

Test report: Blanco SE322 AB INT

Test type	Measurement of the luminaire light distribution in C-Gamma
Test date	10/16/2025
Laboratory	Sedis Light Technology
Operator	Cristina Maftei

The measurement have been performed in the following laboratory ambient conditions

Temperature	23°C ± 2°C
Relative humidity	50% U.R. ± 15% U.R.
Air turbulence	< 2 m/s

Used instruments

Photogoniometer	Model Photoglobe 4FASC, S.N. 2407-79, Brand Sedis Light Technology
Photogoniometer classification	Type 4 according to EN 13032-1 Type C according to IES LM 75-19

Applied standards

Photometric measurement	EN 13032-1; EN 13032-4; IES LM 79-08; IES LM 79-19
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Tested luminaire data

Luminaire name	Blanco SE322 AB INT
Manufacturer	KARMAN
Luminaire dimensions (mm)	Diameter: 920 x H 300
Luminous area dimensions (mm)	920 x 0
Type of light source	LED
Correlated Colour Temperature (CCT)	N/A
Colour Rendering Index (CRI)	0
Total luminous flux of the light source (lm)	N.A.
Output luminous flux of the luminaire (lm)	2187.23
Source power (W)	N.A.
Power included ballast (W)	23.8

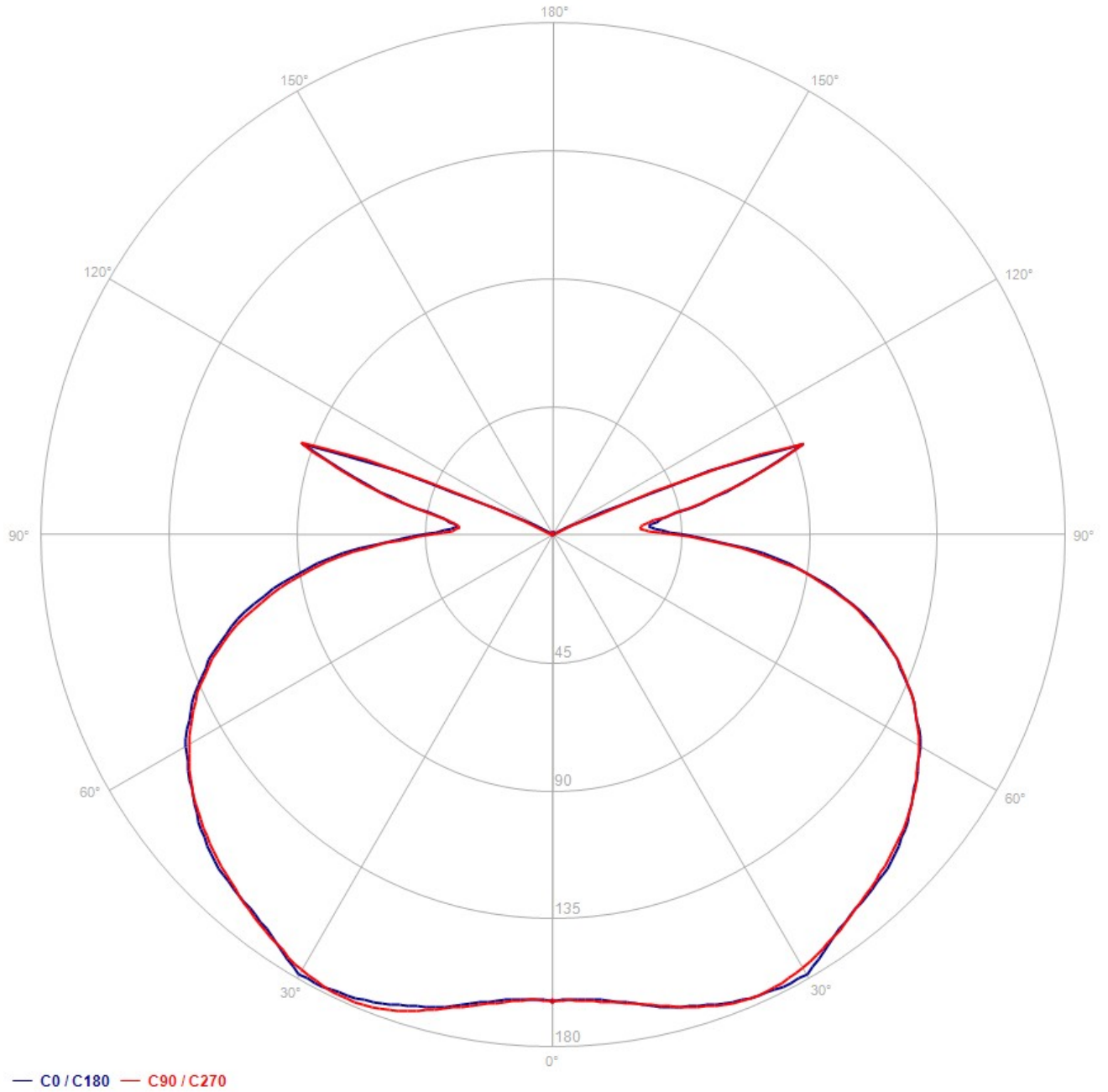
Luminaire efficiency

Light Output Ratio of luminaire (LOR)	100
Downward Flux Fraction (DFF)	85.98
Upward Flux Fraction (UFF)	14.02

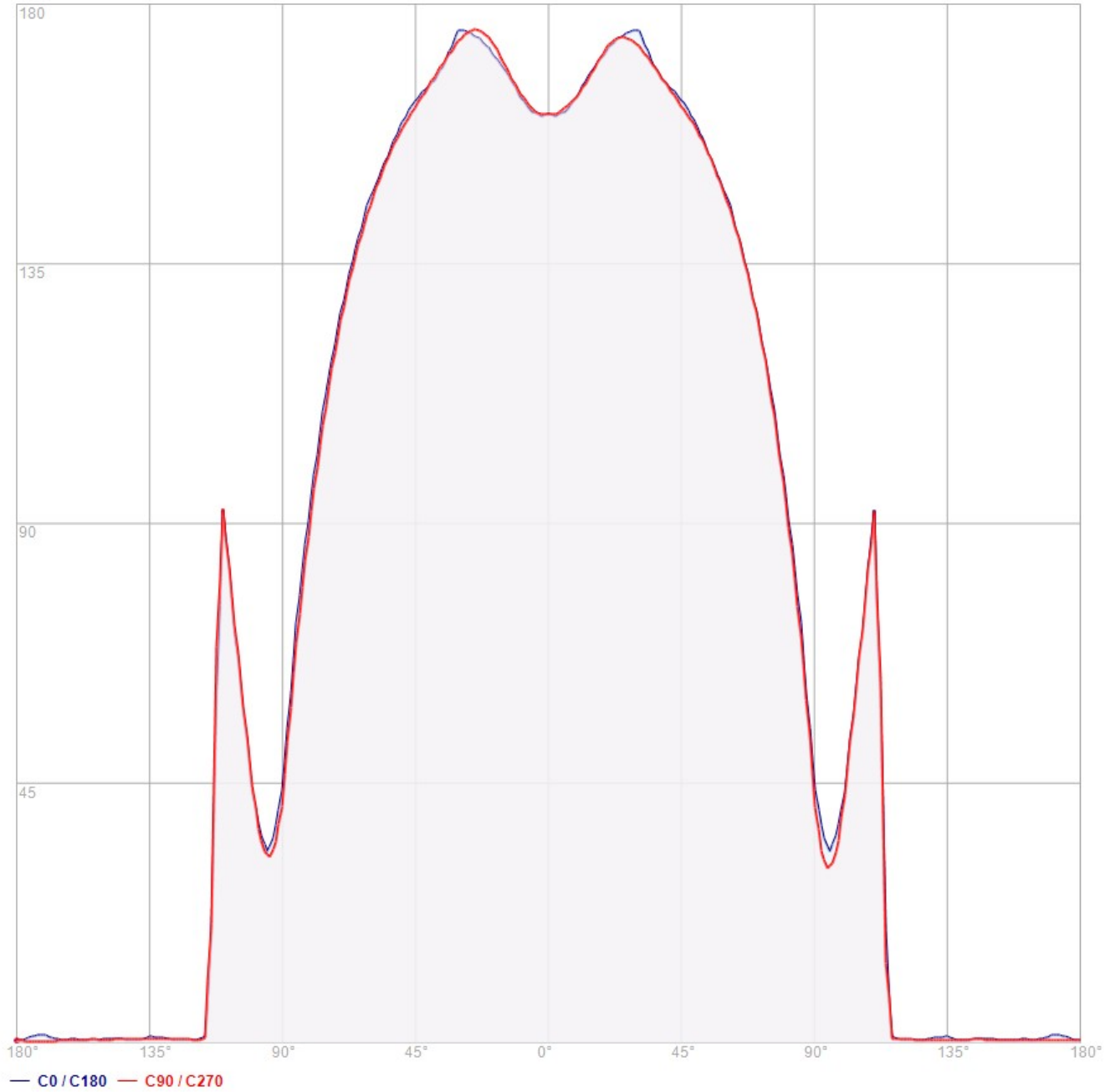
Luminaire efficacy

LED module efficacy (lm/W)	N.A.
System light efficacy (lm/W)	N.A.
Luminaire light efficacy (lm/W)	91.90

Photometric Polar Diagram



Photometric Cartesian Diagram



Light Emission Photo



Light intensities distribution values (cd/klm)

Gamma	C0°	C5°	C10°	C15°	C20°	C25°	C30°	C35°	C40°	C45°	C50°	C55°
0°	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79
1°	163.43	163.43	163.45	163.45	163.46	163.48	163.49	163.51	163.53	163.55	163.57	163.60
2°	163.38	163.40	163.41	163.43	163.44	163.46	163.47	163.48	163.49	163.49	163.49	163.49
3°	163.62	163.65	163.68	163.69	163.71	163.71	163.69	163.68	163.65	163.62	163.62	163.64
4°	163.87	163.90	163.92	163.93	163.94	163.94	163.87	163.96	163.97	163.95	163.92	163.88
5°	164.03	164.05	164.07	164.08	164.10	164.12	164.15	164.18	164.19	164.19	164.18	164.18
6°	164.60	164.62	164.60	164.55	164.50	164.49	164.45	164.43	164.44	164.49	164.57	164.63
7°	165.18	165.21	165.19	165.14	165.10	165.06	165.00	164.93	164.94	164.91	165.00	165.07
8°	165.91	165.93	165.90	165.83	165.77	165.68	165.54	165.59	165.62	165.57	165.48	165.59
9°	166.58	166.59	166.54	166.52	166.50	166.40	166.34	166.30	166.25	166.27	166.25	166.20
10°	167.43	167.44	167.39	167.37	167.31	167.24	167.18	167.08	167.04	167.00	166.95	166.92
11°	168.52	168.56	168.48	168.41	168.26	168.13	168.02	167.91	167.89	167.82	167.74	167.70
12°	169.53	169.54	169.50	169.43	169.31	169.22	169.00	168.85	168.76	168.73	168.65	168.47
13°	170.37	170.35	170.31	170.28	170.26	170.24	170.12	169.92	169.70	169.67	169.59	169.48
14°	171.17	171.15	171.09	171.03	171.09	171.12	171.14	171.00	170.87	170.04	170.51	170.42
15°	171.89	171.93	171.92	171.85	171.89	171.97	172.04	172.01	171.93	171.68	171.41	171.34
16°	172.56	172.64	172.64	172.62	172.64	172.73	172.84	172.88	172.83	172.63	172.39	172.30
17°	173.24	173.36	173.31	173.25	173.24	173.38	173.53	173.60	173.66	173.54	173.56	173.30
18°	173.96	174.05	173.98	173.94	173.93	173.97	174.15	174.34	174.44	174.59	174.69	174.32
19°	174.73	174.75	174.66	174.62	174.59	174.58	174.70	174.99	175.20	175.45	175.50	175.30
20°	175.43	175.52	175.27	175.25	175.17	175.08	175.20	175.53	175.83	175.98	176.03	176.05
21°	176.02	176.22	175.86	175.79	175.67	175.59	175.67	175.95	176.23	176.50	176.53	176.72
22°	176.53	176.76	176.37	176.31	176.19	176.14	176.15	176.28	176.52	176.92	177.03	177.21
23°	177.02	177.05	176.81	176.75	176.67	176.67	176.51	176.58	176.68	177.02	177.34	177.46
24°	177.33	177.30	177.11	177.05	176.94	176.94	176.72	176.72	176.72	177.01	177.38	177.65
25°	177.58	177.54	177.33	177.18	177.05	177.05	176.88	176.81	176.78	176.99	177.30	177.69
26°	177.99	177.93	177.55	177.25	177.08	177.06	176.96	176.99	176.72	176.82	177.09	177.58
27°	178.25	178.13	177.70	177.48	177.11	176.98	176.96	176.97	176.56	176.61	176.81	177.24
28°	178.40	178.19	177.75	177.60	177.20	176.88	176.78	176.72	176.42	176.27	176.47	176.71
29°	178.44	178.13	177.74	177.55	177.28	176.92	176.45	176.38	176.13	175.78	175.98	176.09
30°	178.49	178.05	177.67	177.35	177.18	176.83	176.32	175.95	175.75	175.42	175.56	175.44
31°	177.39	177.14	177.10	177.06	176.86	176.56	176.14	175.48	175.30	175.03	174.89	174.78
32°	176.08	175.95	175.94	176.14	176.42	176.04	175.82	175.17	174.78	174.64	174.14	174.14
33°	174.81	174.67	174.66	174.82	175.35	175.52	175.38	174.79	174.21	174.06	173.58	173.50
34°	173.56	173.38	173.39	173.46	174.20	174.75	174.75	174.32	173.72	173.48	173.07	172.81
35°	172.36	172.24	172.19	172.26	172.99	173.61	174.15	173.74	173.30	172.88	172.51	172.11
36°	171.48	171.30	171.18	171.20	171.67	172.30	173.14	173.06	172.72	172.16	171.86	171.33
37°	170.56	170.30	170.32	170.20	170.38	171.06	171.85	172.42	172.14	171.52	171.37	170.61
38°	169.81	169.44	169.44	169.28	169.34	169.76	170.62	171.60	171.50	170.96	170.52	169.98
39°	169.19	168.87	168.82	168.48	168.52	168.62	169.49	170.49	170.78	170.42	169.81	169.35
40°	168.65	168.34	168.12	167.87	167.67	167.60	168.26	169.22	170.07	169.87	169.12	168.70
41°	168.14	167.82	167.65	167.30	166.82	166.63	167.04	167.93	169.27	169.23	168.46	168.12
42°	167.68	167.31	167.12	166.72	166.20	165.83	165.98	166.78	168.15	168.59	167.92	167.50
43°	167.09	166.74	166.46	166.16	165.64	165.18	165.13	165.76	166.94	167.94	167.31	166.79
44°	166.44	166.18	165.82	165.62	165.12	164.65	164.18	164.65	165.80	167.18	166.69	166.09
45°	165.92	165.67	165.28	165.05	164.58	164.03	163.24	163.50	164.85	166.26	166.17	165.34

