0.94	0.9606	0.9868	1.0031	1.0106	1.0074	0.9967	0.9723	0.946	0.9235	0.9112	0.9643
25	0.8793	0.9134	0.9377	0.9701	0.9904	0.9998	0.9958	0.9817	0.9511	0.9205	0.8926	0.8773	0.9425
30	0.8398	0.8817	0.9091	0.9475	0.9717	0.9829	0.978	0.9603	0.9237	0.8896	0.8565	0.8381	0.9149
35	0.7953	0.8451	0.8748	0.919	0.9471	0.9599	0.9542	0.9328	0.89	0.8537	0.8154	0.7941	0.8818
40	0.7461	0.8039	0.8352	0.8849	0.9167	0.9311	0.9246	0.8992	0.8504	0.8129	0.7698	0.7456	0.8434
45	0.6924	0.7583	0.7908	0.8454	0.8807	0.8966	0.8893	0.8599	0.8051	0.7676	0.7198	0.6929	0.7999
50	0.6348	0.7088	0.7418	0.8008	0.8394	0.8567	0.8487	0.815	0.7546	0.7181	0.666	0.6365	0.7518
55	0.5737	0.6556	0.6884	0.7515	0.7932	0.8116	0.803	0.7651	0.6992	0.6648	0.6087	0.5768	0.6993
60	0.5095	0.5993	0.6312	0.6977	0.7423	0.7618	0.7525	0.7103	0.6394	0.6081	0.5484	0.5142	0.6429
65	0.4428	0.5402	0.5705	0.64	0.6871	0.7075	0.6977	0.6512	0.5755	0.5484	0.4854	0.4492	0.583
70	0.3739	0.4788	0.5068	0.5787	0.6281	0.6493	0.6389	0.5881	0.508	0.4862	0.4204	0.3823	0.52
75	0.3036	0.4156	0.4406	0.5143	0.5656	0.5874	0.5766	0.5215	0.4376	0.422	0.3538	0.314	0.4544
80	0.2322	0.3509	0.3723	0.4473	0.5002	0.5225	0.5112	0.452	0.3646	0.3562	0.286	0.2449	0.3867
85	0.1747	0.2854	0.3026	0.3781	0.4324	0.4549	0.4433	0.3799	0.2896	0.2894	0.2177	0.2061	0.3212
90	0.1716	0.2362	0.2318	0.3073	0.3626	0.3852	0.3733	0.306	0.2133	0.222	0.2089	0.2001	0.2682



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	0.979	0.9865	0.9942	1.0025	1.0073	1.0095	1.0086	1.006	0.9987	0.9887	0.9817	0.978	0.9951
10	0.9608	0.9761	0.9906	1.0069	1.0168	1.0214	1.0195	1.0139	0.9991	0.9803	0.9664	0.9589	0.9926
15	0.9366	0.9601	0.9808	1.0051	1.0201	1.0271	1.0242	1.0151	0.9928	0.9661	0.9454	0.9341	0.984
20	0.9066	0.9386	0.9649	0.997	1.017	1.0264	1.0225	1.0098	0.9799	0.9463	0.9187	0.9037	0.9693
25	0.871	0.9118	0.943	0.9827	1.0077	1.0194	1.0144	0.9978	0.9605	0.9208	0.8867	0.8679	0.9486
30	0.8301	0.8798	0.9153	0.9623	0.9921	1.006	1	0.9794	0.9348	0.8901	0.8495	0.827	0.9222
35	0.7841	0.8429	0.882	0.936	0.9705	0.9865	0.9795	0.9546	0.9028	0.8542	0.8074	0.7814	0.8901
40	0.7335	0.8014	0.8433	0.9039	0.9429	0.9608	0.9529	0.9237	0.8646	0.8134	0.7608	0.7314	0.8527
45	0.6786	0.7555	0.7996	0.8663	0.9095	0.9292	0.9204	0.8868	0.8208	0.7682	0.7099	0.6773	0.8102
50	0.6199	0.7058	0.7513	0.8235	0.8706	0.892	0.8824	0.8442	0.7716	0.7187	0.6553	0.6196	0.7629
55	0.5577	0.6524	0.6986	0.7757	0.8265	0.8494	0.839	0.7962	0.7174	0.6655	0.5972	0.5586	0.7112
60	0.4926	0.5959	0.642	0.7234	0.7775	0.8017	0.7905	0.7432	0.6585	0.6088	0.5362	0.495	0.6555
65	0.425	0.5367	0.5818	0.6668	0.724	0.7493	0.7375	0.6856	0.5956	0.5492	0.4727	0.4291	0.5961
70	0.3556	0.4751	0.5185	0.6065	0.6663	0.6926	0.6801	0.6238	0.5289	0.4871	0.4072	0.3615	0.5336
75	0.2847	0.4118	0.4526	0.5429	0.6049	0.632	0.619	0.5582	0.459	0.4229	0.3402	0.2926	0.4684
80	0.213	0.3471	0.3846	0.4765	0.5403	0.5679	0.5545	0.4894	0.3864	0.3571	0.2722	0.2231	0.401
85	0.1747	0.2816	0.315	0.4076	0.4729	0.5008	0.487	0.4178	0.3117	0.2903	0.2155	0.2061	0.3401
90	0.1716	0.2362	0.2443	0.337	0.4033	0.4313	0.4172	0.3441	0.2355	0.2229	0.2089	0.2001	0.2877

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	0.9774	0.9862	0.9952	1.005	1.0107	1.0133	1.0123	1.0092	1.0006	0.9888	0.9805	0.9761	0.9963