46°	165.12	164.95	164.84	164.36	163.93	163.25	162.61	162.46	163.81	165.09	165.54	164.62
47°	164.30	164.09	163.97	163.76	163.25	162.60	162.08	161.60	162.57	163.99	164.78	163.93
48°	163.38	163.18	163.03	162.81	162.63	162.15	161.49	160.75	161.37	162.82	163.90	163.17
49°	162.35	162.15	161.99	161.91	161.92	161.59	160.79	159.91	160.27	161.70	162.96	162.37
50°	161.38	161.13	160.88	160.89	160.95	160.69	159.97	159.21	159.12	160.57	162.04	161.55
51°	160.21	160.02	159.85	159.75	159.96	159.93	159.18	158.49	157.97	159.27	161.07	160.70
52°	159.02	158.85	158.74	158.70	158.85	158.97	158.35	157.70	156.96	157.92	159.85	159.82
53°	157.70	157.59	157.47	157.61	157.64	157.88	157.40	156.68	155.91	156.66	158.55	158.89
54°	156.44	156.30	156.19	156.36	156.41	156.71	156.49	155.66	154.77	155.32	157.11	157.82
55°	155.16	155.05	154.98	154.95	155.07	155.27	155.44	154.74	153.70	153.90	155.62	156.58
56°	154.13	153.90	153.58	153.43	153.72	153.77	154.13	153.71	152.63	152.45	154.08	155.26
57°	152.72	152.55	152.24	151.97	152.33	152.32	152.75	152.53	151.40	151.01	152.47	153.97
58°	151.27	151.05	150.78	150.50	150.72	150.88	151.20	151.18	150.08	149.53	150.85	152.61
59°	150.05	149.66	149.20	149.11	149.20	149.33	149.64	149.83	148.83	148.03	149.31	151.18
60°	149.19	148.58	147.78	147.45	147.63	147.73	148.03	148.42	147.64	146.50	147.50	149.64
61°	147.61	147.24	146.58	145.73	146.02	145.98	146.34	146.72	146.09	145.03	145.70	147.89
62°	145.71	145.46	145.28	144.23	144.36	144.22	144.56	145.05	144.50	143.48	143.92	146.14
63°	143.66	143.46	143.45	142.88	142.56	142.48	142.70	143.25	143.01	141.92	142.09	144.38
64°	141.76	141.44	141.34	141.40	140.54	140.63	140.77	141.09	141.31	140.12	140.20	142.41
65°	140.01	139.54	139.22	139.45	138.66	138.73	138.90	139.20	139.48	138.31	138.23	140.35
66°	137.82	137.49	137.21	137.18	136.65	136.58	136.89	137.29	137.55	136.39	136.12	138.04
67°	135.57	135.10	135.29	134.83	134.90	134.29	134.58	134.93	135.57	134.35	133.83	135.63
68°	133.21	132.64	132.84	132.61	132.73	131.90	132.44	132.55	133.37	132.32	131.56	133.27
69°	130.86	130.24	130.37	130.41	130.29	129.58	130.10	130.10	130.95	130.06	129.44	130.73
70°	128.72	127.97	127.84	127.96	127.71	127.18	127.49	127.59	128.46	127.66	126.91	128.14
71°	126.08	125.67	125.25	125.21	125.00	124.75	124.96	125.07	125.79	125.24	124.01	125.60
72°	123.28	123.05	122.72	122.36	122.21	122.22	122.24	122.38	123.00	122.40	121.37	122.92
73°	120.32	120.17	120.00	119.35	119.55	119.50	119.28	119.46	120.06	119.57	118.67	119.86
74°	117.50	116.98	116.89	116.35	116.48	116.58	116.11	116.39	116.76	116.78	115.60	116.66
75°	114.81	113.84	113.61	113.26	113.39	113.18	112.83	113.11	113.54	113.48	112.43	113.38
76°	111.28	110.72	110.20	110.11	109.84	109.71	109.41	109.69	110.06	110.11	109.15	109.83
77°	107.60	107.19	106.70	106.70	106.26	106.19	105.82	106.25	106.40	106.71	105.49	106.18
78°	103.82	103.52	103.08	103.10	102.64	102.40	102.05	102.46	102.65	103.05	101.79	102.33
79°	100.06	99.62	99.07	99.22	98.61	98.50	98.19	98.57	98.77	99.22	98.08	98.37
80°	96.41	95.78	95.29	95.14	94.79	94.43	94.23	94.52	94.72	95.25	94.01	94.36
81°	92.07	91.85	91.13	91.00	90.55	90.16	90.06	90.39	90.50	91.12	89.84	90.17
82°	87.84	87.67	86.81	86.69	86.39	85.89	85.72	86.13	86.28	86.79	85.50	85.93
83°	83.45	82.82	82.40	82.09	81.86	81.30	81.40	81.56	81.67	82.27	80.99	81.26
84°	78.85	77.93	77.70	77.32	77.19	76.69	76.68	76.77	76.86	77.52	76.32	76.43
85°	74.12	73.11	72.78	72.36	72.35	71.61	71.67	71.80	71.82	72.43	71.25	71.43
86°	67.62	68.04	67.65	67.02	67.11	66.20	66.40	66.41	66.42	67.08	65.89	65.97
87°	61.53	62.62	62.10	61.34	61.50	60.55	60.70	60.61	60.64	61.40	60.26	60.30
88°	55.53	56.70	56.10	55.28	55.51	54.43	54.87	54.50	54.60	55.22	54.12	54.12
89°	49.79	50.44	49.64	48.99	49.19	48.01	48.38	48.26	48.48	49.05	48.03	48.05
90°	44.61	45.06	44.24	43.20	43.52	42.33	42.50	42.53	42.55	43.13	41.94	42.03
91°	41.14	40.03	39.31	38.53	38.89	37.57	37.56	37.92	38.16	38.97	37.92	38.08
92°	38.38	37.50	36.70	35.98	36.11	34.96	34.98	35.25	35.26	35.89	34.77	34.80
93°	36.11	35.37	34.42	33.78	33.98	32.88	33.06	33.28	33.37	33.80	32.57	32.74
94°	34.54	34.03	33.23	32.71	32.69	31.63	31.99	32.21	32.22	32.67	31.74	31.90

95°	33.75	33.72	33.02	32.55	32.39	31.36	31.87	32.04	32.04	32.58	31.57	31.64
96°	34.92	34.12	33.50	33.15	33.13	31.96	32.70	32.63	32.90	33.23	32.24	32.68
97°	36.56	35.74	35.01	34.76	34.54	33.72	34.12	34.31	34.48	34.70	33.90	34.18
98°	38.53	37.47	37.22	37.02	36.52	35.93	36.40	36.38	36.68	37.05	36.14	36.32
99°	41.03	40.01	40.22	40.03	39.49	38.86	39.31	39.58	39.50	40.20	39.27	39.86
100°	44.14	43.79	43.80	43.64	42.93	42.64	43.43	43.71	43.94	44.19	43.51	43.95
101°	48.71	48.15	48.42	48.22	47.70	47.68	48.12	48.38	48.60	48.80	48.15	48.63
102°	53.44	52.92	53.07	53.10	52.44	52.46	52.90	53.18	53.29	53.49	52.80	53.37
103°	58.09	57.73	57.96	58.06	57.09	57.21	57.59	57.98	58.17	58.18	57.48	58.15
104°	62.69	62.56	62.76	62.70	61.81	62.04	62.31	62.71	62.89	62.79	62.19	63.01
105°	67.50	67.04	67.47	67.14	66.53	66.96	67.27	67.55	67.72	67.47	66.98	67.93
106°	72.00	72.01	72.51	71.61	71.28	72.01	72.27	72.47	72.69	72.27	71.87	73.07
107°	77.18	77.34	77.68	76.80	76.07	77.16	77.38	77.50	77.90	77.33	76.95	78.30
108°	82.90	82.34	81.03	81.42	81.37	81.99	82.64	82.86	83.12	82.51	82.14	83.63
109°	89.11	88.04	82.09	86.51	84.88	84.85	87.87	88.17	88.03	87.73	86.78	88.06
110°	93.81	84.77	81.16	91.55	85.12	83.77	89.29	91.42	90.51	87.81	87.75	91.89
111°	77.08	73.52	76.11	75.65	80.27	76.70	80.31	87.04	84.04	81.60	80.62	81.40
112°	59.55	59.41	66.10	41.66	68.36	58.90	57.52	63.34	69.38	65.69	65.10	66.03
113°	39.80	42.03	50.43	20.95	48.18	36.48	30.76	35.76	43.99	41.88	40.44	39.52
114°	19.81	23.34	17.70	10.04	20.37	16.66	13.06	22.12	18.86	18.96	16.64	19.13
115°	6.37	8.38	4.82	3.98	7.11	3.62	5.44	9.57	5.41	6.56	6.87	6.62
116°	1.08	1.51	1.10	1.29	1.77	1.02	1.77	2.43	2.09	0.96	1.28	1.84
117°	0.79	0.69	0.54	0.57	0.60	0.58	0.85	0.97	0.77	0.52	0.62	0.81
118°	0.64	0.59	0.46	0.44	0.49	0.46	0.67	0.94	0.81	0.50	0.51	0.73
119°	0.51	0.48	0.43	0.43	0.44	0.44	0.72	1.20	0.80	0.55	0.51	0.74
120°	0.43	0.43	0.43	0.43	0.45	0.46	0.69	1.37	0.76	0.62	0.60	0.66
121°	0.43	0.43	0.43	0.43	0.48	0.53	0.68	1.26	0.64	0.65	0.68	0.62
122°	0.43	0.45	0.40	0.43	0.51	0.64	0.77	1.01	0.54	0.66	0.68	0.71
123°	0.43	0.44	0.35	0.46	0.54	0.71	0.90	0.89	0.51	0.65	0.70	0.76
124°	0.43	0.43	0.32	0.49	0.59	0.77	1.08	0.78	0.51	0.63	0.71	0.76
125°	0.42	0.43	0.39	0.53	0.64	0.85	1.36	0.68	0.52	0.60	0.71	0.76
126°	0.46	0.48	0.49	0.58	0.71	0.96	1.20	0.62	0.52	0.54	0.73	0.75
127°	0.51	0.54	0.59	0.64	0.78	1.09	0.95	0.56	0.52	0.53	0.73	0.76
128°	0.60	0.62	0.69	0.71	0.87	1.26	0.79	0.52	0.52	0.54	0.74	0.77
129°	0.68	0.71	0.79	0.78	1.00	1.33	0.70	0.51	0.52	0.57	0.76	0.77
130°	0.79	0.79	0.85	0.88	1.16	0.99	0.62	0.52	0.52	0.59	0.76	0.78
131°	0.82	0.84	0.90	1.01	1.38	0.80	0.57	0.52	0.51	0.62	0.76	0.77
132°	0.87	0.89	0.99	1.18	1.11	0.68	0.51	0.52	0.52	0.65	0.76	0.76
133°	0.94	0.98	1.12	1.37	0.85	0.60	0.51	0.52	0.54	0.68	0.77	0.76
134°	1.05	1.08	1.27	0.97	0.70	0.54	0.51	0.51	0.56	0.73	0.78	0.74
135°	1.18	1.10	0.87	0.75	0.61	0.51	0.52	0.51	0.59	0.76	0.77	0.72
136°	0.79	0.74	0.63	0.64	0.54	0.51	0.52	0.52	0.62	0.76	0.76	0.70
137°	0.60	0.57	0.52	0.57	0.51	0.51	0.52	0.54	0.67	0.76	0.76	0.68
138°	0.50	0.49	0.46	0.52	0.51	0.51	0.51	0.57	0.71	0.72	0.76	0.65
139°	0.43	0.43	0.40	0.51	0.52	0.52	0.51	0.60	0.75	0.70	0.74	0.62
140°	0.38	0.39	0.40	0.52	0.52	0.52	0.52	0.62	0.73	0.68	0.66	0.61
141°	0.42	0.41	0.43	0.51	0.51	0.51	0.53	0.62	0.68	0.66	0.61	0.59
142°	0.46	0.44	0.46	0.51	0.51	0.52	0.54	0.60	0.64	0.60	0.60	0.57
143°	0.51	0.48	0.48	0.51	0.51	0.54	0.57	0.58	0.60	0.51	0.59	0.57

144°	0.57	0.51	0.51	0.51	0.52	0.55	0.58	0.57	0.55	0.50	0.56	0.57
145°	0.66	0.56	0.52	0.52	0.54	0.57	0.60	0.56	0.52	0.50	0.54	0.58
146°	0.64	0.56	0.53	0.54	0.57	0.59	0.60	0.57	0.51	0.52	0.54	0.60
147°	0.62	0.57	0.55	0.56	0.58	0.60	0.61	0.60	0.51	0.56	0.55	0.62
148°	0.61	0.58	0.57	0.58	0.60	0.60	0.62	0.64	0.54	0.61	0.60	0.64
149°	0.61	0.59	0.59	0.60	0.60	0.61	0.64	0.65	0.61	0.65	0.69	0.65
150°	0.60	0.60	0.60	0.60	0.60	0.62	0.65	0.65	0.66	0.69	0.74	0.68
151°	0.56	0.57	0.60	0.61	0.62	0.64	0.65	0.66	0.69	0.74	0.71	0.71
152°	0.54	0.55	0.60	0.62	0.63	0.65	0.63	0.68	0.71	0.71	0.65	0.68
153°	0.53	0.54	0.59	0.64	0.65	0.62	0.60	0.71	0.73	0.69	0.62	0.60
154°	0.52	0.53	0.57	0.65	0.62	0.61	0.58	0.69	0.72	0.65	0.60	0.57
155°	0.51	0.51	0.55	0.62	0.60	0.59	0.57	0.65	0.68	0.63	0.57	0.59
156°	0.51	0.51	0.54	0.60	0.59	0.58	0.57	0.59	0.64	0.60	0.55	0.64
157°	0.51	0.53	0.54	0.58	0.57	0.57	0.57	0.57	0.60	0.57	0.57	0.68
158°	0.53	0.54	0.54	0.57	0.57	0.57	0.57	0.56	0.57	0.55	0.62	0.74
159°	0.54	0.55	0.55	0.57	0.57	0.57	0.56	0.55	0.56	0.57	0.69	0.83
160°	0.57	0.57	0.57	0.57	0.57	0.56	0.55	0.54	0.54	0.60	0.76	0.95
161°	0.57	0.56	0.56	0.57	0.57	0.56	0.55	0.54	0.57	0.65	0.80	1.07
162°	0.56	0.56	0.55	0.56	0.57	0.55	0.54	0.56	0.62	0.72	0.87	1.22
163°	0.55	0.55	0.55	0.55	0.56	0.54	0.57	0.61	0.69	0.82	1.02	1.27
164°	0.55	0.55	0.55	0.55	0.54	0.57	0.62	0.68	0.78	0.94	1.21	1.25
165°	0.54	0.55	0.56	0.57	0.59	0.63	0.71	0.79	0.91	1.12	1.26	1.21
166°	0.60	0.62	0.64	0.65	0.67	0.71	0.80	0.96	1.12	1.27	1.25	1.21
167°	0.69	0.71	0.74	0.76	0.79	0.84	0.95	1.17	1.38	1.31	1.27	1.22
168°	0.81	0.84	0.87	0.90	0.94	1.02	1.17	1.35	1.37	1.34	1.29	1.24
169°	0.99	1.01	1.06	1.11	1.18	1.28	1.28	1.31	1.32	1.34	1.30	1.25
170°	1.28	1.28	1.27	1.26	1.26	1.26	1.28	1.28	1.29	1.29	1.28	1.23
171°	1.26	1.25	1.23	1.22	1.24	1.27	1.27	1.26	1.25	1.24	1.23	1.19
172°	1.25	1.23	1.21	1.20	1.22	1.24	1.25	1.23	1.23	1.21	1.18	1.01
173°	1.24	1.23	1.21	1.19	1.20	1.21	1.21	1.21	1.19	1.15	0.98	0.79
174°	1.22	1.21	1.20	1.18	1.18	1.18	1.18	1.14	1.02	0.88	0.76	0.70
175°	1.18	1.17	1.15	1.12	1.07	1.01	0.93	0.85	0.78	0.72	0.66	0.61
176°	0.80	0.80	0.80	0.79	0.78	0.76	0.65	0.70	0.65	0.62	0.59	0.56
177°	0.63	0.63	0.63	0.63	0.62	0.62	0.60	0.59	0.57	0.55	0.53	0.51
178°	0.54	0.54	0.54	0.53	0.53	0.52	0.51	0.51	0.50	0.49	0.48	0.47
179°	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.44	0.44	0.43	0.43
180°	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Gamma	C60°	C65°	C70°	C75°	C80°	C85°	C90°	C95°	C100°	C105°	C110°	C115°
0°	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79
1°	163.62	163.65	163.68	163.71	163.74	163.76	163.79	163.76	163.74	163.71	163.68	163.65
2°	163.48	163.52	163.58	163.63	163.68	163.74	163.79	163.74	163.68	163.63	163.58	163.52
3°	163.66	163.68	163.71	163.79	163.88	163.97	164.05	163.97	163.88	163.79	163.71	163.68
4°	163.85	163.90	163.94	163.99	164.10	164.20	164.30	164.20	164.10	163.99	163.94	163.90
5°	164.21	164.21	164.26	164.33	164.41	164.58	164.74	164.58	164.41	164.33	164.26	164.21
6°	164.68	164.68	164.67	164.71	164.73	164.96	165.18	164.96	164.73	164.71	164.67	164.68
7°	165.14	165.21	165.22	165.24	165.32	165.48	165.69	165.48	165.32	165.24	165.22	165.21
8°	165.71	165.78	165.81	165.81	165.90	166.04	166.19	166.04	165.90	165.81	165.81	165.78
9°	166.29	166.38	166.41	166.41	166.46	166.61	166.87	166.61	166.46	166.41	166.41	166.38
10°	166.93	167.08	167.09	167.03	167.01	167.16	167.55	167.16	167.01	167.03	167.09	167.08