10	0.9576	0.9755	0.9927	1.0119	1.0237	1.0292	1.0269	1.0202	1.0028	0.9805	0.9641	0.9552	0.995
15	0.9318	0.9592	0.9839	1.0125	1.0302	1.0386	1.0351	1.0246	0.9984	0.9664	0.9419	0.9286	0.9876
20	0.9002	0.9374	0.9691	1.0068	1.0304	1.0416	1.0369	1.0223	0.9872	0.9466	0.9141	0.8964	0.9741
25	0.8631	0.9102	0.9481	0.9948	1.0243	1.0382	1.0323	1.0133	0.9695	0.9212	0.881	0.8589	0.9546
30	0.8207	0.8779	0.9213	0.9766	1.0117	1.0282	1.0212	0.9977	0.9454	0.8905	0.8427	0.8164	0.9292
35	0.7733	0.8407	0.8889	0.9523	0.9929	1.0119	1.0037	0.9756	0.9149	0.8547	0.7997	0.7692	0.8982
40	0.7214	0.799	0.851	0.9222	0.968	0.9893	0.98	0.9471	0.8783	0.814	0.7521	0.7177	0.8617
45	0.6653	0.7529	0.8081	0.8864	0.9371	0.9606	0.9502	0.9126	0.8358	0.7688	0.7004	0.6622	0.82
50	0.6055	0.7029	0.7605	0.8452	0.9005	0.9259	0.9146	0.8721	0.7879	0.7194	0.6449	0.6033	0.7736
55	0.5423	0.6494	0.7084	0.799	0.8585	0.8857	0.8735	0.8261	0.7348	0.6662	0.5862	0.5412	0.7226
60	0.4763	0.5927	0.6523	0.748	0.8113	0.84	0.827	0.7748	0.6769	0.6096	0.5245	0.4766	0.6675
65	0.408	0.5333	0.5926	0.6926	0.7593	0.7894	0.7756	0.7186	0.6148	0.55	0.4605	0.4098	0.6087
70	0.3379	0.4716	0.5297	0.6332	0.703	0.7342	0.7197	0.658	0.5488	0.4879	0.3945	0.3415	0.5467
75	0.2666	0.4082	0.4642	0.5703	0.6426	0.6747	0.6596	0.5934	0.4795	0.4237	0.3272	0.2721	0.4818
80	0.1945	0.3434	0.3964	0.5044	0.5787	0.6114	0.5959	0.5253	0.4073	0.358	0.2589	0.2121	0.4155
85	0.1747	0.2778	0.3269	0.4359	0.5118	0.5449	0.529	0.4542	0.3329	0.2912	0.2155	0.2061	0.3584
90	0.1716	0.2362	0.2563	0.3654	0.4423	0.4755	0.4593	0.3805	0.2567	0.2238	0.2089	0.2001	0.3064



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	0.9759	0.9859	0.9962	1.0074	1.014	1.017	1.0158	1.0123	1.0024	0.9889	0.9794	0.9743	0.9975
10	0.9545	0.9749	0.9947	1.0166	1.0301	1.0365	1.0339	1.0263	1.0064	0.9806	0.9619	0.9517	0.9973
15	0.9272	0.9583	0.9869	1.0195	1.0399	1.0496	1.0456	1.0336	1.0036	0.9666	0.9386	0.9233	0.9911
20	0.8941	0.9361	0.973	1.016	1.0432	1.0561	1.0507	1.0342	0.9942	0.9468	0.9097	0.8895	0.9786
25	0.8555	0.9087	0.953	1.0062	1.04	1.056	1.0492	1.028	0.9781	0.9215	0.8756	0.8504	0.9602
30	0.8118	0.8761	0.9271	0.9901	1.0303	1.0493	1.0412	1.0151	0.9554	0.8909	0.8363	0.8063	0.9358
35	0.7631	0.8387	0.8955	0.9678	1.0142	1.0361	1.0267	0.9955	0.9265	0.8551	0.7923	0.7576	0.9058
40	0.71	0.7967	0.8584	0.9396	0.9919	1.0163	1.0057	0.9694	0.8912	0.8145	0.7438	0.7047	0.8702
45	0.6527	0.7504	0.8161	0.9055	0.9633	0.9903	0.9785	0.9371	0.8501	0.7694	0.6913	0.6479	0.8294
50	0.5918	0.7002	0.7691	0.8659	0.9289	0.9581	0.9453	0.8986	0.8033	0.72	0.6351	0.5878	0.7837
55	0.5277	0.6464	0.7177	0.821	0.8888	0.9201	0.9062	0.8544	0.7512	0.6669	0.5757	0.5247	0.7334
60	0.4609	0.5896	0.6621	0.7713	0.8434	0.8764	0.8616	0.8047	0.6943	0.6103	0.5134	0.4591	0.6789
65	0.3919	0.53	0.6029	0.7169	0.7929	0.8275	0.8118	0.7499	0.633	0.5507	0.4489	0.3915	0.6207
70	0.3212	0.4683	0.5404	0.6585	0.7378	0.7736	0.7572	0.6905	0.5677	0.4886	0.3825	0.3225	0.5591
75	0.2493	0.4047	0.4751	0.5963	0.6784	0.7152	0.6982	0.6268	0.4989	0.4245	0.3148	0.2525	0.4946
80	0.1778	0.3399	0.4076	0.5309	0.6152	0.6528	0.6352	0.5593	0.4271	0.3588	0.2463	0.2121	0.4302
85	0.1747	0.2743	0.3383	0.4627	0.5487	0.5867	0.5688	0.4886	0.3529	0.292	0.2155	0.2061	0.3758
90	0.1716	0.2362	0.2677	0.3923	0.4794	0.5175	0.4993	0.4151	0.2768	0.2246	0.2089	0.2001	0.3241

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	0.9744	0.9856	0.9972	1.0096	1.0171	1.0205	1.0191	1.0152	1.0041	0.989	0.9784	0.9727	0.9986
10	0.9516	0.9743	0.9965	1.0211	1.0362	1.0434	1.0405	1.032	1.0097	0.9808	0.9598	0.9484	0.9995
15	0.9228	0.9574	0.9897	1.0261	1.049	1.0599	1.0554	1.0421	1.0085	0.9668	0.9354	0.9184	0.9943
20	0.8884	0.935	0.9766	1.0248	1.0552	1.0697	1.0636	1.0454	1.0007	0.9471	0.9056	0.883	0.9829
25	0.8484	0.9073	0.9575	1.017	1.0548	1.0728	1.0652	1.0418	0.9861	0.9219	0.8705	0.8423	0.9655
30	0.8034	0.8744	0.9325	1.0028	1.0478	1.0691	1.0601	1.0314	0.9649	0.8913	0.8303	0.7968	0.9421
35	0.7535	0.8368	0.9016	0.9824	1.0343	1.0588	1.0483	1.0142	0.9373	0.8556	0.7854	0.7467	0.9129
40	0.6992	0.7945	0.8653	0.9558	1.0143	1.0418	1.03	0.9903	0.9034	0.815	0.7361	0.6925	0.8782
45	0.6409	0.748	0.8238	0.9234	0.988	1.0183	1.0052	0.96	0.8634	0.7699	0.6828	0.6345	0.8382
50	0.579	0.6976	0.7773	0.8852	0.9556	0.9884	0.9741	0.9235	0.8177	0.7206	0.6259	0.5732	0.7932
55	0.514	0.6437	0.7264	0.8417	0.9174	0.9524	0.937	0.881	0.7666	0.6675	0.5658	0.5091	0.7435
60	0.4464	0.5867	0.6713	0.7931	0.8735	0.9106	0.8942	0.8328	0.7106	0.611	0.503	0.4426	0.6896
65	0.3767	0.527	0.6125	0.7398	0.8244	0.8632	0.8459	0.7793	0.65	0.5514	0.4379	0.3743	0.6319
70	0.3054	0.4651	0.5504	0.6822	0.7704	0.8107	0.7925	0.7209	0.5853	0.4894	0.3712	0.3046	0.5707
75	0.2331	0.4015	0.4854	0.6207	0.712	0.7533	0.7345	0.6581	0.517	0.4252	0.3031	0.2342	0.5065
80	0.1778	0.3366	0.4181	0.5558	0.6494	0.6916	0.6722	0.5913	0.4456	0.3595	0.2344	0.2121	0.4454
85	0.1747	0.2709	0.3489	0.4879	0.5833	0.6259	0.6061	0.5209	0.3717	0.2928	0.2155	0.2061	0.3921
90	0.1716	0.2362	0.2784	0.4176	0.5141	0.5569	0.5368	0.4476	0.2957	0.2254	0.2089	0.2001	0.3408



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	0.973	0.9853	0.998	1.0117	1.0199	1.0237	1.0222	1.0178	1.0056	0.989	0.9774	0.9711	0.9996
10	0.9489	0.9738	0.9983	1.0252	1.0419	1.0499	1.0466	1.0373	1.0128	0.9809	0.9578	0.9453	1.0016
15	0.9188	0.9566	0.9923	1.0323	1.0574	1.0694	1.0645	1.05	1.0131	0.967	0.9325	0.9138	0.9973
20	0.883	0.9339	0.9801	1.0329	1.0663	1.0823	1.0756	1.0558	1.0067	0.9474	0.9018	0.8769	0.9869
25	0.8419	0.9059	0.9618	1.027	1.0685	1.0884	1.08	1.0546	0.9935	0.9222	0.8657	0.8348	0.9704
30	0.7956	0.8729	0.9375	1.0146	1.064	1.0875	1.0776	1.0465	0.9736	0.8917	0.8247	0.7879	0.9478
35	0.7445	0.835	0.9074	0.9959	1.0529	1.0799	1.0684	1.0315	0.9473	0.856	0.779	0.7366	0.9195
40	0.6892	0.7925	0.8717	0.971	1.0351	1.0654	1.0524	1.0098	0.9146	0.8155	0.7289	0.6811	0.8856
45	0.6298	0.7458	0.8308	0.94	1.0109	1.0442	1.0299	0.9814	0.8758	0.7704	0.6749	0.622	0.8463
50	0.567	0.6952	0.7849	0.9032	0.9804	1.0165	1.0008	0.9466	0.8311	0.7212	0.6173	0.5597	0.802
55	0.5012	0.6411	0.7345	0.8609	0.9438	0.9825	0.9656	0.9056	0.7809	0.6681	0.5566	0.4946	0.753
60	0.4329	0.584	0.6799	0.8134	0.9015	0.9424	0.9244	0.8588	0.7257	0.6116	0.4933	0.4273	0.6996
65	0.3625	0.5242	0.6215	0.761	0.8537	0.8964	0.8775	0.8066	0.6658	0.5521	0.4278	0.3582	0.6423