11°	167.68	167.75	167.90	167.90	167.91	168.01	168.30	168.01	167.91	167.90	167.90	167.75
12°	168.54	168.56	168.75	168.90	168.88	168.91	169.04	168.91	168.88	168.90	168.75	168.56
13°	169.52	169.53	169.59	169.73	169.66	169.67	169.92	169.67	169.66	169.73	169.59	169.53
14°	170.49	170.53	170.51	170.54	170.40	170.42	170.79	170.42	170.40	170.54	170.51	170.53
15°	171.42	171.50	171.44	171.45	171.31	171.35	171.80	171.35	171.31	171.45	171.44	171.50
16°	172.34	172.33	172.30	172.35	172.28	172.29	172.81	172.29	172.28	172.35	172.30	172.33
17°	173.19	173.05	173.14	173.23	173.25	173.20	173.61	173.20	173.25	173.23	173.14	173.05
18°	174.08	173.88	174.00	174.14	174.23	174.10	174.41	174.10	174.23	174.14	174.00	173.88
19°	174.96	174.74	174.79	174.92	174.98	174.81	175.23	174.81	174.98	174.92	174.79	174.74
20°	175.78	175.52	175.40	175.49	175.64	175.51	176.06	175.51	175.64	175.49	175.40	175.52
21°	176.47	176.14	176.03	176.02	176.17	176.04	176.49	176.04	176.17	176.02	176.03	176.14
22°	177.05	176.69	176.48	176.47	176.64	176.54	176.92	176.54	176.64	176.47	176.48	176.69
23°	177.49	177.00	176.84	176.83	176.83	176.59	177.11	176.59	176.83	176.83	176.84	177.00
24°	177.75	177.28	176.97	176.97	176.93	176.62	177.30	176.62	176.93	176.97	176.97	177.28
25°	177.97	177.42	177.03	177.00	176.99	176.67	177.23	176.67	176.99	177.00	177.03	177.42
26°	177.74	177.47	177.01	176.81	176.99	176.71	177.17	176.71	176.99	176.81	177.01	177.47
27°	177.48	177.35	176.89	176.58	176.69	176.43	176.92	176.43	176.69	176.58	176.89	177.35
28°	177.14	177.20	176.52	176.11	176.28	176.10	176.67	176.10	176.28	176.11	176.52	177.20
29°	176.66	176.85	176.05	175.61	175.80	175.65	176.17	175.65	175.80	175.61	176.05	176.85
30°	176.02	176.31	175.62	175.09	175.26	175.20	175.67	175.20	175.26	175.09	175.62	176.31
31°	175.36	175.72	175.17	174.58	174.64	174.59	175.04	174.59	174.64	174.58	175.17	175.72
32°	174.65	175.15	174.70	173.95	173.98	173.95	174.41	173.95	173.98	173.95	174.70	175.15
33°	173.86	174.42	174.17	173.30	173.39	173.33	173.73	173.33	173.39	173.30	174.17	174.42
34°	173.06	173.57	173.54	172.67	172.81	172.70	173.06	172.70	172.81	172.67	173.54	173.57
35°	172.27	172.73	172.73	172.03	172.14	171.93	172.31	171.93	172.14	172.03	172.73	172.73
36°	171.47	171.90	171.97	171.39	171.40	171.14	171.55	171.14	171.40	171.39	171.97	171.90
37°	170.53	171.07	171.35	170.73	170.64	170.34	170.80	170.34	170.64	170.73	171.35	171.07
38°	169.65	170.23	170.64	169.98	169.82	169.55	170.05	169.55	169.82	169.98	170.64	170.23
39°	168.90	169.39	169.76	169.27	169.06	168.87	169.30	168.87	169.06	169.27	169.76	169.39
40°	168.18	168.54	168.92	168.59	168.37	168.20	168.55	168.20	168.37	168.59	168.92	168.54
41°	167.44	167.68	168.12	167.91	167.54	167.52	167.80	167.52	167.54	167.91	168.12	167.68
42°	166.69	166.82	167.32	167.15	166.64	166.83	167.04	166.83	166.64	167.15	167.32	166.82
43°	165.90	166.01	166.64	166.43	165.84	166.12	166.29	166.12	165.84	166.43	166.64	166.01
44°	165.22	165.25	165.93	165.70	165.14	165.40	165.54	165.40	165.14	165.70	165.93	165.25
45°	164.63	164.44	165.11	164.96	164.35	164.71	164.79	164.71	164.35	164.96	165.11	164.44
46°	164.00	163.57	164.30	164.23	163.50	164.04	164.04	164.04	163.50	164.23	164.30	163.57
47°	163.15	162.69	163.43	163.50	162.67	163.21	163.29	163.21	162.67	163.50	163.43	162.69
48°	162.30	161.86	162.57	162.67	161.84	162.37	162.54	162.37	161.84	162.67	162.57	161.86
49°	161.54	161.02	161.66	161.83	161.02	161.43	161.66	161.43	161.02	161.83	161.66	161.02
50°	160.77	160.10	160.68	161.02	160.25	160.50	160.78	160.50	160.25	161.02	160.68	160.10
51°	159.85	159.16	159.57	160.19	159.27	159.45	159.78	159.45	159.27	160.19	159.57	159.16
52°	158.94	158.18	158.44	159.13	158.13	158.39	158.77	158.39	158.13	159.13	158.44	158.18
53°	158.02	157.18	157.32	158.06	157.03	157.30	157.66	157.30	157.03	158.06	157.32	157.18
54°	157.08	156.10	156.18	157.00	155.99	156.19	156.53	156.19	155.99	157.00	156.18	156.10
55°	155.92	155.00	154.92	155.91	154.87	155.03	155.28	155.03	154.87	155.91	154.92	155.00
56°	154.73	153.74	153.66	154.66	153.69	153.88	154.02	153.88	153.69	154.66	153.66	153.74
57°	153.49	152.48	152.43	153.40	152.36	152.50	152.65	152.50	152.36	153.40	152.43	152.48
58°	152.19	151.25	151.08	151.82	150.94	151.11	151.27	151.11	150.94	151.82	151.08	151.25
59°	150.78	149.94	149.50	150.22	149.60	149.84	149.89	149.84	149.60	150.22	149.50	149.94

60°	149.35	148.56	147.97	148.61	148.32	148.56	148.52	148.56	148.32	148.61	147.97	148.56
61°	147.92	146.99	146.50	147.01	146.78	146.89	146.97	146.89	146.78	147.01	146.50	146.99
62°	146.31	145.25	144.88	145.50	145.12	145.20	145.42	145.20	145.12	145.50	144.88	145.25
63°	144.42	143.59	143.11	143.90	143.34	143.42	143.66	143.42	143.34	143.90	143.11	143.59
64°	142.64	141.96	141.25	141.95	141.51	141.62	141.90	141.62	141.51	141.95	141.25	141.96
65°	141.00	140.03	139.33	140.00	139.59	139.68	139.90	139.68	139.59	140.00	139.33	140.03
66°	138.96	137.97	137.33	138.01	137.62	137.74	137.90	137.74	137.62	138.01	137.33	137.97
67°	136.74	135.91	135.28	135.93	135.57	135.65	135.65	135.65	135.57	135.93	135.28	135.91
68°	134.50	133.82	133.00	133.67	133.46	133.53	133.39	133.53	133.46	133.67	133.00	133.82
69°	132.24	131.34	130.61	131.31	131.09	131.05	131.08	131.05	131.09	131.31	130.61	131.34
70°	129.82	128.87	128.04	128.85	128.59	128.55	128.77	128.55	128.59	128.85	128.04	128.87
71°	127.24	126.25	125.43	126.22	125.91	125.97	126.09	125.97	125.91	126.22	125.43	126.25
72°	124.44	123.56	122.67	123.34	123.15	123.36	123.40	123.36	123.15	123.34	122.67	123.56
73°	121.45	120.68	119.89	120.37	120.28	120.40	120.40	120.40	120.28	120.37	119.89	120.68
74°	118.34	117.67	116.81	117.25	117.34	117.42	117.39	117.42	117.34	117.25	116.81	117.67
75°	114.97	114.45	113.68	113.96	114.06	114.02	113.97	114.02	114.06	113.96	113.68	114.45
76°	111.50	111.02	110.05	110.49	110.69	110.63	110.54	110.63	110.69	110.49	110.05	111.02
77°	107.83	107.44	106.41	106.86	107.01	106.88	106.85	106.88	107.01	106.86	106.41	107.44
78°	104.07	103.66	102.69	103.10	103.29	103.08	103.16	103.08	103.29	103.10	102.69	103.66
79°	100.03	99.82	98.83	99.16	99.33	99.12	99.15	99.12	99.33	99.16	98.83	99.82
80°	95.95	95.70	94.72	95.11	95.28	95.16	95.14	95.16	95.28	95.11	94.72	95.70
81°	91.80	91.53	90.53	90.84	91.03	90.90	90.83	90.90	91.03	90.84	90.53	91.53
82°	87.42	87.03	86.19	86.52	86.71	86.68	86.51	86.68	86.71	86.52	86.19	87.03
83°	82.87	82.46	81.61	81.79	82.09	81.95	81.76	81.95	82.09	81.79	81.61	82.46
84°	77.91	77.54	76.88	76.96	77.37	77.15	77.01	77.15	77.37	76.96	76.88	77.54
85°	72.81	72.36	71.78	71.80	72.11	71.89	71.77	71.89	72.11	71.80	71.78	72.36
86°	67.30	66.94	66.47	66.51	66.74	66.63	66.53	66.63	66.74	66.51	66.47	66.94
87°	61.43	61.09	60.40	60.53	60.81	60.54	60.40	60.54	60.81	60.53	60.40	61.09
88°	55.26	55.00	54.18	54.37	54.77	54.50	54.26	54.50	54.77	54.37	54.18	55.00
89°	49.03	48.67	47.96	48.13	48.49	48.14	47.83	48.14	48.49	48.13	47.96	48.67
90°	42.85	42.35	41.83	41.81	42.13	41.84	41.39	41.84	42.13	41.81	41.83	42.35
91°	38.84	38.50	38.11	38.05	38.40	38.21	37.65	38.21	38.40	38.05	38.11	38.50
92°	35.37	34.98	34.61	34.47	34.77	34.56	33.90	34.56	34.77	34.47	34.61	34.98
93°	33.45	33.09	32.87	32.81	33.26	33.07	32.34	33.07	33.26	32.81	32.87	33.09
94°	32.45	31.90	31.59	31.43	31.89	31.60	30.78	31.60	31.89	31.43	31.59	31.90
95°	32.27	31.91	31.73	31.70	32.28	32.05	31.28	32.05	32.28	31.70	31.73	31.91
96°	33.21	32.79	32.43	32.32	32.81	32.53	31.77	32.53	32.81	32.32	32.43	32.79
97°	34.53	34.35	34.11	34.28	34.78	34.56	33.77	34.56	34.78	34.28	34.11	34.35
98°	37.09	36.84	36.59	36.70	36.94	36.64	35.77	36.64	36.94	36.70	36.59	36.84
99°	40.28	39.68	39.89	40.21	40.75	40.61	39.78	40.61	40.75	40.21	39.89	39.68
100°	44.88	44.20	43.96	44.16	44.66	44.64	43.79	44.64	44.66	44.16	43.96	44.20
101°	49.54	48.88	48.55	48.86	49.38	49.32	48.55	49.32	49.38	48.86	48.55	48.88
102°	54.27	53.62	53.26	53.60	54.07	54.01	53.30	54.01	54.07	53.60	53.26	53.62
103°	59.10	58.37	57.98	58.39	58.81	58.87	58.13	58.87	58.81	58.39	57.98	58.37
104°	63.95	63.14	62.84	63.26	63.63	63.69	62.95	63.69	63.63	63.26	62.84	63.14
105°	68.87	68.01	67.72	68.22	68.53	68.63	67.94	68.63	68.53	68.22	67.72	68.01
106°	73.91	72.99	72.75	73.25	73.48	73.63	72.93	73.63	73.48	73.25	72.75	72.99
107°	79.15	78.10	77.80	78.35	78.66	78.77	78.13	78.77	78.66	78.35	77.80	78.10
108°	84.41	83.32	83.10	83.57	83.82	83.92	83.32	83.92	83.82	83.57	83.10	83.32

109°	89.57	87.86	87.88	88.85	89.01	89.09	88.46	89.09	89.01	88.85	87.88	87.86
110°	89.11	92.00	88.38	87.53	89.89	92.88	93.59	92.88	89.89	87.53	88.38	92.00
111°	85.58	80.54	84.18	82.20	79.37	78.83	78.83	78.83	79.37	82.20	84.18	80.54
112°	63.60	66.03	63.11	63.95	64.43	63.78	64.06	63.78	64.43	63.95	63.11	66.03
113°	39.78	39.46	41.42	39.84	39.47	38.96	39.11	38.96	39.47	39.84	41.42	39.46
114°	18.72	15.78	18.73	21.28	19.16	15.53	14.15	15.53	19.16	21.28	18.73	15.78
115°	3.53	6.92	3.84	5.29	8.56	8.16	7.40	8.16	8.56	5.29	3.84	6.92
116°	1.65	0.93	1.73	1.29	1.65	1.37	0.64	1.37	1.65	1.29	1.73	0.93
117°	0.75	0.82	0.68	0.73	1.42	1.26	0.65	1.26	1.42	0.73	0.68	0.82
118°	0.76	0.79	0.67	0.65	1.28	1.16	0.65	1.16	1.28	0.65	0.67	0.79
119°	0.76	0.81	0.69	0.68	1.28	1.15	0.65	1.15	1.28	0.68	0.69	0.81
120°	0.76	0.83	0.74	0.76	1.28	1.13	0.65	1.13	1.28	0.76	0.74	0.83
121°	0.76	0.85	0.76	0.85	1.28	1.12	0.65	1.12	1.28	0.85	0.76	0.85
122°	0.76	0.86	0.76	0.90	1.31	1.12	0.65	1.12	1.31	0.90	0.76	0.86
123°	0.76	0.85	0.76	0.94	1.38	1.05	0.57	1.05	1.38	0.94	0.76	0.85
124°	0.74	0.76	0.76	0.98	1.43	0.99	0.49	0.99	1.43	0.98	0.76	0.76
125°	0.71	0.62	0.73	1.01	1.42	0.99	0.49	0.99	1.42	1.01	0.73	0.62
126°	0.70	0.57	0.68	1.02	1.43	0.99	0.49	0.99	1.43	1.02	0.68	0.57
127°	0.68	0.57	0.67	1.03	1.43	0.96	0.49	0.96	1.43	1.03	0.67	0.57
128°	0.68	0.58	0.68	1.07	1.44	0.94	0.49	0.94	1.44	1.07	0.68	0.58
129°	0.71	0.59	0.69	1.10	1.44	0.92	0.49	0.92	1.44	1.10	0.69	0.59
130°	0.76	0.65	0.70	1.08	1.40	0.90	0.49	0.90	1.40	1.08	0.70	0.65
131°	0.76	0.72	0.71	1.04	1.34	0.89	0.49	0.89	1.34	1.04	0.71	0.72
132°	0.75	0.73	0.73	1.11	1.32	0.88	0.49	0.88	1.32	1.11	0.73	0.73
133°	0.75	0.73	0.74	1.18	1.35	0.87	0.49	0.87	1.35	1.18	0.74	0.73
134°	0.74	0.74	0.76	1.23	1.37	0.86	0.49	0.86	1.37	1.23	0.76	0.74
135°	0.66	0.74	0.76	1.26	1.37	0.85	0.49	0.85	1.37	1.26	0.76	0.74
136°	0.58	0.71	0.79	1.32	1.36	0.84	0.49	0.84	1.36	1.32	0.79	0.71
137°	0.57	0.67	0.82	1.37	1.35	0.83	0.49	0.83	1.35	1.37	0.82	0.67
138°	0.58	0.67	0.87	1.41	1.35	0.82	0.49	0.82	1.35	1.41	0.87	0.67
139°	0.60	0.67	0.89	1.40	1.33	0.83	0.49	0.83	1.33	1.40	0.89	0.67
140°	0.61	0.68	0.91	1.40	1.34	0.83	0.49	0.83	1.34	1.40	0.91	0.68
141°	0.62	0.70	0.93	1.41	1.35	0.80	0.49	0.80	1.35	1.41	0.93	0.70
142°	0.62	0.71	0.96	1.42	1.35	0.78	0.49	0.78	1.35	1.42	0.96	0.71
143°	0.63	0.72	0.99	1.43	1.33	0.85	0.57	0.85	1.33	1.43	0.99	0.72
144°	0.65	0.74	1.03	1.43	1.32	0.92	0.65	0.92	1.32	1.43	1.03	0.74
145°	0.65	0.76	1.09	1.43	1.32	0.90	0.65	0.90	1.32	1.43	1.09	0.76
146°	0.67	0.79	1.14	1.42	1.32	0.88	0.65	0.88	1.32	1.42	1.14	0.79
147°	0.68	0.84	1.22	1.40	1.32	0.80	0.58	0.80	1.32	1.40	1.22	0.84
148°	0.70	0.87	1.30	1.38	1.31	0.73	0.51	0.73	1.31	1.38	1.30	0.87
149°	0.71	0.90	1.37	1.37	1.30	0.74	0.51	0.74	1.30	1.37	1.37	0.90
150°	0.74	0.93	1.41	1.38	1.29	0.74	0.51	0.74	1.29	1.38	1.41	0.93
151°	0.76	0.99	1.42	1.38	1.24	0.73	0.51	0.73	1.24	1.38	1.42	0.99
152°	0.79	1.05	1.42	1.38	1.19	0.72	0.51	0.72	1.19	1.38	1.42	1.05
153°	0.82	1.12	1.43	1.37	1.13	0.72	0.51	0.72	1.13	1.37	1.43	1.12
154°	0.79	1.21	1.44	1.37	1.07	0.71	0.51	0.71	1.07	1.37	1.44	1.21
155°	0.76	1.25	1.43	1.35	1.02	0.70	0.51	0.70	1.02	1.35	1.43	1.25
156°	0.83	1.28	1.37	1.33	0.95	0.68	0.51	0.68	0.95	1.33	1.37	1.28
157°	0.92	1.28	1.32	1.31	0.86	0.60	0.45	0.60	0.86	1.31	1.32	1.28