70	0.2908	0.4622	0.5597	0.7042	0.8008	0.8451	0.8253	0.7492	0.6017	0.49	0.3606	0.288	0.5814
75	0.2181	0.3985	0.4949	0.6433	0.7431	0.7887	0.7681	0.6871	0.5339	0.4259	0.2923	0.218	0.5177
80	0.1778	0.3335	0.4278	0.5788	0.6812	0.7276	0.7065	0.6208	0.4628	0.3602	0.2234	0.2121	0.4594
85	0.1747	0.2678	0.3587	0.5112	0.6154	0.6624	0.6408	0.5508	0.389	0.2935	0.2155	0.2061	0.4072
90	0.1716	0.2362	0.2883	0.441	0.5464	0.5934	0.5715	0.4776	0.3131	0.2261	0.2089	0.2001	0.3562

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	0.9718	0.9851	0.9988	1.0136	1.0225	1.0267	1.025	1.0203	1.0071	0.9891	0.9765	0.9697	1.0005
10	0.9464	0.9733	0.9999	1.029	1.0471	1.0557	1.0522	1.0422	1.0156	0.981	0.956	0.9425	1.0034
15	0.9151	0.9558	0.9947	1.0379	1.0651	1.0782	1.0728	1.0572	1.0173	0.9671	0.9299	0.9096	1.0001
20	0.8781	0.9329	0.9832	1.0403	1.0765	1.0939	1.0866	1.0653	1.0122	0.9476	0.8983	0.8714	0.9905
25	0.8358	0.9047	0.9656	1.0361	1.0811	1.1026	1.0936	1.0664	1.0003	0.9225	0.8614	0.828	0.9748
30	0.7884	0.8715	0.942	1.0254	1.0789	1.1044	1.0937	1.0604	0.9816	0.892	0.8195	0.7798	0.9531
35	0.7364	0.8333	0.9126	1.0082	1.0699	1.0992	1.0868	1.0474	0.9564	0.8564	0.7731	0.7273	0.9256
40	0.68	0.7907	0.8776	0.9848	1.0542	1.0871	1.073	1.0275	0.9248	0.8159	0.7223	0.6707	0.8924
45	0.6197	0.7438	0.8373	0.9551	1.0318	1.068	1.0525	1.0009	0.887	0.7709	0.6676	0.6105	0.8538
50	0.5561	0.693	0.792	0.9196	1.0031	1.0423	1.0253	0.9677	0.8433	0.7217	0.6094	0.5472	0.8101
55	0.4895	0.6388	0.7419	0.8784	0.968	1.01	0.9918	0.9282	0.794	0.6686	0.5482	0.4813	0.7616
60	0.4205	0.5815	0.6877	0.8319	0.9271	0.9714	0.952	0.8826	0.7395	0.6122	0.4844	0.4132	0.7087
65	0.3496	0.5216	0.6297	0.7803	0.8804	0.9268	0.9064	0.8315	0.6802	0.5527	0.4185	0.3436	0.6518
70	0.2773	0.4595	0.5682	0.7242	0.8285	0.8766	0.8552	0.775	0.6166	0.4907	0.351	0.2728	0.5913
75	0.2043	0.3957	0.5037	0.6639	0.7716	0.821	0.7989	0.7136	0.5492	0.4266	0.2824	0.218	0.5291
80	0.1778	0.3307	0.4367	0.5998	0.7102	0.7606	0.7378	0.6479	0.4784	0.3609	0.2221	0.2121	0.4729
85	0.1747	0.265	0.3678	0.5325	0.6448	0.6957	0.6725	0.5782	0.4049	0.2941	0.2155	0.2061	0.421
90	0.1716	0.2362	0.2973	0.4623	0.5758	0.6268	0.6033	0.5051	0.329	0.2268	0.2089	0.2001	0.3703



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	0.9707	0.9848	0.9996	1.0153	1.0249	1.0294	1.0275	1.0225	1.0083	0.9891	0.9757	0.9685	1.0014
10	0.9442	0.9728	1.0013	1.0324	1.0518	1.061	1.0572	1.0466	1.0182	0.9811	0.9544	0.94	1.0051
15	0.9118	0.9552	0.9968	1.043	1.0721	1.0861	1.0803	1.0637	1.0211	0.9673	0.9275	0.9059	1.0026
20	0.8737	0.9321	0.986	1.047	1.0857	1.1043	1.0965	1.0739	1.0172	0.9478	0.8951	0.8664	0.9938
25	0.8304	0.9037	0.9691	1.0443	1.0924	1.1155	1.1058	1.077	1.0064	0.9227	0.8575	0.8218	0.9789
30	0.782	0.8702	0.9462	1.0351	1.0923	1.1196	1.1081	1.0729	0.9888	0.8923	0.8149	0.7725	0.9579
35	0.729	0.8319	0.9174	1.0194	1.0852	1.1166	1.1033	1.0617	0.9646	0.8567	0.7678	0.7189	0.931
40	0.6717	0.789	0.883	0.9972	1.0713	1.1065	1.0916	1.0435	0.934	0.8163	0.7163	0.6613	0.8985
45	0.6106	0.742	0.8432	0.9688	1.0507	1.0894	1.0729	1.0184	0.8971	0.7713	0.661	0.6002	0.8605
50	0.5462	0.691	0.7983	0.9344	1.0235	1.0655	1.0474	0.9867	0.8542	0.7221	0.6023	0.5361	0.8173
55	0.4789	0.6367	0.7487	0.8941	0.9898	1.0348	1.0153	0.9484	0.8057	0.6691	0.5406	0.4694	0.7693
60	0.4093	0.5793	0.6948	0.8485	0.9501	0.9976	0.9769	0.904	0.7518	0.6127	0.4764	0.4006	0.7168
65	0.3379	0.5192	0.637	0.7977	0.9045	0.9542	0.9324	0.8538	0.6931	0.5532	0.4101	0.3303	0.6603
70	0.2652	0.4571	0.5758	0.7422	0.8534	0.9049	0.8822	0.7981	0.63	0.4912	0.3423	0.2591	0.6001
75	0.1918	0.3932	0.5115	0.6823	0.7972	0.8502	0.8266	0.7374	0.5629	0.4271	0.2734	0.218	0.5393
80	0.1778	0.3282	0.4447	0.6186	0.7363	0.7902	0.766	0.6721	0.4924	0.3615	0.2221	0.2121	0.4852
85	0.1747	0.2624	0.3758	0.5515	0.6712	0.7257	0.701	0.6027	0.419	0.2947	0.2155	0.2061	0.4334
90	0.1716	0.2362	0.3055	0.4815	0.6023	0.6569	0.6319	0.5297	0.3432	0.2274	0.2089	0.2001	0.3829

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	0.9697	0.9846	1.0002	1.0168	1.0269	1.0317	1.0298	1.0244	1.0095	0.9892	0.975	0.9673	1.0021
10	0.9422	0.9724	1.0026	1.0354	1.0559	1.0657	1.0617	1.0504	1.0204	0.9812	0.953	0.9377	1.0066
15	0.9088	0.9546	0.9987	1.0475	1.0783	1.093	1.0869	1.0695	1.0244	0.9674	0.9254	0.9025	1.0048
20	0.8699	0.9313	0.9885	1.0529	1.0938	1.1135	1.1053	1.0815	1.0215	0.948	0.8923	0.862	0.9967
25	0.8256	0.9027	0.9722	1.0516	1.1024	1.1268	1.1166	1.0863	1.0118	0.9229	0.854	0.8164	0.9824
30	0.7763	0.869	0.9498	1.0437	1.1041	1.133	1.1209	1.0839	0.9952	0.8925	0.8108	0.7661	0.9621
35	0.7224	0.8305	0.9216	1.0292	1.0988	1.132	1.1179	1.0743	0.9718	0.857	0.7631	0.7115	0.9358
40	0.6644	0.7875	0.8876	1.0082	1.0865	1.1237	1.1079	1.0576	0.942	0.8166	0.7111	0.653	0.9039
45	0.6026	0.7403	0.8483	0.9808	1.0673	1.1083	1.0908	1.0339	0.9059	0.7717	0.6553	0.5911	0.8664
50	0.5375	0.6893	0.8039	0.9473	1.0415	1.0859	1.0668	1.0034	0.8638	0.7225	0.5961	0.5262	0.8237
55	0.4696	0.6348	0.7547	0.908	1.0091	1.0566	1.0361	0.9663	0.8159	0.6696	0.5339	0.4588	0.7761
60	0.3995	0.5773	0.7011	0.8631	0.9704	1.0207	0.9988	0.9229	0.7626	0.6131	0.4693	0.3894	0.724
65	0.3276	0.5172	0.6435	0.813	0.9257	0.9784	0.9553	0.8735	0.7044	0.5537	0.4027	0.3187	0.6678
70	0.2546	0.4549	0.5825	0.758	0.8754	0.93	0.9059	0.8185	0.6417	0.4917	0.3346	0.247	0.6079
75	0.1809	0.391	0.5184	0.6986	0.8198	0.8759	0.851	0.7584	0.5749	0.4277	0.2656	0.218	0.5483
80	0.1778	0.3259	0.4517	0.6352	0.7593	0.8164	0.7909	0.6934	0.5047	0.362	0.2221	0.2121	0.496
85	0.1747	0.2601	0.383	0.5682	0.6944	0.7521	0.7261	0.6243	0.4314	0.2952	0.2155	0.2061	0.4443
90	0.1716	0.2362	0.3126	0.4983	0.6256	0.6833	0.6571	0.5513	0.3557	0.2279	0.2089	0.2001	0.394



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	0.9688	0.9845	1.0007	1.0181	1.0287	1.0337	1.0317	1.0261	1.0105	0.9892	0.9744	0.9664	1.0027
10	0.9405	0.9721	1.0037	1.038	1.0595	1.0697	1.0655	1.0537	1.0223	0.9813	0.9518	0.9358	1.0078
15	0.9063	0.9541	1.0003	1.0513	1.0835	1.099	1.0926	1.0744	1.0273	0.9675	0.9236	0.8997	1.0066
20	0.8665	0.9306	0.9907	1.0579	1.1008	1.1214	1.1128	1.088	1.0253	0.9481	0.8899	0.8582	0.9992
25	0.8214	0.9019	0.9749	1.0578	1.111	1.1366	1.1259	1.0943	1.0164	0.9231	0.8511	0.8117	0.9855
30	0.7714	0.8681	0.953	1.051	1.1142	1.1445	1.1318	1.0933	1.0006	0.8928	0.8073	0.7606	0.9657
35	0.7168	0.8294	0.9252	1.0376	1.1104	1.1452	1.1305	1.0851	0.978	0.8573	0.759	0.7052	0.94
40	0.6581	0.7863	0.8917	1.0175	1.0995	1.1385	1.1219	1.0697	0.9489	0.8169	0.7066	0.6459	0.9085