158°	1.03	1.25	1.23	1.22	0.77	0.53	0.38	0.53	0.77	1.22	1.23	1.25
159°	1.18	1.23	1.14	1.10	0.71	0.51	0.39	0.51	0.71	1.10	1.14	1.23
160°	1.26	1.21	1.12	1.04	0.65	0.50	0.39	0.50	0.65	1.04	1.12	1.21
161°	1.24	1.18	1.11	0.99	0.62	0.49	0.39	0.49	0.62	0.99	1.11	1.18
162°	1.21	1.15	1.08	0.91	0.60	0.49	0.39	0.49	0.60	0.91	1.08	1.15
163°	1.21	1.12	1.06	0.83	0.58	0.49	0.39	0.49	0.58	0.83	1.06	1.12
164°	1.21	1.12	1.05	0.75	0.57	0.48	0.39	0.48	0.57	0.75	1.05	1.12
165°	1.17	1.11	1.04	0.71	0.55	0.47	0.39	0.47	0.55	0.71	1.04	1.11
166°	1.14	1.09	0.96	0.68	0.54	0.46	0.39	0.46	0.54	0.68	0.96	1.09
167°	1.15	1.08	0.87	0.65	0.54	0.46	0.39	0.46	0.54	0.65	0.87	1.08
168°	1.18	1.12	0.79	0.62	0.53	0.46	0.39	0.46	0.53	0.62	0.79	1.12
169°	1.20	1.04	0.75	0.60	0.51	0.45	0.39	0.45	0.51	0.60	0.75	1.04
170°	1.17	0.87	0.69	0.58	0.50	0.44	0.39	0.44	0.50	0.58	0.69	0.87
171°	0.98	0.75	0.62	0.55	0.49	0.44	0.39	0.44	0.49	0.55	0.62	0.75
172°	0.79	0.68	0.59	0.52	0.48	0.43	0.39	0.43	0.48	0.52	0.59	0.68
173°	0.70	0.61	0.56	0.51	0.47	0.43	0.39	0.43	0.47	0.51	0.56	0.61
174°	0.62	0.57	0.52	0.49	0.46	0.42	0.39	0.42	0.46	0.49	0.52	0.57
175°	0.57	0.53	0.50	0.47	0.45	0.42	0.39	0.42	0.45	0.47	0.50	0.53
176°	0.53	0.51	0.48	0.46	0.43	0.41	0.39	0.41	0.43	0.46	0.48	0.51
177°	0.49	0.48	0.46	0.44	0.43	0.40	0.39	0.40	0.43	0.44	0.46	0.48
178°	0.46	0.45	0.43	0.43	0.41	0.40	0.39	0.40	0.41	0.43	0.43	0.45
179°	0.43	0.42	0.41	0.40	0.40	0.40	0.39	0.40	0.40	0.40	0.41	0.42
180°	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Gamma	C120°	C125°	C130°	C135°	C140°	C145°	C150°	C155°	C160°	C165°	C170°	C175°
0°	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79
1°	163.62	163.60	163.57	163.55	163.53	163.51	163.49	163.48	163.46	163.45	163.45	163.43
2°	163.48	163.49	163.49	163.49	163.49	163.48	163.47	163.46	163.44	163.43	163.41	163.40
3°	163.66	163.64	163.62	163.62	163.65	163.68	163.69	163.71	163.71	163.69	163.68	163.65
4°	163.85	163.88	163.92	163.95	163.97	163.96	164.04	163.94	163.94	163.93	163.92	163.90
5°	164.21	164.18	164.18	164.19	164.19	164.18	164.15	164.12	164.10	164.08	164.07	164.05
6°	164.68	164.63	164.57	164.49	164.44	164.43	164.45	164.49	164.50	164.55	164.60	164.62
7°	165.14	165.07	165.00	164.91	164.94	164.93	165.00	165.06	165.10	165.14	165.19	165.21
8°	165.71	165.59	165.48	165.57	165.62	165.59	165.54	165.68	165.77	165.83	165.90	165.93
9°	166.29	166.20	166.25	166.27	166.25	166.30	166.34	166.40	166.50	166.52	166.54	166.59
10°	166.93	166.92	166.95	167.00	167.04	167.08	167.18	167.24	167.31	167.37	167.39	167.44
11°	167.68	167.70	167.74	167.82	167.89	167.91	168.02	168.13	168.26	168.41	168.48	168.56
12°	168.54	168.47	168.65	168.73	168.76	168.85	169.00	169.22	169.31	169.43	169.50	169.54
13°	169.52	169.48	169.59	169.67	169.70	169.92	170.12	170.24	170.26	170.28	170.31	170.35
14°	170.49	170.42	170.51	170.76	170.87	171.00	171.14	171.12	171.09	171.03	171.09	171.15
15°	171.42	171.34	171.41	171.68	171.93	172.01	172.04	171.97	171.89	171.85	171.92	171.93
16°	172.34	172.30	172.39	172.63	172.83	172.88	172.84	172.73	172.64	172.62	172.64	172.64
17°	173.19	173.30	173.56	173.54	173.66	173.60	173.53	173.38	173.24	173.25	173.31	173.36
18°	174.08	174.32	174.69	174.59	174.44	174.34	174.15	173.97	173.93	173.94	173.98	174.05
19°	174.96	175.30	175.50	175.45	175.20	174.99	174.70	174.58	174.59	174.62	174.66	174.75
20°	175.78	176.05	176.03	175.98	175.83	175.53	175.20	175.08	175.17	175.25	175.27	175.52
21°	176.47	176.72	176.53	176.50	176.23	175.95	175.67	175.59	175.67	175.79	175.86	176.22
22°	177.05	177.21	177.03	176.92	176.52	176.28	176.15	176.14	176.19	176.31	176.37	176.76
23°	177.49	177.46	177.34	177.02	176.68	176.58	176.51	176.67	176.67	176.75	176.81	177.05
24°	177.75	177.65	177.38	177.01	176.72	176.72	176.72	176.94	176.94	177.05	177.11	177.30

25°	177.97	177.69	177.30	176.99	176.78	176.81	176.88	177.05	177.05	177.18	177.33	177.54
26°	177.74	177.58	177.09	176.82	176.72	176.99	176.96	177.06	177.08	177.25	177.55	177.93
27°	177.48	177.24	176.81	176.61	176.56	176.97	176.96	176.98	177.11	177.48	177.70	178.13
28°	177.14	176.71	176.47	176.27	176.42	176.72	176.78	176.88	177.20	177.60	177.75	178.19
29°	176.66	176.09	175.98	175.78	176.13	176.38	176.45	176.92	177.28	177.55	177.74	178.13
30°	176.02	175.44	175.56	175.42	175.75	175.95	176.32	176.83	177.18	177.35	177.67	178.05
31°	175.36	174.78	174.89	175.03	175.30	175.48	176.14	176.56	176.86	177.06	177.10	177.14
32°	174.65	174.14	174.14	174.64	174.78	175.17	175.82	176.04	176.42	176.14	175.94	175.95
33°	173.86	173.50	173.58	174.06	174.21	174.79	175.38	175.52	175.35	174.82	174.66	174.67
34°	173.06	172.81	173.07	173.48	173.72	174.32	174.75	174.75	174.20	173.46	173.39	173.38
35°	172.27	172.11	172.51	172.88	173.30	173.74	174.15	173.61	172.99	172.26	172.19	172.24
36°	171.47	171.33	171.86	172.16	172.72	173.06	173.14	172.30	171.67	171.20	171.18	171.30
37°	170.53	170.61	171.17	171.52	172.14	172.42	171.85	171.06	170.38	170.20	170.32	170.30
38°	169.65	169.98	170.52	170.96	171.50	171.60	170.62	169.76	169.34	169.28	169.44	169.44
39°	168.90	169.35	169.81	170.42	170.78	170.49	169.49	168.62	168.52	168.48	168.28	168.87
40°	168.18	168.70	169.12	169.87	170.07	169.22	168.26	167.60	167.67	167.87	168.12	168.34
41°	167.44	168.12	168.46	169.23	169.27	167.93	167.04	166.63	166.82	167.30	167.65	167.82
42°	166.69	167.50	167.92	168.59	168.15	166.78	165.98	165.83	166.20	166.72	167.12	167.31
43°	165.90	166.79	167.31	167.94	166.94	165.76	165.13	165.18	165.64	166.16	166.46	166.74
44°	165.22	166.09	166.69	167.18	165.80	164.65	164.18	164.65	165.12	165.62	165.82	166.18
45°	164.63	165.34	166.17	166.26	164.85	163.50	163.24	164.03	164.58	165.05	165.28	165.67
46°	164.00	164.62	165.54	165.09	163.81	162.46	162.61	163.25	163.93	164.36	164.84	164.95
47°	163.15	163.93	164.78	163.99	162.57	161.60	162.08	162.60	163.25	163.76	163.97	164.09
48°	162.30	163.17	163.90	162.82	161.37	160.75	161.49	162.15	162.63	162.81	163.03	163.18
49°	161.54	162.37	162.96	161.70	160.27	159.91	160.79	161.59	161.92	161.91	161.99	162.15
50°	160.77	161.55	162.04	160.57	159.12	159.21	159.97	160.69	160.95	160.89	160.88	161.13
51°	159.85	160.70	161.07	159.27	157.97	158.49	159.18	159.93	159.96	159.75	159.85	160.02
52°	158.94	159.82	159.85	157.92	156.96	157.70	158.35	158.97	158.85	158.70	158.74	158.85
53°	158.02	158.89	158.55	156.66	155.91	156.68	157.40	157.88	157.64	157.61	157.47	157.59
54°	157.08	157.82	157.11	155.32	154.77	155.66	156.49	156.71	156.41	156.36	156.19	156.30
55°	155.92	156.58	155.62	153.90	153.70	154.74	155.44	155.27	155.07	154.95	154.98	155.05
56°	154.73	155.26	154.08	152.45	152.63	153.71	154.13	153.77	153.72	153.43	153.58	153.90
57°	153.49	153.97	152.47	151.01	151.40	152.53	152.75	152.32	152.33	151.97	152.24	152.55
58°	152.19	152.61	150.85	149.53	150.08	151.18	151.20	150.88	150.72	150.50	150.78	151.05
59°	150.78	151.18	149.31	148.03	148.83	149.83	149.64	149.33	149.20	149.11	149.20	149.66
60°	149.35	149.64	147.50	146.50	147.64	148.42	148.03	147.73	147.63	147.45	147.78	148.58
61°	147.92	147.89	145.70	145.03	146.09	146.72	146.34	145.98	146.02	145.73	146.58	147.24
62°	146.31	146.14	143.92	143.48	144.50	145.05	144.56	144.22	144.36	144.23	145.28	145.46
63°	144.42	144.38	142.09	141.92	143.01	143.25	142.70	142.48	142.56	142.88	143.45	143.46
64°	142.64	142.41	140.20	140.12	141.31	141.09	140.77	140.63	140.54	141.40	141.34	141.44
65°	141.00	140.35	138.23	138.31	139.48	139.20	138.90	138.73	138.66	139.45	139.22	139.54
66°	138.96	138.04	136.12	136.39	137.55	137.29	136.89	136.58	136.65	137.18	137.21	137.49
67°	136.74	135.63	133.83	134.35	135.57	134.93	134.58	134.29	134.90	134.83	135.29	135.10
68°	134.50	133.27	131.56	132.32	133.37	132.55	132.44	131.90	132.73	132.61	132.84	132.64
69°	132.24	130.73	129.44	130.06	130.95	130.10	130.10	129.58	130.29	130.41	130.37	130.24
70°	129.82	128.14	126.91	127.66	128.46	127.59	127.49	127.18	127.71	127.96	127.84	127.97
71°	127.24	125.60	124.01	125.24	125.79	125.07	124.96	124.75	125.00	125.21	125.25	125.67
72°	124.44	122.92	121.37	122.40	123.00	122.38	122.24	122.22	122.21	122.36	122.72	123.05
73°	121.45	119.86	118.67	119.57	120.06	119.46	119.28	119.50	119.55	119.35	120.00	120.17

74°	118.34	116.66	115.60	116.78	116.76	116.39	116.11	116.58	116.48	116.35	116.89	116.98
75°	114.97	113.38	112.43	113.48	113.54	113.11	112.83	113.18	113.39	113.26	113.61	113.84
76°	111.50	109.83	109.15	110.11	110.06	109.69	109.41	109.71	109.84	110.11	110.20	110.72
77°	107.83	106.18	105.49	106.71	106.40	106.25	105.82	106.19	106.26	106.70	106.70	107.19
78°	104.07	102.33	101.79	103.05	102.65	102.46	102.05	102.40	102.64	103.10	103.08	103.52
79°	100.03	98.37	98.08	99.22	98.77	98.57	98.19	98.50	98.61	99.22	99.07	99.62
80°	95.95	94.36	94.01	94.78	94.72	94.52	94.23	94.43	94.79	95.14	95.29	95.78
81°	91.80	90.17	89.84	91.12	90.50	90.39	90.06	90.16	90.55	91.00	91.13	91.85
82°	87.42	85.93	85.50	86.79	86.28	86.13	85.72	85.89	86.39	86.69	86.81	87.67
83°	82.87	81.26	80.99	82.27	81.67	81.56	81.40	81.30	81.86	82.09	82.40	82.82
84°	77.91	76.43	76.32	77.52	76.86	76.77	76.68	76.69	77.19	77.32	77.70	77.93
85°	72.81	71.43	71.25	72.43	71.82	71.80	71.67	71.61	72.35	72.36	72.78	73.11
86°	67.30	65.97	65.89	67.08	66.42	66.41	66.40	66.20	67.11	67.02	67.65	68.04
87°	61.43	60.30	60.26	61.40	60.64	60.61	60.70	60.55	61.50	61.34	62.10	62.62
88°	55.26	54.12	54.12	55.22	54.60	54.50	54.64	54.43	55.51	55.28	56.10	56.70
89°	49.03	48.05	48.03	49.05	48.48	48.26	48.31	48.01	49.19	48.99	49.64	50.44
90°	42.85	42.03	41.94	43.13	42.55	42.53	42.50	42.33	43.52	43.20	44.24	45.06
91°	38.84	38.08	37.92	38.97	38.16	37.92	37.79	37.57	38.89	38.53	39.31	40.03
92°	35.37	34.80	34.77	35.89	35.26	35.25	35.25	34.96	36.11	35.98	36.70	37.50
93°	33.45	32.74	32.57	33.80	33.37	33.28	33.06	32.88	33.98	33.78	34.42	35.37
94°	32.45	31.90	31.74	32.67	32.22	32.21	31.99	31.63	32.69	32.71	33.23	34.03
95°	32.27	31.64	31.57	32.58	32.04	32.04	31.87	31.36	32.39	32.55	33.02	33.72
96°	33.21	32.68	32.24	33.23	32.90	32.63	32.70	31.96	33.13	33.15	33.50	34.12
97°	34.53	34.18	33.90	34.70	34.48	34.31	34.12	33.72	34.54	34.76	35.01	35.74
98°	37.09	36.32	36.14	37.05	36.68	36.38	36.40	35.93	36.52	37.02	37.22	37.47
99°	40.28	39.86	39.27	40.20	39.50	39.58	39.31	38.86	39.49	40.03	40.22	40.01
100°	44.88	43.95	43.51	43.74	43.94	43.71	43.43	42.64	42.93	43.64	43.80	43.79
101°	49.54	48.63	48.15	48.80	48.60	48.38	48.12	47.68	47.70	48.22	48.42	48.15
102°	54.27	53.37	52.80	53.49	53.29	53.18	52.90	52.46	52.44	53.10	53.07	52.92
103°	59.10	58.15	57.48	58.18	58.17	57.98	57.59	57.21	57.09	58.06	57.96	57.73
104°	63.95	63.01	62.19	62.79	62.89	62.71	62.31	62.04	61.81	62.70	62.76	62.56
105°	68.87	67.93	66.98	67.47	67.72	67.55	67.27	66.96	66.53	67.14	67.47	67.04
106°	73.91	73.07	71.87	72.27	72.69	72.47	72.27	72.01	71.28	71.61	72.51	72.01
107°	79.15	78.30	76.95	77.33	77.90	77.50	77.38	77.16	76.07	76.80	77.68	77.34
108°	84.41	83.63	82.14	82.51	83.12	82.86	82.64	81.99	81.37	81.42	81.03	82.34
109°	89.57	88.06	86.78	87.73	88.03	88.17	87.87	84.85	84.88	86.51	82.09	88.04
110°	89.11	91.89	87.75	87.81	90.51	91.42	89.29	83.77	85.12	91.55	81.16	84.77
111°	85.58	81.40	80.62	81.60	84.04	87.04	80.31	76.70	80.27	75.65	76.11	73.52
112°	63.60	66.03	65.10	65.69	69.38	63.34	57.52	58.90	68.36	41.66	66.10	59.41
113°	39.78	39.52	40.44	41.88	43.99	35.76	30.76	36.48	48.18	20.95	50.43	42.03
114°	18.72	19.13	16.64	18.96	18.86	22.12	13.06	16.66	20.37	10.04	17.70	23.34
115°	3.53	6.62	6.87	6.56	5.41	9.57	5.44	3.62	7.11	3.98	4.82	8.38
116°	1.65	1.84	1.28	0.96	2.09	2.43	1.77	1.02	1.77	1.29	1.10	1.51
117°	0.75	0.81	0.62	0.52	0.77	0.97	0.85	0.58	0.60	0.57	0.54	0.69
118°	0.76	0.73	0.51	0.50	0.81	0.94	0.67	0.46	0.49	0.44	0.46	0.59
119°	0.76	0.74	0.51	0.55	0.80	1.20	0.72	0.44	0.44	0.43	0.43	0.48
120°	0.76	0.66	0.60	0.62	0.76	1.37	0.69	0.46	0.45	0.43	0.43	0.43
121°	0.76	0.62	0.68	0.65	0.64	1.26	0.68	0.53	0.48	0.43	0.43	0.43
122°	0.76	0.71	0.68	0.66	0.54	1.01	0.77	0.64	0.51	0.43	0.40	0.45