45	0.5957	0.739	0.8527	0.9911	1.0816	1.1246	1.1063	1.0472	0.9135	0.772	0.6503	0.5833	0.8714
50	0.53	0.6878	0.8087	0.9585	1.0569	1.1035	1.0835	1.0177	0.8719	0.7229	0.5907	0.5177	0.8292
55	0.4616	0.6332	0.7598	0.9199	1.0256	1.0754	1.0539	0.9816	0.8246	0.6699	0.5282	0.4497	0.782
60	0.391	0.5756	0.7065	0.8756	0.9878	1.0405	1.0177	0.939	0.7719	0.6135	0.4632	0.3799	0.7302
65	0.3188	0.5154	0.6492	0.826	0.944	0.9991	0.9751	0.8904	0.7141	0.5541	0.3963	0.3086	0.6742
70	0.2454	0.4531	0.5883	0.7715	0.8943	0.9515	0.9264	0.836	0.6517	0.4921	0.328	0.2365	0.6146
75	0.1808	0.3891	0.5243	0.7124	0.8392	0.898	0.872	0.7763	0.5852	0.4281	0.2588	0.218	0.5568
80	0.1778	0.324	0.4577	0.6493	0.7791	0.8389	0.8123	0.7117	0.5151	0.3624	0.2221	0.2121	0.5052
85	0.1747	0.2582	0.3891	0.5825	0.7144	0.7748	0.7477	0.6427	0.4419	0.2957	0.2155	0.2061	0.4536
90	0.1716	0.2362	0.3187	0.5126	0.6456	0.706	0.6787	0.5698	0.3663	0.2284	0.2089	0.2001	0.4036

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	0.9681	0.9843	1.0012	1.0192	1.0302	1.0354	1.0333	1.0275	1.0113	0.9892	0.9738	0.9656	1.0033
10	0.9391	0.9718	1.0046	1.0401	1.0624	1.0731	1.0687	1.0565	1.0239	0.9813	0.9508	0.9342	1.0089
15	0.9042	0.9537	1.0016	1.0545	1.0879	1.104	1.0973	1.0785	1.0297	0.9676	0.9221	0.8973	1.0082
20	0.8637	0.9301	0.9925	1.0621	1.1065	1.1279	1.119	1.0934	1.0284	0.9482	0.8879	0.8551	1.0012
25	0.818	0.9012	0.977	1.063	1.1181	1.1446	1.1336	1.1009	1.0202	0.9233	0.8486	0.8078	0.988
30	0.7674	0.8672	0.9556	1.0571	1.1226	1.154	1.1409	1.1012	1.0051	0.893	0.8044	0.756	0.9687
35	0.7122	0.8285	0.9281	1.0445	1.12	1.1561	1.1409	1.0941	0.9832	0.8575	0.7557	0.6999	0.9434
40	0.6529	0.7852	0.895	1.0253	1.1102	1.1507	1.1336	1.0797	0.9546	0.8172	0.7028	0.64	0.9123
45	0.59	0.7378	0.8564	0.9996	1.0934	1.138	1.119	1.0581	0.9197	0.7723	0.6462	0.5768	0.8756
50	0.5238	0.6866	0.8127	0.9677	1.0697	1.1181	1.0974	1.0296	0.8786	0.7232	0.5862	0.5107	0.8337
55	0.455	0.6319	0.7641	0.9297	1.0392	1.091	1.0687	0.9942	0.8317	0.6702	0.5234	0.4422	0.7868
60	0.384	0.5742	0.711	0.886	1.0022	1.057	1.0333	0.9524	0.7794	0.6138	0.4582	0.3719	0.7353
65	0.3114	0.5139	0.6539	0.8368	0.959	1.0163	0.9914	0.9043	0.722	0.5544	0.391	0.3003	0.6796
70	0.2378	0.4516	0.5931	0.7826	0.9099	0.9693	0.9433	0.8504	0.6599	0.4925	0.3225	0.2279	0.6201
75	0.1808	0.3876	0.5292	0.7239	0.8553	0.9163	0.8894	0.7911	0.5936	0.4284	0.2532	0.218	0.5639
80	0.1778	0.3224	0.4627	0.6609	0.7955	0.8577	0.83	0.7267	0.5236	0.3628	0.2221	0.2121	0.5129
85	0.1747	0.2566	0.3941	0.5942	0.7309	0.7937	0.7656	0.6579	0.4505	0.2961	0.2155	0.2061	0.4613
90	0.1716	0.2362	0.3238	0.5244	0.6621	0.7248	0.6966	0.585	0.3749	0.2287	0.2089	0.2001	0.4114



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	0.9676	0.9842	1.0016	1.0201	1.0314	1.0367	1.0345	1.0285	1.0119	0.9893	0.9734	0.9649	1.0037
10	0.938	0.9716	1.0053	1.0418	1.0647	1.0757	1.0712	1.0586	1.0252	0.9814	0.95	0.933	1.0097
15	0.9026	0.9533	1.0027	1.057	1.0913	1.1079	1.101	1.0817	1.0315	0.9677	0.9209	0.8954	1.0094
20	0.8616	0.9296	0.9938	1.0654	1.1111	1.133	1.1239	1.0976	1.0309	0.9483	0.8863	0.8526	1.0028
25	0.8153	0.9006	0.9788	1.0671	1.1237	1.151	1.1396	1.1061	1.0232	0.9234	0.8467	0.8048	0.99
30	0.7642	0.8666	0.9576	1.0619	1.1292	1.1615	1.148	1.1073	1.0086	0.8931	0.8021	0.7524	0.9711
35	0.7086	0.8278	0.9305	1.05	1.1276	1.1647	1.149	1.1011	0.9872	0.8577	0.7531	0.6958	0.9461
40	0.6488	0.7844	0.8976	1.0314	1.1187	1.1603	1.1427	1.0876	0.9591	0.8174	0.6999	0.6354	0.9153
45	0.5855	0.7369	0.8593	1.0063	1.1027	1.1486	1.1291	1.0668	0.9246	0.7725	0.643	0.5717	0.8789
50	0.5189	0.6856	0.8158	0.9749	1.0797	1.1295	1.1082	1.0389	0.8839	0.7234	0.5827	0.5052	0.8372
55	0.4498	0.6309	0.7674	0.9374	1.05	1.1032	1.0803	1.0042	0.8373	0.6705	0.5196	0.4363	0.7906
60	0.3785	0.5731	0.7145	0.8941	1.0136	1.0699	1.0456	0.9628	0.7852	0.6141	0.4542	0.3657	0.7393
65	0.3057	0.5128	0.6576	0.8453	0.9709	1.0299	1.0042	0.9152	0.728	0.5547	0.3869	0.2938	0.6837
70	0.2318	0.4504	0.5969	0.7914	0.9222	0.9834	0.9566	0.8617	0.6661	0.4928	0.3182	0.2237	0.6246
75	0.1808	0.3863	0.5331	0.7328	0.8679	0.9308	0.9031	0.8026	0.6001	0.4287	0.2487	0.218	0.5694
80	0.1778	0.3211	0.4666	0.6699	0.8084	0.8725	0.8441	0.7385	0.5302	0.3631	0.2221	0.2121	0.5189
85	0.1747	0.2553	0.398	0.6034	0.744	0.8086	0.7798	0.6698	0.4571	0.2964	0.2155	0.2061	0.4674
90	0.1716	0.2362	0.3277	0.5335	0.6751	0.7546	0.7228	0.597	0.3815	0.229	0.2089	0.2001	0.4198

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	0.9672	0.9841	1.0018	1.0207	1.0322	1.0377	1.0354	1.0293	1.0124	0.9893	0.9732	0.9645	1.004
10	0.9372	0.9714	1.0058	1.043	1.0664	1.0776	1.073	1.0602	1.0261	0.9814	0.9494	0.9321	1.0103
15	0.9014	0.9531	1.0035	1.0588	1.0938	1.1107	1.1037	1.084	1.0329	0.9678	0.92	0.8941	1.0103
20	0.86	0.9293	0.9949	1.0678	1.1143	1.1367	1.1274	1.1006	1.0326	0.9484	0.8852	0.8508	1.004
25	0.8134	0.9003	0.98	1.07	1.1278	1.1555	1.144	1.1099	1.0254	0.9235	0.8453	0.8026	0.9915
30	0.7619	0.8661	0.9591	1.0653	1.134	1.1669	1.1531	1.1117	1.0111	0.8932	0.8005	0.7498	0.9727
35	0.7059	0.8272	0.9322	1.0539	1.133	1.1709	1.1549	1.1062	0.9901	0.8578	0.7512	0.6928	0.948
40	0.6459	0.7838	0.8995	1.0358	1.1248	1.1673	1.1493	1.0932	0.9623	0.8175	0.6978	0.632	0.9174
45	0.5822	0.7363	0.8614	1.0111	1.1094	1.1562	1.1363	1.073	0.9281	0.7726	0.6406	0.568	0.8813
50	0.5154	0.6849	0.818	0.9801	1.087	1.1377	1.116	1.0456	0.8876	0.7236	0.5802	0.5012	0.8398
55	0.446	0.6301	0.7698	0.9429	1.0577	1.112	1.0887	1.0113	0.8413	0.6706	0.517	0.4321	0.7933
60	0.3745	0.5723	0.7171	0.8999	1.0217	1.0792	1.0544	0.9704	0.7894	0.6143	0.4514	0.3612	0.7421
65	0.3015	0.512	0.6602	0.8513	0.9794	1.0397	1.0135	0.9231	0.7323	0.5549	0.3839	0.2891	0.6867
70	0.2275	0.4495	0.5997	0.7976	0.9311	0.9936	0.9663	0.8698	0.6705	0.493	0.3151	0.2237	0.6281
75	0.1808	0.3854	0.536	0.7391	0.877	0.9413	0.9131	0.811	0.6045	0.4289	0.2456	0.218	0.5734
80	0.1778	0.3202	0.4695	0.6764	0.8177	0.8833	0.8543	0.747	0.5348	0.3633	0.2221	0.2121	0.5232
85	0.1747	0.2544	0.4008	0.6099	0.7535	0.8343	0.8023	0.6784	0.4618	0.2966	0.2155	0.2061	0.474
90	0.1716	0.2362	0.3305	0.54	0.694	0.7658	0.7334	0.6056	0.3861	0.2292	0.2089	0.2001	0.4251



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	0.9669	0.9841	1.002	1.021	1.0327	1.0382	1.036	1.0298	1.0126	0.9893	0.973	0.9642	1.0042
10	0.9367	0.9713	1.0061	1.0438	1.0674	1.0787	1.0741	1.0611	1.0266	0.9815	0.9491	0.9315	1.0107