123°	0.76	0.76	0.70	0.65	0.51	0.89	0.90	0.71	0.54	0.46	0.35	0.44
124°	0.74	0.76	0.71	0.63	0.51	0.78	1.08	0.77	0.59	0.49	0.32	0.43
125°	0.71	0.76	0.71	0.60	0.52	0.68	1.36	0.85	0.64	0.53	0.39	0.43
126°	0.70	0.75	0.73	0.54	0.52	0.62	1.20	0.96	0.71	0.58	0.49	0.48
127°	0.68	0.76	0.73	0.53	0.52	0.56	0.95	1.09	0.78	0.64	0.59	0.54
128°	0.68	0.77	0.74	0.54	0.52	0.52	0.79	1.26	0.87	0.71	0.69	0.62
129°	0.71	0.77	0.76	0.57	0.52	0.51	0.70	1.33	1.00	0.78	0.79	0.71
130°	0.76	0.78	0.76	0.59	0.52	0.52	0.62	0.99	1.16	0.88	0.85	0.79
131°	0.76	0.77	0.76	0.62	0.51	0.52	0.57	0.80	1.38	1.01	0.90	0.84
132°	0.75	0.76	0.76	0.65	0.52	0.52	0.51	0.68	1.11	1.18	0.99	0.89
133°	0.75	0.76	0.77	0.68	0.54	0.52	0.51	0.60	0.85	1.37	1.12	0.98
134°	0.74	0.74	0.78	0.73	0.56	0.51	0.51	0.54	0.70	0.97	1.27	1.08
135°	0.66	0.72	0.77	0.76	0.59	0.51	0.52	0.51	0.61	0.75	0.87	1.10
136°	0.58	0.70	0.76	0.76	0.62	0.52	0.52	0.51	0.54	0.64	0.63	0.74
137°	0.57	0.68	0.76	0.76	0.67	0.54	0.52	0.51	0.51	0.57	0.52	0.57
138°	0.58	0.65	0.76	0.72	0.71	0.57	0.51	0.51	0.51	0.52	0.46	0.49
139°	0.60	0.62	0.74	0.70	0.75	0.60	0.51	0.52	0.52	0.51	0.40	0.43
140°	0.61	0.61	0.66	0.68	0.73	0.62	0.52	0.52	0.52	0.52	0.40	0.39
141°	0.62	0.59	0.61	0.66	0.68	0.62	0.53	0.51	0.51	0.51	0.41	0.41
142°	0.62	0.57	0.60	0.60	0.64	0.60	0.54	0.52	0.51	0.51	0.46	0.44
143°	0.63	0.57	0.60	0.51	0.60	0.58	0.57	0.54	0.51	0.51	0.48	0.48
144°	0.65	0.57	0.56	0.50	0.55	0.57	0.58	0.55	0.52	0.51	0.51	0.51
145°	0.65	0.58	0.54	0.50	0.52	0.56	0.60	0.57	0.54	0.52	0.52	0.56
146°	0.67	0.60	0.54	0.52	0.51	0.57	0.60	0.59	0.57	0.54	0.53	0.56
147°	0.68	0.62	0.55	0.56	0.51	0.60	0.61	0.60	0.58	0.56	0.55	0.57
148°	0.70	0.64	0.60	0.61	0.54	0.64	0.62	0.60	0.60	0.58	0.57	0.58
149°	0.71	0.65	0.69	0.65	0.61	0.65	0.64	0.61	0.60	0.60	0.59	0.59
150°	0.74	0.68	0.74	0.69	0.66	0.65	0.65	0.62	0.60	0.60	0.60	0.60
151°	0.76	0.71	0.71	0.74	0.69	0.66	0.65	0.64	0.62	0.61	0.60	0.57
152°	0.79	0.68	0.65	0.71	0.71	0.68	0.63	0.65	0.63	0.62	0.60	0.55
153°	0.82	0.60	0.62	0.69	0.73	0.71	0.60	0.62	0.65	0.64	0.59	0.54
154°	0.79	0.57	0.60	0.65	0.72	0.69	0.58	0.61	0.62	0.65	0.57	0.53
155°	0.76	0.59	0.57	0.63	0.68	0.65	0.57	0.59	0.60	0.62	0.55	0.51
156°	0.83	0.64	0.55	0.60	0.64	0.59	0.57	0.58	0.59	0.60	0.54	0.51
157°	0.92	0.68	0.57	0.57	0.60	0.57	0.57	0.57	0.57	0.58	0.54	0.53
158°	1.03	0.74	0.62	0.55	0.57	0.56	0.57	0.57	0.57	0.57	0.54	0.54
159°	1.18	0.83	0.69	0.57	0.56	0.55	0.56	0.57	0.57	0.57	0.55	0.55
160°	1.26	0.95	0.76	0.60	0.54	0.54	0.55	0.56	0.57	0.57	0.57	0.57
161°	1.24	1.07	0.80	0.65	0.57	0.54	0.55	0.56	0.57	0.57	0.56	0.56
162°	1.21	1.22	0.87	0.72	0.62	0.56	0.54	0.55	0.57	0.56	0.55	0.56
163°	1.21	1.27	1.02	0.82	0.69	0.61	0.57	0.54	0.56	0.55	0.55	0.55
164°	1.21	1.25	1.21	0.94	0.78	0.68	0.62	0.57	0.54	0.55	0.55	0.55
165°	1.17	1.21	1.26	1.12	0.91	0.79	0.71	0.63	0.59	0.57	0.56	0.55
166°	1.14	1.21	1.25	1.28	1.12	0.96	0.80	0.71	0.67	0.65	0.64	0.62
167°	1.15	1.22	1.27	1.31	1.38	1.17	0.95	0.84	0.79	0.76	0.74	0.71
168°	1.18	1.24	1.29	1.34	1.37	1.35	1.17	1.02	0.94	0.90	0.87	0.84
169°	1.20	1.25	1.30	1.34	1.32	1.31	1.28	1.28	1.18	1.11	1.06	1.01
170°	1.17	1.23	1.28	1.29	1.29	1.28	1.28	1.26	1.26	1.26	1.27	1.28
171°	0.98	1.19	1.23	1.24	1.25	1.26	1.27	1.27	1.24	1.22	1.23	1.25

172°	0.79	1.01	1.18	1.21	1.23	1.23	1.25	1.24	1.22	1.20	1.21	1.23
173°	0.70	0.79	0.98	1.15	1.19	1.21	1.21	1.21	1.20	1.19	1.21	1.23
174°	0.62	0.70	0.76	0.88	1.02	1.14	1.18	1.18	1.18	1.18	1.20	1.21
175°	0.57	0.61	0.66	0.72	0.78	0.85	0.93	1.01	1.07	1.12	1.15	1.17
176°	0.53	0.56	0.59	0.62	0.65	0.70	0.82	0.76	0.78	0.79	0.80	0.80
177°	0.49	0.51	0.53	0.55	0.57	0.59	0.60	0.62	0.62	0.63	0.63	0.63
178°	0.46	0.47	0.48	0.49	0.50	0.51	0.51	0.52	0.53	0.53	0.54	0.54
179°	0.43	0.43	0.43	0.44	0.44	0.45	0.45	0.46	0.46	0.46	0.46	0.46
180°	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Gamma	C180°	C185°	C190°	C195°	C200°	C205°	C210°	C215°	C220°	C225°	C230°	C235°
0°	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79
1°	163.43	163.44	163.45	163.46	163.47	163.48	163.49	163.51	163.53	163.55	163.57	163.59
2°	163.38	163.40	163.41	163.43	163.44	163.46	163.46	163.48	163.49	163.49	163.50	163.50
3°	163.62	163.63	163.64	163.65	163.64	163.63	163.62	163.61	163.60	163.59	163.60	163.62
4°	163.87	163.85	163.84	163.82	163.79	163.77	163.80	163.82	163.86	163.87	163.87	163.86
5°	164.03	164.00	163.96	163.93	163.89	163.88	163.96	164.02	164.08	164.12	164.14	164.17
6°	164.60	164.56	164.48	164.37	164.28	164.29	164.27	164.26	164.33	164.43	164.54	164.61
7°	165.18	165.11	165.01	164.88	164.87	164.90	164.90	164.85	164.89	164.91	165.02	165.08
8°	165.91	165.81	165.66	165.51	165.56	165.57	165.51	165.60	165.65	165.65	165.64	165.76
9°	166.58	166.49	166.35	166.31	166.37	166.37	166.39	166.40	166.38	166.49	166.58	166.56
10°	167.43	167.34	167.18	167.20	167.25	167.26	167.28	167.26	167.30	167.39	167.50	167.48
11°	168.52	168.40	168.20	168.24	168.22	168.17	168.15	168.14	168.20	168.28	168.28	168.22
12°	169.53	169.34	169.14	169.26	169.31	169.28	169.14	169.11	169.09	169.12	169.04	168.89
13°	170.37	170.12	169.97	170.17	170.31	170.36	170.32	170.25	170.11	170.06	169.92	169.97
14°	171.17	170.97	170.89	171.08	171.29	171.42	171.45	171.41	171.37	171.27	171.05	171.06
15°	171.89	171.74	171.74	171.92	172.26	172.41	172.44	172.56	172.59	172.42	172.18	172.15
16°	172.56	172.34	172.41	172.67	173.08	173.28	173.35	173.57	173.68	173.64	173.35	173.25
17°	173.24	173.03	173.14	173.44	173.84	174.05	174.35	174.57	174.67	174.69	174.56	174.34
18°	173.96	173.84	173.93	174.25	174.61	174.70	175.17	175.56	175.65	175.70	175.67	175.47
19°	174.73	174.59	174.66	174.97	175.25	175.37	175.83	176.29	176.55	176.63	176.79	176.64
20°	175.43	175.25	175.33	175.60	175.86	176.06	176.49	176.88	177.32	177.45	177.69	177.61
21°	176.02	175.92	176.00	176.20	176.43	176.72	177.11	177.49	177.84	178.26	178.37	178.35
22°	176.53	176.55	176.55	176.81	176.91	177.17	177.53	177.90	178.30	178.84	178.84	178.85
23°	177.02	177.01	176.96	177.20	177.25	177.51	177.75	178.12	178.64	178.99	179.29	179.27
24°	177.33	177.28	177.23	177.45	177.50	177.71	177.89	178.24	178.85	178.97	179.53	179.66
25°	177.58	177.34	177.41	177.50	177.61	177.78	178.01	178.23	178.64	178.86	179.46	179.75
26°	177.99	177.53	177.64	177.55	177.62	177.76	178.00	178.16	178.34	178.78	179.22	179.74
27°	178.25	177.70	177.86	177.89	177.63	177.60	177.78	177.94	178.05	178.58	178.81	179.47
28°	178.40	177.89	177.98	178.19	177.77	177.43	177.39	177.56	177.67	178.05	178.33	178.91
29°	178.44	177.93	178.02	178.23	177.83	177.57	176.98	177.14	177.25	177.46	177.78	178.31
30°	178.49	177.93	178.03	178.11	177.82	177.53	176.96	176.66	176.75	176.94	177.16	177.64
31°	177.39	176.99	177.52	178.00	177.71	177.43	176.98	176.01	176.17	176.25	176.44	176.94
32°	176.08	175.77	176.36	177.05	177.71	177.28	176.92	175.85	175.45	175.56	175.70	176.11
33°	174.81	174.56	175.08	175.78	176.79	177.05	176.71	175.67	174.64	174.83	174.93	175.25
34°	173.56	173.33	173.86	174.49	175.45	176.27	176.18	175.42	174.11	174.00	174.11	174.27
35°	172.36	172.15	172.65	173.27	174.05	175.01	175.75	174.99	173.83	173.10	173.28	173.28
36°	171.48	171.16	171.52	172.09	172.70	173.79	174.84	174.56	173.45	172.19	172.42	172.36
37°	170.56	170.21	170.51	171.08	171.51	172.64	173.69	174.20	172.98	171.49	171.39	171.42
38°	169.81	169.35	169.64	170.09	170.40	171.35	172.47	173.53	172.59	171.12	170.52	170.55

39°	169.19	168.76	168.52	169.08	169.42	170.02	171.23	172.23	172.12	170.69	169.59	169.78
40°	168.65	168.22	168.31	168.24	168.55	168.95	169.87	170.95	171.66	170.31	168.80	169.03
41°	168.14	167.70	167.69	167.59	167.76	168.04	168.62	169.86	171.03	169.90	168.00	168.20
42°	167.68	167.15	167.15	166.98	167.08	167.09	167.48	168.79	169.91	169.46	167.53	167.32
43°	167.09	166.49	166.51	166.44	166.31	166.22	166.48	167.60	168.86	168.93	167.08	166.45
44°	166.44	165.89	165.89	165.83	165.68	165.54	165.49	166.39	167.82	168.39	166.58	165.60
45°	165.92	165.42	165.34	165.23	165.18	164.86	164.65	165.23	166.63	167.88	166.09	164.76
46°	165.12	164.73	164.85	164.71	164.60	164.18	163.93	164.26	165.40	166.82	165.65	163.89
47°	164.30	163.87	164.04	164.22	163.91	163.44	163.18	163.33	164.19	165.82	165.23	162.93
48°	163.38	162.93	163.16	163.27	163.20	162.71	162.32	162.42	163.04	164.69	164.61	162.14
49°	162.35	161.93	162.14	162.31	162.47	162.00	161.55	161.40	161.92	163.40	163.88	161.54
50°	161.38	160.98	161.11	161.37	161.62	161.26	160.82	160.43	160.79	162.18	163.24	160.90
51°	160.21	159.88	160.26	160.38	160.66	160.57	160.10	159.44	159.59	161.05	162.59	160.08
52°	159.02	158.61	159.09	159.33	159.56	159.62	159.21	158.45	158.31	159.77	161.39	159.32
53°	157.70	157.33	157.77	158.14	158.48	158.63	158.24	157.58	157.14	158.34	160.03	158.66
54°	156.44	156.13	156.41	156.80	157.36	157.56	157.22	156.66	156.09	156.98	158.68	157.87
55°	155.16	154.91	155.13	155.42	156.10	156.35	156.10	155.55	154.99	155.54	157.41	156.92
56°	154.13	153.77	153.86	154.00	154.61	155.08	154.86	154.42	153.77	154.08	155.96	155.80
57°	152.72	152.48	152.67	152.67	153.02	153.57	153.57	153.16	152.47	152.67	154.39	154.57
58°	151.27	151.09	151.39	151.33	151.44	152.03	152.21	151.86	151.16	151.15	152.72	153.39
59°	150.05	149.81	150.03	150.08	149.99	150.50	150.89	150.69	149.69	149.57	150.89	152.25
60°	149.19	148.81	148.66	148.63	148.42	148.91	149.39	149.19	148.21	147.96	149.08	150.91
61°	147.61	147.44	147.54	147.01	146.91	147.15	147.86	147.56	146.76	146.37	147.34	149.44
62°	145.71	145.61	146.20	145.43	145.45	145.35	146.00	146.01	145.31	144.73	145.51	147.61
63°	143.66	143.64	144.27	144.19	143.76	143.53	144.11	144.31	143.76	143.05	143.66	145.77
64°	141.76	141.65	142.17	142.81	141.94	141.73	142.12	142.34	142.03	141.22	141.73	143.81
65°	140.01	139.64	140.00	140.65	140.15	139.92	140.12	140.50	140.20	139.26	139.73	141.72
66°	137.82	137.59	137.81	138.40	138.46	138.01	138.07	138.56	138.21	137.26	137.65	139.49
67°	135.57	135.44	135.65	135.91	136.80	135.95	135.74	136.31	136.18	135.18	135.31	137.15
68°	133.21	133.21	133.30	133.49	134.46	133.75	133.49	134.05	134.07	133.05	132.95	134.74
69°	130.86	130.79	130.93	131.05	131.93	131.39	131.24	131.78	131.72	130.87	130.51	132.29
70°	128.72	128.44	128.49	128.57	129.31	129.22	128.91	129.34	129.27	128.47	128.05	129.85
71°	126.08	126.04	125.96	126.05	126.55	126.87	126.29	126.61	126.75	125.91	125.54	127.11
72°	123.28	123.31	123.44	123.38	123.68	124.36	123.59	123.80	124.05	123.28	122.75	124.24
73°	120.32	120.43	120.97	120.64	120.64	121.78	120.81	120.92	121.22	120.53	119.89	121.14
74°	117.50	117.36	117.91	117.69	117.59	118.51	117.91	117.80	118.27	117.67	116.76	117.97
75°	114.81	114.34	114.74	114.66	114.34	115.28	114.73	114.53	115.01	114.42	113.54	114.73
76°	111.28	111.31	111.41	111.53	111.05	111.68	111.40	111.09	111.59	111.04	110.21	111.20
77°	107.60	107.68	107.84	108.29	107.63	107.98	107.85	107.63	108.00	107.51	106.60	107.56
78°	103.82	103.89	104.25	104.52	103.94	104.11	104.25	103.87	104.22	103.87	102.91	103.76
79°	100.06	100.01	100.56	100.78	100.02	100.22	100.46	100.08	100.35	100.13	99.11	99.82
80°	96.41	96.23	96.75	96.89	96.34	96.22	96.44	96.14	96.31	96.00	95.17	95.79
81°	92.07	92.41	92.56	92.74	92.32	91.92	92.29	92.06	92.14	92.23	91.14	91.56
82°	87.84	88.17	88.15	88.24	88.16	87.54	88.10	87.83	87.79	87.97	86.83	87.27
83°	83.45	83.52	83.51	83.80	83.70	82.98	83.68	83.34	83.26	83.60	82.35	82.67
84°	78.85	78.75	78.98	79.02	79.10	78.26	78.93	78.58	78.57	78.84	77.73	77.96
85°	74.12	73.99	74.02	73.93	74.22	73.16	74.06	73.61	73.69	73.92	72.77	73.13
86°	67.62	68.75	68.51	68.77	68.94	67.94	68.79	68.36	68.48	68.79	67.47	67.68
87°	61.53	63.34	63.21	63.09	63.38	62.24	63.14	62.76	62.81	63.18	61.90	62.05

88°	55.53	57.35	57.04	57.09	57.42	56.17	57.09	56.79	56.81	57.17	55.93	56.11
89°	49.79	51.10	50.73	50.80	51.23	50.00	50.75	50.66	50.79	51.28	50.19	50.37
90°	44.61	45.51	45.23	45.14	45.56	44.46	45.50	45.05	45.17	45.77	44.60	44.75
91°	41.14	40.78	40.42	40.47	40.92	39.81	40.62	40.67	41.00	41.88	40.81	41.03
92°	38.38	37.92	37.68	37.59	38.03	36.92	37.80	37.74	37.92	38.65	37.63	37.81
93°	36.11	35.57	35.17	35.23	35.59	34.46	35.22	35.39	35.67	36.14	35.10	35.43
94°	34.54	34.45	33.84	33.84	34.02	32.98	33.75	33.89	34.13	34.68	33.94	34.22
95°	33.75	34.39	33.51	33.35	33.54	32.55	33.24	33.42	33.67	34.33	33.45	33.56
96°	34.92	34.89	34.16	34.02	34.11	33.04	33.70	33.90	34.16	34.73	33.78	34.21
97°	36.56	35.98	35.26	35.18	35.12	34.35	34.95	35.13	35.38	35.95	35.20	35.42
98°	38.53	37.67	37.20	37.20	37.11	36.25	36.82	37.09	37.28	37.94	37.08	37.39
99°	41.03	40.17	40.50	40.69	40.28	39.43	39.50	39.83	39.99	40.68	39.66	40.41
100°	44.14	44.03	44.24	44.62	43.64	42.99	43.28	43.61	44.00	43.74	43.51	43.93
101°	48.71	48.46	48.08	48.54	47.87	47.48	47.69	47.94	48.39	48.66	47.85	48.43
102°	53.44	52.92	52.59	53.13	52.32	52.02	52.27	52.43	52.97	53.15	52.40	53.01
103°	58.09	57.50	57.07	57.83	56.85	56.65	56.85	57.21	57.66	57.66	56.96	57.65
104°	62.69	62.25	61.72	62.45	61.51	61.44	61.55	61.70	62.40	62.37	61.57	62.35
105°	67.50	66.68	66.36	66.71	66.24	66.30	66.39	66.61	67.25	67.14	66.42	67.09
106°	72.00	71.33	71.39	71.36	71.21	71.42	71.33	71.66	72.19	71.97	71.33	72.10
107°	77.18	76.47	76.97	76.44	76.46	76.60	76.43	76.69	77.25	76.91	76.35	77.23
108°	82.90	82.14	82.86	82.08	82.99	82.32	81.61	81.77	82.56	82.16	81.60	82.56
109°	89.11	87.95	88.16	88.51	90.14	88.45	86.88	87.59	88.22	87.69	86.87	88.04
110°	93.81	90.52	90.59	92.42	93.47	91.24	90.92	92.19	94.01	91.57	91.26	93.61
111°	77.08	86.92	87.79	94.45	88.93	89.37	93.22	93.58	91.00	90.12	89.51	89.99
112°	59.55	75.55	78.16	83.78	77.54	86.59	87.73	81.82	80.71	79.65	80.49	81.77
113°	39.80	54.63	56.17	52.46	55.10	68.37	67.89	58.07	57.75	59.57	59.06	61.40
114°	19.81	29.34	13.52	14.03	16.22	35.45	21.27	18.36	27.68	34.93	33.81	36.58
115°	6.37	9.56	2.43	2.91	2.84	8.86	4.53	5.23	4.31	12.33	12.83	10.60
116°	1.08	1.34	0.77	1.12	0.94	2.58	1.47	2.73	2.02	2.56	1.70	2.10
117°	0.79	0.78	0.57	0.72	0.68	0.94	0.99	1.90	1.12	0.93	0.97	1.06
118°	0.64	0.60	0.46	0.51	0.54	0.69	0.75	1.54	0.82	0.71	0.79	0.91
119°	0.51	0.48	0.42	0.47	0.46	0.55	0.73	1.37	0.69	0.68	0.80	0.90
120°	0.43	0.43	0.42	0.44	0.45	0.49	0.78	1.40	0.63	0.62	0.79	0.90
121°	0.43	0.44	0.44	0.43	0.48	0.49	0.83	1.31	0.66	0.58	0.76	0.87
122°	0.43	0.44	0.44	0.43	0.51	0.50	0.83	1.07	0.68	0.60	0.68	0.80
123°	0.43	0.44	0.43	0.45	0.54	0.54	0.90	0.92	0.65	0.62	0.61	0.74
124°	0.43	0.43	0.43	0.47	0.59	0.60	1.08	0.80	0.62	0.64	0.61	0.66
125°	0.42	0.43	0.47	0.54	0.64	0.76	1.35	0.71	0.57	0.65	0.63	0.64
126°	0.46	0.47	0.52	0.64	0.71	0.95	1.23	0.64	0.55	0.65	0.70	0.66
127°	0.51	0.54	0.60	0.74	0.79	1.10	1.00	0.57	0.57	0.66	0.74	0.70
128°	0.60	0.62	0.69	0.82	0.89	1.26	0.83	0.52	0.57	0.68	0.76	0.75
129°	0.68	0.71	0.79	0.89	1.01	1.34	0.71	0.51	0.54	0.68	0.76	0.76
130°	0.79	0.79	0.85	0.98	1.16	1.01	0.62	0.51	0.51	0.70	0.76	0.76
131°	0.82	0.83	0.91	1.10	1.38	0.82	0.56	0.51	0.51	0.68	0.76	0.76
132°	0.87	0.89	1.00	1.26	1.12	0.69	0.51	0.52	0.53	0.67	0.76	0.76
133°	0.94	0.98	1.13	1.40	0.85	0.60	0.52	0.51	0.55	0.68	0.76	0.76
134°	1.05	1.09	1.29	0.97	0.70	0.54	0.53	0.51	0.57	0.72	0.75	0.77
135°	1.18	1.10	0.96	0.76	0.61	0.51	0.53	0.51	0.60	0.76	0.74	0.78
136°	0.79	0.73	0.73	0.65	0.55	0.52	0.52	0.52	0.63	0.76	0.74	0.79

137°	0.60	0.56	0.59	0.57	0.51	0.53	0.52	0.53	0.67	0.74	0.74	0.78
138°	0.50	0.48	0.51	0.52	0.51	0.53	0.51	0.54	0.71	0.71	0.76	0.77
139°	0.43	0.42	0.43	0.51	0.51	0.52	0.51	0.55	0.75	0.68	0.74	0.73
140°	0.38	0.39	0.43	0.52	0.53	0.52	0.51	0.55	0.73	0.67	0.67	0.65
141°	0.42	0.41	0.42	0.52	0.52	0.51	0.52	0.57	0.63	0.65	0.62	0.60
142°	0.46	0.44	0.46	0.52	0.51	0.51	0.54	0.59	0.56	0.59	0.61	0.58
143°	0.51	0.47	0.49	0.52	0.51	0.51	0.56	0.59	0.52	0.51	0.61	0.57
144°	0.57	0.51	0.51	0.51	0.51	0.54	0.58	0.58	0.51	0.51	0.57	0.57
145°	0.66	0.56	0.52	0.51	0.53	0.56	0.60	0.59	0.51	0.51	0.55	0.59
146°	0.64	0.56	0.52	0.53	0.55	0.58	0.59	0.60	0.54	0.54	0.56	0.60
147°	0.62	0.56	0.54	0.56	0.57	0.60	0.58	0.62	0.61	0.57	0.57	0.62
148°	0.61	0.57	0.56	0.58	0.60	0.59	0.59	0.63	0.66	0.62	0.60	0.63
149°	0.61	0.59	0.59	0.60	0.60	0.60	0.61	0.65	0.68	0.68	0.68	0.66
150°	0.60	0.60	0.60	0.60	0.60	0.61	0.64	0.65	0.69	0.72	0.74	0.71
151°	0.56	0.57	0.60	0.60	0.61	0.63	0.65	0.67	0.71	0.74	0.74	0.74
152°	0.54	0.56	0.60	0.62	0.63	0.65	0.64	0.68	0.72	0.72	0.76	0.73
153°	0.53	0.55	0.62	0.64	0.65	0.63	0.62	0.71	0.73	0.69	0.72	0.71
154°	0.52	0.54	0.64	0.65	0.64	0.62	0.60	0.69	0.72	0.67	0.65	0.70
155°	0.51	0.53	0.64	0.63	0.62	0.61	0.59	0.65	0.69	0.65	0.60	0.64
156°	0.51	0.53	0.62	0.62	0.61	0.60	0.57	0.60	0.67	0.62	0.55	0.60
157°	0.51	0.54	0.62	0.60	0.59	0.58	0.57	0.57	0.62	0.60	0.55	0.62
158°	0.53	0.54	0.60	0.59	0.57	0.57	0.57	0.57	0.60	0.57	0.57	0.70
159°	0.54	0.55	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.55	0.62	0.79
160°	0.57	0.57	0.57	0.57	0.57	0.56	0.57	0.57	0.55	0.58	0.68	0.92
161°	0.57	0.57	0.57	0.57	0.56	0.56	0.56	0.55	0.57	0.63	0.77	1.06
162°	0.56	0.57	0.57	0.56	0.56	0.56	0.55	0.56	0.62	0.72	0.90	1.22
163°	0.55	0.57	0.57	0.56	0.55	0.55	0.56	0.61	0.69	0.84	1.08	1.25
164°	0.55	0.57	0.57	0.55	0.54	0.57	0.61	0.68	0.81	1.01	1.32	1.23
165°	0.54	0.56	0.57	0.57	0.60	0.63	0.68	0.79	0.97	1.23	1.35	1.21
166°	0.60	0.61	0.62	0.64	0.67	0.72	0.80	0.93	1.15	1.42	1.27	1.18
167°	0.69	0.70	0.72	0.74	0.79	0.85	0.96	1.11	1.30	1.26	1.23	1.17
168°	0.81	0.82	0.85	0.90	0.96	1.04	1.18	1.26	1.21	1.19	1.18	1.15
169°	0.99	1.01	1.06	1.11	1.19	1.27	1.23	1.18	1.17	1.15	1.15	1.12
170°	1.28	1.28	1.27	1.26	1.23	1.18	1.17	1.15	1.14	1.13	1.11	1.08
171°	1.26	1.26	1.25	1.23	1.21	1.17	1.15	1.14	1.12	1.10	1.08	1.04
172°	1.25	1.25	1.25	1.24	1.21	1.18	1.15	1.12	1.10	1.07	1.04	0.97
173°	1.24	1.24	1.25	1.25	1.22	1.18	1.14	1.09	1.06	1.03	0.96	0.87
174°	1.22	1.22	1.22	1.21	1.21	1.16	1.12	1.06	0.97	0.91	0.85	0.79
175°	1.18	1.17	1.15	1.11	1.06	0.99	0.92	0.85	0.82	0.78	0.74	0.70
176°	0.80	0.79	0.79	0.77	0.76	0.73	0.79	0.68	0.66	0.64	0.62	0.59
177°	0.63	0.63	0.62	0.62	0.61	0.60	0.59	0.57	0.56	0.54	0.53	0.51
178°	0.54	0.54	0.53	0.53	0.52	0.52	0.51	0.51	0.50	0.49	0.48	0.47
179°	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.44	0.44	0.43	0.43
180°	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Gamma	C240°	C245°	C250°	C255°	C260°	C265°	C270°	C275°	C280°	C285°	C290°	C295°
0°	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79
1°	163.61	163.63	163.65	163.67	163.69	163.71	163.74	163.71	163.69	163.67	163.65	163.63
2°	163.50	163.54	163.57	163.60	163.62	163.65	163.68	163.65	163.62	163.60	163.57	163.54
3°	163.64	163.65	163.65	163.71	163.79	163.86	163.93	163.86	163.79	163.71	163.65	163.65