15	0.9007	0.9529	1.0039	1.0599	1.0953	1.1124	1.1053	1.0854	1.0337	0.9678	0.9195	0.8933	1.0108
20	0.8591	0.9291	0.9955	1.0692	1.1163	1.139	1.1296	1.1025	1.0337	0.9485	0.8845	0.8497	1.0047
25	0.8122	0.9	0.9808	1.0717	1.1302	1.1583	1.1466	1.1121	1.0267	0.9235	0.8444	0.8013	0.9923
30	0.7605	0.8659	0.96	1.0674	1.1369	1.1702	1.1562	1.1144	1.0127	0.8933	0.7995	0.7482	0.9738
35	0.7043	0.8269	0.9332	1.0563	1.1363	1.1746	1.1585	1.1092	0.9918	0.8579	0.7501	0.691	0.9492
40	0.6441	0.7835	0.9007	1.0385	1.1284	1.1714	1.1533	1.0966	0.9643	0.8176	0.6965	0.63	0.9187
45	0.5803	0.7359	0.8626	1.014	1.1134	1.1608	1.1407	1.0767	0.9302	0.7727	0.6392	0.5658	0.8827
50	0.5133	0.6845	0.8194	0.9832	1.0913	1.1427	1.1208	1.0496	0.8899	0.7237	0.5787	0.4988	0.8413
55	0.4438	0.6297	0.7713	0.9462	1.0623	1.1173	1.0937	1.0156	0.8437	0.6707	0.5153	0.4295	0.7949
60	0.3722	0.5718	0.7186	0.9034	1.0267	1.0849	1.0597	0.9749	0.7919	0.6144	0.4496	0.3585	0.7439
65	0.299	0.5115	0.6618	0.8549	0.9846	1.0456	1.0191	0.9278	0.7349	0.555	0.3821	0.2862	0.6885
70	0.2249	0.449	0.6014	0.8013	0.9364	0.9997	0.9721	0.8747	0.6732	0.4931	0.3133	0.2237	0.6302
75	0.1808	0.3849	0.5377	0.743	0.8826	0.9477	0.9191	0.816	0.6072	0.4291	0.2436	0.218	0.5758
80	0.1778	0.3197	0.4712	0.6803	0.8234	0.9046	0.8605	0.7521	0.5374	0.3634	0.2221	0.2121	0.5271
85	0.1747	0.2538	0.4026	0.6138	0.7595	0.8411	0.8087	0.6836	0.4644	0.2967	0.2155	0.2061	0.4767
90	0.1716	0.2362	0.3322	0.5439	0.6999	0.7726	0.7398	0.611	0.3887	0.2294	0.2089	0.2001	0.4279

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	0.9668	0.9841	1.002	1.0212	1.0329	1.0384	1.0362	1.03	1.0127	0.9893	0.9729	0.9641	1.0042
10	0.9365	0.9713	1.0062	1.044	1.0677	1.0791	1.0744	1.0614	1.0268	0.9815	0.9489	0.9313	1.0108
15	0.9004	0.9529	1.0041	1.0602	1.0958	1.1129	1.1059	1.0859	1.0339	0.9678	0.9193	0.893	1.011
20	0.8587	0.9291	0.9957	1.0697	1.1169	1.1397	1.1303	1.1031	1.034	0.9485	0.8843	0.8494	1.0049
25	0.8118	0.8999	0.981	1.0723	1.131	1.1592	1.1474	1.1129	1.0271	0.9236	0.8442	0.8008	0.9926
30	0.7601	0.8658	0.9603	1.0681	1.1378	1.1713	1.1573	1.1153	1.0132	0.8933	0.7992	0.7477	0.9741
35	0.7038	0.8268	0.9335	1.0571	1.1374	1.1758	1.1596	1.1102	0.9924	0.8579	0.7497	0.6904	0.9496
40	0.6435	0.7834	0.901	1.0393	1.1297	1.1728	1.1546	1.0978	0.9649	0.8176	0.6961	0.6294	0.9192
45	0.5796	0.7358	0.8631	1.015	1.1148	1.1623	1.1421	1.0779	0.9309	0.7728	0.6388	0.5651	0.8832
50	0.5126	0.6843	0.8198	0.9843	1.0928	1.1444	1.1223	1.051	0.8907	0.7237	0.5782	0.498	0.8418
55	0.443	0.6295	0.7717	0.9473	1.0639	1.1191	1.0954	1.017	0.8445	0.6708	0.5148	0.4286	0.7955
60	0.3714	0.5717	0.7191	0.9045	1.0283	1.0867	1.0615	0.9764	0.7927	0.6144	0.4491	0.3576	0.7445
65	0.2982	0.5113	0.6624	0.8562	0.9863	1.0475	1.0209	0.9294	0.7358	0.5551	0.3815	0.2853	0.6891
70	0.224	0.4488	0.6019	0.8026	0.9382	1.0018	0.974	0.8763	0.6741	0.4931	0.3127	0.2237	0.6309
75	0.1808	0.3847	0.5382	0.7443	0.8844	0.9499	0.9211	0.8176	0.6081	0.4291	0.243	0.218	0.5766
80	0.1778	0.3195	0.4718	0.6816	0.8254	0.9068	0.8627	0.7538	0.5383	0.3635	0.2221	0.2121	0.5279
85	0.1747	0.2537	0.4032	0.6151	0.7706	0.8433	0.8108	0.6854	0.4652	0.2967	0.2155	0.2061	0.4784
90	0.1716	0.2362	0.3328	0.5453	0.7019	0.7748	0.742	0.6129	0.3895	0.2294	0.2089	0.2001	0.4288