4°	163.84	163.84	163.83	163.81	163.93	164.05	164.18	164.05	163.93	163.81	163.83	163.84
5°	164.20	164.22	164.26	164.32	164.39	164.54	164.68	164.54	164.39	164.32	164.26	164.22
6°	164.65	164.70	164.73	164.82	164.92	165.06	165.18	165.06	164.92	164.82	164.73	164.70
7°	165.15	165.25	165.34	165.42	165.54	165.69	165.87	165.69	165.54	165.42	165.34	165.25
8°	165.89	166.01	166.07	166.07	166.17	166.32	166.54	166.32	166.17	166.07	166.07	166.01
9°	166.65	166.75	166.83	166.82	166.88	167.04	167.36	167.04	166.88	166.82	166.83	166.75
10°	167.29	167.40	167.51	167.57	167.59	167.74	168.18	167.74	167.59	167.57	167.51	167.40
11°	168.06	168.01	168.29	168.48	168.51	168.67	169.12	168.67	168.51	168.48	168.29	168.01
12°	168.98	168.95	169.25	169.50	169.48	169.63	170.05	169.63	169.48	169.50	169.25	168.95
13°	170.06	170.04	170.20	170.45	170.46	170.56	171.06	170.56	170.46	170.45	170.20	170.04
14°	171.17	171.13	171.14	171.38	171.43	171.49	172.06	171.49	171.43	171.38	171.14	171.13
15°	172.20	172.23	172.12	172.33	172.45	172.51	173.06	172.51	172.45	172.33	172.12	172.23
16°	173.25	173.24	173.15	173.28	173.46	173.53	174.05	173.53	173.46	173.28	173.15	173.24
17°	174.33	174.23	174.20	174.18	174.39	174.53	175.06	174.53	174.39	174.18	174.20	174.23
18°	175.40	175.26	175.14	175.06	175.29	175.50	176.06	175.50	175.29	175.06	175.14	175.26
19°	176.37	176.22	176.06	175.86	176.07	176.19	176.74	176.19	176.07	175.86	176.06	176.22
20°	177.28	177.05	176.78	176.53	176.79	176.89	177.42	176.89	176.79	176.53	176.78	177.05
21°	178.06	177.61	177.42	177.15	177.27	177.28	177.85	177.28	177.27	177.15	177.42	177.61
22°	178.74	178.16	177.89	177.64	177.67	177.64	178.28	177.64	177.67	177.64	177.89	178.16
23°	179.26	178.61	178.38	178.00	177.96	177.94	178.47	177.94	177.96	178.00	178.38	178.61
24°	179.52	178.95	178.60	178.14	178.16	178.25	178.67	178.25	178.16	178.14	178.60	178.95
25°	179.77	179.10	178.67	178.19	178.08	178.17	178.55	178.17	178.08	178.19	178.67	179.10
26°	179.69	179.23	178.54	178.03	177.87	178.06	178.42	178.06	177.87	178.03	178.54	179.23
27°	179.55	179.06	178.28	177.80	177.47	177.54	178.05	177.54	177.47	177.80	178.28	179.06
28°	179.13	178.78	177.91	177.30	176.97	176.97	177.67	176.97	176.97	177.30	177.91	178.78
29°	178.69	178.36	177.46	176.80	176.42	176.58	177.17	176.58	176.42	176.80	177.46	178.36
30°	178.07	177.80	177.00	176.31	175.83	176.19	176.67	176.19	175.83	176.31	177.00	177.80
31°	177.38	177.19	176.52	175.76	175.22	175.42	175.92	175.42	175.22	175.76	176.52	177.19
32°	176.56	176.58	175.95	174.97	174.58	174.60	175.17	174.60	174.58	174.97	175.95	176.58
33°	175.66	175.83	175.19	174.21	173.89	173.86	174.42	173.86	173.89	174.21	175.19	175.83
34°	174.70	174.99	174.42	173.59	173.17	173.15	173.67	173.15	173.17	173.59	174.42	174.99
35°	173.75	174.20	173.74	172.93	172.40	172.37	172.92	172.37	172.40	172.93	173.74	174.20
36°	172.83	173.43	173.07	172.13	171.63	171.57	172.16	171.57	171.63	172.13	173.07	173.43
37°	171.96	172.64	172.30	171.34	170.84	170.74	171.28	170.74	170.84	171.34	172.30	172.64
38°	171.06	171.73	171.48	170.63	170.01	169.90	170.41	169.90	170.01	170.63	171.48	171.73
39°	170.16	170.76	170.75	169.88	169.20	169.15	169.66	169.15	169.20	169.88	170.75	170.76
40°	169.30	169.85	169.99	169.11	168.38	168.42	168.91	168.42	168.38	169.11	169.99	169.85
41°	168.38	168.93	169.07	168.31	167.61	167.51	168.04	167.51	167.61	168.31	169.07	168.93
42°	167.37	168.09	168.18	167.47	166.89	166.58	167.16	166.58	166.89	167.47	168.18	168.09
43°	166.45	167.20	167.37	166.68	166.07	165.80	166.41	165.80	166.07	166.68	167.37	167.20
44°	165.68	166.18	166.59	165.99	165.21	165.03	165.65	165.03	165.21	165.99	166.59	166.18
45°	164.77	165.20	165.96	165.29	164.40	164.15	164.79	164.15	164.40	165.29	165.96	165.20
46°	163.85	164.34	165.22	164.56	163.65	163.25	163.91	163.25	163.65	164.56	165.22	164.34
47°	162.95	163.45	164.26	163.87	162.76	162.48	163.10	162.48	162.76	163.87	164.26	163.45
48°	162.01	162.53	163.35	162.90	161.79	161.72	162.29	161.72	161.79	162.90	163.35	162.53
49°	161.10	161.58	162.42	161.90	160.85	160.72	161.35	160.72	160.85	161.90	162.42	161.58
50°	160.16	160.46	161.38	160.99	159.96	159.70	160.40	159.70	159.96	160.99	161.38	160.46
51°	159.16	159.35	160.29	160.07	159.02	158.63	159.41	158.63	159.02	160.07	160.29	159.35
52°	158.21	158.24	159.18	159.10	158.02	157.55	158.41	157.55	158.02	159.10	159.18	158.24

53°	157.08	157.10	158.05	158.12	156.94	156.40	157.28	156.40	156.94	158.12	158.05	157.10
54°	155.94	155.80	156.87	156.92	155.85	155.22	156.16	155.22	155.85	156.92	156.87	155.80
55°	154.63	154.56	155.58	155.69	154.66	154.08	154.85	154.08	154.66	155.69	155.58	154.56
56°	153.27	153.30	154.22	154.44	153.44	152.94	153.54	152.94	153.44	154.44	154.22	153.30
57°	151.91	151.98	152.73	153.16	152.05	151.48	152.16	151.48	152.05	153.16	152.73	151.98
58°	150.58	150.59	151.23	151.62	150.60	149.99	150.78	149.99	150.60	151.62	151.23	150.59
59°	149.27	149.11	149.69	150.07	149.14	148.55	149.21	148.55	149.14	150.07	149.69	149.11
60°	147.92	147.51	148.14	148.58	147.69	147.09	147.64	147.09	147.69	148.58	148.14	147.51
61°	146.58	145.93	146.64	147.06	146.15	145.45	146.01	145.45	146.15	147.06	146.64	145.93
62°	145.17	144.39	144.98	145.42	144.59	143.78	144.39	143.78	144.59	145.42	144.98	144.39
63°	143.63	142.67	143.22	143.73	142.78	142.07	142.58	142.07	142.78	143.73	143.22	142.67
64°	141.99	140.86	141.33	141.77	140.85	140.34	140.76	140.34	140.85	141.77	141.33	140.86
65°	140.26	138.86	139.34	139.81	138.91	138.32	138.76	138.32	138.91	139.81	139.34	138.86
66°	138.42	136.80	137.23	137.79	136.96	136.28	136.76	136.28	136.96	137.79	137.23	136.80
67°	136.49	134.67	135.07	135.68	134.83	134.07	134.53	134.07	134.83	135.68	135.07	134.67
68°	134.29	132.49	132.74	133.38	132.61	131.84	132.29	131.84	132.61	133.38	132.74	132.49
69°	132.05	130.08	130.31	131.00	130.23	129.38	129.79	129.38	130.23	131.00	130.31	130.08
70°	129.64	127.66	127.75	128.50	127.75	126.92	127.28	126.92	127.75	128.50	127.75	127.66
71°	127.11	125.02	125.17	125.89	125.13	124.25	124.53	124.25	125.13	125.89	125.17	125.02
72°	124.39	122.30	122.31	123.14	122.44	121.54	121.78	121.54	122.44	123.14	122.31	122.30
73°	121.51	119.34	119.40	120.22	119.49	118.64	118.78	118.64	119.49	120.22	119.40	119.34
74°	118.56	116.30	116.42	117.10	116.42	115.73	115.77	115.73	116.42	117.10	116.42	116.30
75°	115.34	113.10	113.40	113.81	113.08	112.34	112.34	112.34	113.08	113.81	113.40	113.10
76°	112.04	109.68	109.82	110.37	109.65	108.95	108.90	108.95	109.65	110.37	109.82	109.68
77°	108.43	106.10	106.21	106.79	106.02	105.32	105.21	105.32	106.02	106.79	106.21	106.10
78°	104.73	102.35	102.42	103.13	102.40	101.64	101.52	101.64	102.40	103.13	102.42	102.35
79°	100.83	98.55	98.55	99.25	98.54	97.82	97.59	97.82	98.54	99.25	98.55	98.55
80°	96.89	94.59	94.58	95.23	94.61	93.99	93.66	93.99	94.61	95.23	94.58	94.59
81°	92.84	90.59	90.44	91.02	90.39	89.73	89.28	89.73	90.39	91.02	90.44	90.59
82°	88.49	86.21	86.08	86.77	86.06	85.51	84.89	85.51	86.06	86.77	86.08	86.21
83°	83.96	81.79	81.53	82.12	81.50	80.85	80.28	80.85	81.50	82.12	81.53	81.79
84°	79.20	77.07	76.88	77.38	76.85	76.12	75.66	76.12	76.85	77.38	76.88	77.07
85°	74.30	72.11	71.86	72.30	71.83	71.00	70.41	71.00	71.83	72.30	71.86	72.11
86°	68.90	66.97	66.62	67.06	66.73	65.87	65.14	65.87	66.73	67.06	66.62	66.97
87°	63.13	61.37	60.92	61.28	60.81	59.98	59.08	59.98	60.81	61.28	60.92	61.37
88°	57.04	55.47	55.15	55.34	54.78	54.13	53.02	54.13	54.78	55.34	55.15	55.47
89°	51.16	49.75	49.32	49.52	49.19	48.41	47.33	48.41	49.19	49.52	49.32	49.75
90°	45.41	44.14	43.55	43.64	43.55	42.76	41.64	42.76	43.55	43.64	43.55	44.14
91°	41.85	40.71	40.29	40.31	40.35	39.71	38.57	39.71	40.35	40.31	40.29	40.71
92°	38.59	37.49	37.17	37.11	37.22	36.64	35.51	36.64	37.22	37.11	37.17	37.49
93°	36.23	35.39	35.28	35.28	35.59	35.02	34.15	35.02	35.59	35.28	35.28	35.39
94°	34.79	33.93	33.80	33.74	34.07	33.42	32.78	33.42	34.07	33.74	33.80	33.93
95°	34.17	33.59	33.65	33.82	34.26	33.81	33.29	33.81	34.26	33.82	33.65	33.59
96°	34.89	34.24	34.09	34.20	34.59	34.22	33.79	34.22	34.59	34.20	34.09	34.24
97°	36.03	35.67	35.62	35.79	36.29	36.06	35.73	36.06	36.29	35.79	35.62	35.67
98°	38.14	37.76	37.79	37.83	38.18	37.94	37.67	37.94	38.18	37.83	37.79	37.76
99°	40.82	40.13	40.64	41.02	41.60	41.53	41.48	41.53	41.60	41.02	40.64	40.13
100°	44.82	44.36	44.49	44.72	45.15	45.18	45.29	45.18	45.15	44.72	44.49	44.36
101°	49.19	48.79	49.02	49.32	49.67	49.66	49.80	49.66	49.67	49.32	49.02	48.79

102°	53.85	53.43	53.60	53.94	54.18	54.14	54.30	54.14	54.18	53.94	53.60	53.43
103°	58.50	58.08	58.15	58.57	58.86	58.81	59.06	58.81	58.86	58.57	58.15	58.08
104°	63.14	62.81	62.89	63.31	63.60	63.45	63.81	63.45	63.60	63.31	62.89	62.81
105°	68.04	67.62	67.68	68.17	68.41	68.27	68.75	68.27	68.41	68.17	67.68	67.62
106°	72.98	72.52	72.57	73.13	73.22	73.14	73.68	73.14	73.22	73.13	72.57	72.52
107°	77.95	77.49	77.49	78.18	78.16	78.16	78.81	78.16	78.16	78.18	77.49	77.49
108°	83.29	82.55	82.71	83.31	83.12	83.18	83.93	83.18	83.12	83.31	82.71	82.55
109°	88.90	87.79	87.76	88.50	88.30	88.36	89.06	88.36	88.30	88.50	87.76	87.79
110°	91.53	93.06	91.28	90.12	90.61	92.49	94.20	92.49	90.61	90.12	91.28	93.06
111°	92.39	88.14	90.73	89.49	85.29	83.49	82.06	83.49	85.29	89.49	90.73	88.14
112°	78.88	80.63	75.38	74.80	74.19	73.14	69.92	73.14	74.19	74.80	75.38	80.63
113°	61.87	53.04	56.57	53.59	49.91	48.88	45.47	48.88	49.91	53.59	56.57	53.04
114°	31.57	27.08	29.80	31.45	28.25	25.56	21.02	25.56	28.25	31.45	29.80	27.08
115°	8.75	12.21	10.50	9.50	12.49	13.18	11.01	13.18	12.49	9.50	10.50	12.21
116°	3.73	2.04	4.29	3.09	2.23	1.82	1.00	1.82	2.23	3.09	4.29	2.04
117°	1.02	1.29	1.02	1.29	1.76	1.44	0.75	1.44	1.76	1.29	1.02	1.29
118°	0.85	0.88	0.90	1.00	1.46	1.09	0.49	1.09	1.46	1.00	0.90	0.88
119°	0.79	0.91	0.87	1.04	1.46	1.07	0.49	1.07	1.46	1.04	0.87	0.91
120°	0.77	0.94	0.90	1.04	1.44	1.05	0.49	1.05	1.44	1.04	0.90	0.94
121°	0.76	0.95	0.90	1.03	1.43	1.08	0.57	1.08	1.43	1.03	0.90	0.95
122°	0.76	0.96	0.90	1.05	1.43	1.11	0.64	1.11	1.43	1.05	0.90	0.96
123°	0.76	0.99	0.90	1.07	1.43	1.11	0.64	1.11	1.43	1.07	0.90	0.99
124°	0.78	0.99	0.90	1.10	1.44	1.10	0.64	1.10	1.44	1.10	0.90	0.99
125°	0.78	1.01	0.90	1.11	1.49	1.14	0.64	1.14	1.49	1.11	0.90	1.01
126°	0.78	0.97	0.88	1.12	1.51	1.16	0.64	1.16	1.51	1.12	0.88	0.97
127°	0.79	0.88	0.87	1.12	1.50	1.14	0.64	1.14	1.50	1.12	0.87	0.88
128°	0.79	0.86	0.86	1.15	1.49	1.12	0.64	1.12	1.49	1.15	0.86	0.86
129°	0.80	0.86	0.85	1.18	1.50	1.09	0.64	1.09	1.50	1.18	0.85	0.86
130°	0.81	0.82	0.85	1.21	1.51	1.06	0.64	1.06	1.51	1.21	0.85	0.82
131°	0.82	0.75	0.72	1.25	1.51	1.03	0.64	1.03	1.51	1.25	0.72	0.75
132°	0.83	0.72	0.58	1.18	1.51	1.01	0.64	1.01	1.51	1.18	0.58	0.72
133°	0.84	0.70	0.56	1.14	1.51	1.02	0.64	1.02	1.51	1.14	0.56	0.70
134°	0.85	0.69	0.57	1.21	1.51	1.03	0.64	1.03	1.51	1.21	0.57	0.69
135°	0.85	0.68	0.57	1.29	1.49	1.04	0.64	1.04	1.49	1.29	0.57	0.68
136°	0.86	0.67	0.59	1.27	1.47	1.04	0.64	1.04	1.47	1.27	0.59	0.67
137°	0.85	0.65	0.60	1.22	1.46	1.03	0.64	1.03	1.46	1.22	0.60	0.65
138°	0.82	0.64	0.62	1.28	1.41	1.01	0.64	1.01	1.41	1.28	0.62	0.64
139°	0.75	0.62	0.64	1.29	1.35	0.98	0.64	0.98	1.35	1.29	0.64	0.62
140°	0.69	0.60	0.68	1.29	1.31	0.95	0.64	0.95	1.31	1.29	0.68	0.60
141°	0.65	0.57	0.72	1.30	1.31	0.94	0.64	0.94	1.31	1.30	0.72	0.57
142°	0.64	0.60	0.75	1.30	1.29	0.93	0.64	0.93	1.29	1.30	0.75	0.60
143°	0.65	0.68	0.85	1.30	1.29	0.92	0.64	0.92	1.29	1.30	0.85	0.68
144°	0.67	0.71	0.99	1.35	1.29	0.91	0.64	0.91	1.29	1.35	0.99	0.71
145°	0.68	0.72	1.07	1.38	1.29	0.91	0.64	0.91	1.29	1.38	1.07	0.72
146°	0.68	0.75	1.14	1.37	1.29	0.90	0.64	0.90	1.29	1.37	1.14	0.75
147°	0.70	0.78	1.21	1.35	1.29	0.82	0.57	0.82	1.29	1.35	1.21	0.78
148°	0.70	0.80	1.29	1.37	1.32	0.75	0.49	0.75	1.32	1.37	1.29	0.80
149°	0.71	0.85	1.37	1.40	1.39	0.76	0.49	0.76	1.39	1.40	1.37	0.85
150°	0.71	0.90	1.41	1.37	1.40	0.76	0.49	0.76	1.40	1.37	1.41	0.90

151°	0.73	0.98	1.40	1.35	1.28	0.74	0.50	0.74	1.28	1.35	1.40	0.98
152°	0.76	1.07	1.39	1.33	1.20	0.74	0.51	0.74	1.20	1.33	1.39	1.07
153°	0.80	1.15	1.37	1.32	1.18	0.79	0.58	0.79	1.18	1.32	1.37	1.15
154°	0.85	1.23	1.36	1.31	1.15	0.83	0.65	0.83	1.15	1.31	1.36	1.23
155°	0.88	1.27	1.33	1.29	1.07	0.76	0.58	0.76	1.07	1.29	1.33	1.27
156°	0.88	1.27	1.29	1.27	1.00	0.68	0.51	0.68	1.00	1.27	1.29	1.27
157°	0.92	1.26	1.25	1.27	0.97	0.67	0.51	0.67	0.97	1.27	1.25	1.26
158°	1.03	1.22	1.18	1.20	0.90	0.65	0.51	0.65	0.90	1.20	1.18	1.22
159°	1.18	1.19	1.10	1.08	0.77	0.57	0.45	0.57	0.77	1.08	1.10	1.19
160°	1.26	1.16	1.08	1.04	0.67	0.49	0.38	0.49	0.67	1.04	1.08	1.16
161°	1.22	1.13	1.07	0.99	0.65	0.48	0.38	0.48	0.65	0.99	1.07	1.13
162°	1.18	1.11	1.06	0.92	0.62	0.47	0.38	0.47	0.62	0.92	1.06	1.11
163°	1.15	1.10	1.06	0.85	0.59	0.46	0.38	0.46	0.59	0.85	1.06	1.10
164°	1.13	1.10	1.05	0.77	0.56	0.45	0.38	0.45	0.56	0.77	1.05	1.10
165°	1.13	1.09	1.04	0.72	0.55	0.45	0.38	0.45	0.55	0.72	1.04	1.09
166°	1.12	1.08	0.98	0.71	0.54	0.45	0.38	0.45	0.54	0.71	0.98	1.08
167°	1.12	1.06	0.93	0.74	0.57	0.43	0.31	0.43	0.57	0.74	0.93	1.06
168°	1.10	1.04	0.89	0.73	0.57	0.40	0.24	0.40	0.57	0.73	0.89	1.04
169°	1.07	0.98	0.84	0.69	0.54	0.39	0.24	0.39	0.54	0.69	0.84	0.98
170°	1.04	0.91	0.78	0.65	0.51	0.37	0.24	0.37	0.51	0.65	0.78	0.91
171°	0.96	0.85	0.73	0.61	0.49	0.36	0.24	0.36	0.49	0.61	0.73	0.85
172°	0.87	0.77	0.68	0.57	0.46	0.35	0.24	0.35	0.46	0.57	0.68	0.77
173°	0.79	0.71	0.62	0.52	0.43	0.33	0.24	0.33	0.43	0.52	0.62	0.71
174°	0.71	0.64	0.57	0.49	0.40	0.32	0.24	0.32	0.40	0.49	0.57	0.64
175°	0.64	0.57	0.51	0.44	0.37	0.31	0.24	0.31	0.37	0.44	0.51	0.57
176°	0.55	0.51	0.46	0.40	0.35	0.29	0.24	0.29	0.35	0.40	0.46	0.51
177°	0.49	0.46	0.43	0.40	0.37	0.35	0.32	0.35	0.37	0.40	0.43	0.46
178°	0.46	0.45	0.43	0.43	0.41	0.40	0.39	0.40	0.41	0.43	0.43	0.45
179°	0.43	0.42	0.41	0.40	0.40	0.40	0.39	0.40	0.40	0.40	0.41	0.42
180°	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Gamma	C300°	C305°	C310°	C315°	C320°	C325°	C330°	C335°	C340°	C345°	C350°	C355°
0°	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79	163.79
1°	163.61	163.59	163.57	163.55	163.53	163.51	163.49	163.48	163.47	163.46	163.45	163.44
2°	163.50	163.50	163.50	163.49	163.49	163.48	163.46	163.46	163.44	163.43	163.41	163.40
3°	163.64	163.62	163.60	163.59	163.60	163.61	163.62	163.63	163.64	163.65	163.64	163.63
4°	163.84	163.86	163.87	163.87	163.86	163.82	163.74	163.77	163.79	163.82	163.84	163.85
5°	164.20	164.17	164.14	164.12	164.08	164.02	163.96	163.88	163.89	163.93	163.96	164.00
6°	164.65	164.61	164.54	164.43	164.33	164.26	164.27	164.29	164.28	164.37	164.48	164.56
7°	165.15	165.08	165.02	164.91	164.89	164.85	164.90	164.90	164.87	164.88	165.01	165.11
8°	165.89	165.76	165.64	165.65	165.65	165.60	165.51	165.57	165.56	165.51	165.66	165.81
9°	166.65	166.56	166.58	166.49	166.38	166.40	166.39	166.37	166.37	166.31	166.35	166.49
10°	167.29	167.48	167.50	167.39	167.30	167.26	167.28	167.26	167.25	167.20	167.18	167.34
11°	168.06	168.22	168.28	168.28	168.20	168.14	168.15	168.17	168.22	168.24	168.20	168.40
12°	168.98	168.89	169.04	169.12	169.09	169.11	169.14	169.28	169.31	169.26	169.14	169.34
13°	170.06	169.97	169.92	170.06	170.11	170.25	170.32	170.36	170.31	170.17	169.97	170.12
14°	171.17	171.06	171.05	170.42	171.37	171.41	171.45	171.42	171.29	171.08	170.89	170.97
15°	172.20	172.15	172.18	172.42	172.59	172.56	172.44	172.41	172.26	171.92	171.74	171.74
16°	173.25	173.25	173.35	173.64	173.68	173.57	173.35	173.28	173.08	172.67	172.41	172.34
17°	174.33	174.34	174.56	174.69	174.67	174.57	174.35	174.05	173.84	173.44	173.14	173.03

18°	175.40	175.47	175.67	175.70	175.65	175.56	175.17	174.70	174.61	174.25	173.93	173.84
19°	176.37	176.64	176.79	176.63	176.55	176.29	175.83	175.37	175.25	174.97	174.66	174.59
20°	177.28	177.61	177.69	177.45	177.32	176.88	176.49	176.06	175.86	175.60	175.33	175.25
21°	178.06	178.35	178.37	178.26	177.84	177.49	177.11	176.72	176.43	176.20	176.00	175.92
22°	178.74	178.85	178.84	178.84	178.30	177.90	177.53	177.17	176.91	176.81	176.55	176.55
23°	179.26	179.27	179.29	178.99	178.64	178.12	177.75	177.51	177.25	177.20	176.96	177.01
24°	179.52	179.66	179.53	178.97	178.85	178.24	177.89	177.71	177.50	177.45	177.23	177.28
25°	179.77	179.75	179.46	178.86	178.64	178.23	178.01	177.78	177.61	177.50	177.41	177.34
26°	179.69	179.74	179.22	178.78	178.34	178.16	178.00	177.76	177.62	177.55	177.64	177.53
27°	179.55	179.47	178.81	178.58	178.05	177.94	177.78	177.60	177.63	177.89	177.86	177.70
28°	179.13	178.91	178.33	178.05	177.67	177.56	177.39	177.43	177.77	178.19	177.98	177.89
29°	178.69	178.31	177.78	177.46	177.25	177.14	176.98	177.57	177.83	178.23	178.02	177.93
30°	178.07	177.64	177.16	176.94	176.75	176.66	176.96	177.53	177.82	178.11	178.03	177.93
31°	177.38	176.94	176.44	176.25	176.17	176.01	176.98	177.43	177.71	178.00	177.52	176.99
32°	176.56	176.11	175.70	175.56	175.45	175.85	176.92	177.28	177.71	177.05	176.36	175.77
33°	175.66	175.25	174.93	174.83	174.64	175.67	176.71	177.05	176.79	175.78	175.08	174.56
34°	174.70	174.27	174.11	174.00	174.11	175.42	176.18	176.27	175.45	174.49	173.86	173.33
35°	173.75	173.28	173.28	173.10	173.83	174.99	175.75	175.01	174.05	173.27	172.65	172.15
36°	172.83	172.36	172.42	172.19	173.45	174.56	174.84	173.79	172.70	172.09	171.52	171.16
37°	171.96	171.42	171.98	171.49	172.98	174.20	173.69	172.64	171.51	171.08	170.51	170.21
38°	171.06	170.55	170.52	171.12	172.59	173.53	172.47	171.35	170.40	170.09	169.64	169.35
39°	170.16	169.78	169.59	170.69	172.12	172.23	171.23	170.02	169.42	169.08	169.13	168.76
40°	169.30	169.03	168.80	170.31	171.66	170.95	169.87	168.95	168.55	168.24	168.31	168.22
41°	168.38	168.20	168.00	169.90	171.03	169.86	168.62	168.04	167.76	167.59	167.69	167.70
42°	167.37	167.32	167.53	169.46	169.91	168.79	167.48	167.09	167.08	166.98	167.15	167.15
43°	166.45	166.45	167.08	168.93	168.86	167.60	166.48	166.22	166.31	166.44	166.51	166.49
44°	165.68	165.60	166.58	168.39	167.82	166.39	165.49	165.54	165.68	165.83	165.89	165.89
45°	164.77	164.76	166.09	167.88	166.63	165.23	164.65	164.86	165.18	165.23	165.34	165.42
46°	163.85	163.89	165.65	166.82	165.40	164.26	163.93	164.18	164.60	164.71	164.85	164.73
47°	162.95	162.93	165.23	165.82	164.19	163.33	163.18	163.44	163.91	164.22	164.04	163.87
48°	162.01	162.14	164.61	164.69	163.04	162.42	162.32	162.71	163.20	163.27	163.16	162.93
49°	161.10	161.54	163.88	163.40	161.92	161.40	161.55	162.00	162.47	162.31	162.14	161.93
50°	160.16	160.90	163.24	162.18	160.79	160.43	160.82	161.26	161.62	161.37	161.11	160.98
51°	159.16	160.08	162.59	161.05	159.59	159.44	160.10	160.57	160.66	160.38	160.26	159.88
52°	158.21	159.32	161.39	159.77	158.31	158.45	159.21	159.62	159.56	159.33	159.09	158.61
53°	157.08	158.66	160.03	158.34	157.14	157.58	158.24	158.63	158.48	158.14	157.77	157.33
54°	155.94	157.87	158.68	156.98	156.09	156.66	157.22	157.56	157.36	156.80	156.41	156.13
55°	154.63	156.92	157.41	155.54	154.99	155.55	156.10	156.35	156.10	155.42	155.13	154.91
56°	153.27	155.80	155.96	154.08	153.77	154.42	154.86	155.08	154.61	154.00	153.86	153.77
57°	151.91	154.57	154.39	152.67	152.47	153.16	153.57	153.57	153.02	152.67	152.67	152.48
58°	150.58	153.39	152.72	151.15	151.16	151.86	152.21	152.03	151.44	151.33	151.39	151.09
59°	149.27	152.25	150.89	149.57	149.69	150.69	150.89	150.50	149.99	150.08	150.03	149.81
60°	147.92	150.91	149.08	147.96	148.21	149.19	149.39	148.91	148.42	148.63	148.66	148.81
61°	146.58	149.44	147.34	146.37	146.76	147.56	147.86	147.15	146.91	147.01	147.54	147.44
62°	145.17	147.61	145.51	144.73	145.31	146.01	146.00	145.35	145.45	145.43	146.20	145.61
63°	143.63	145.77	143.66	143.05	143.76	144.31	144.11	143.53	143.76	144.19	144.27	143.64
64°	141.99	143.81	141.73	141.22	142.03	142.34	142.12	141.73	141.94	142.81	142.17	141.65
65°	140.26	141.72	139.73	139.26	140.20	140.50	140.12	139.92	140.15	140.65	140.00	139.64
66°	138.42	139.49	137.65	137.26	138.21	138.56	138.07	138.01	138.46	138.40	137.81	137.59

67°	136.49	137.15	135.31	135.18	136.18	136.31	135.74	135.95	136.80	135.91	135.65	135.44
68°	134.29	134.74	132.95	133.05	134.07	134.05	133.49	133.75	134.46	133.49	133.30	133.21
69°	132.05	132.29	130.51	130.87	131.72	131.78	131.24	131.39	131.93	131.05	130.93	130.79
70°	129.64	129.85	128.05	128.47	129.27	129.34	128.91	129.22	129.31	128.57	128.49	128.44
71°	127.11	127.11	125.54	125.91	126.75	126.61	126.29	126.87	126.55	126.05	125.96	126.04
72°	124.39	124.24	122.75	123.28	124.05	123.80	123.59	124.36	123.68	123.38	123.44	123.31
73°	121.51	121.14	119.89	120.53	121.22	120.92	120.81	121.78	120.64	120.64	120.97	120.43
74°	118.56	117.97	116.76	117.67	118.27	117.80	117.91	118.51	117.59	117.69	117.91	117.36
75°	115.34	114.73	113.54	114.42	115.01	114.53	114.73	115.28	114.34	114.66	114.74	114.34
76°	112.04	111.20	110.21	111.04	111.59	111.09	111.40	111.68	111.05	111.53	111.41	111.31
77°	108.43	107.56	106.60	107.51	108.00	107.63	107.85	107.98	107.63	108.29	107.84	107.68
78°	104.73	103.76	102.91	103.87	104.22	103.87	104.25	104.11	103.94	104.52	104.25	103.89
79°	100.83	99.82	99.11	100.13	100.35	100.08	100.46	100.22	100.02	100.78	100.56	100.01
80°	96.89	95.79	95.17	96.36	96.31	96.14	96.44	96.22	96.34	96.89	96.75	96.23
81°	92.84	91.56	91.14	92.23	92.14	92.06	92.29	91.92	92.32	92.74	92.56	92.41
82°	88.49	87.27	86.83	87.97	87.79	87.83	88.10	87.54	88.16	88.24	88.15	88.17
83°	83.96	82.67	82.35	83.60	83.26	83.34	83.68	82.98	83.70	83.80	83.51	83.52
84°	79.20	77.96	77.73	78.84	78.57	78.58	78.93	78.26	79.10	79.02	78.98	78.75
85°	74.30	73.13	72.77	73.92	73.69	73.61	74.06	73.16	74.22	73.93	74.02	73.99
86°	68.90	67.68	67.47	68.79	68.48	68.36	68.79	67.94	68.94	68.77	68.51	68.75
87°	63.13	62.05	61.90	63.18	62.81	62.76	63.14	62.24	63.38	63.09	63.21	63.34
88°	57.04	56.11	55.93	57.17	56.81	56.79	57.29	56.17	57.42	57.09	57.04	57.35
89°	51.16	50.37	50.19	51.28	50.79	50.66	50.85	50.00	51.23	50.80	50.73	51.10
90°	45.41	44.75	44.60	45.77	45.17	45.05	45.50	44.46	45.56	45.14	45.23	45.51
91°	41.85	41.03	40.81	41.88	41.00	40.67	40.40	39.81	40.92	40.47	40.42	40.78
92°	38.59	37.81	37.63	38.65	37.92	37.74	37.58	36.92	38.03	37.59	37.68	37.92
93°	36.23	35.43	35.10	36.14	35.67	35.39	35.22	34.46	35.59	35.23	35.17	35.57
94°	34.79	34.22	33.94	34.68	34.13	33.89	33.75	32.98	34.02	33.84	33.84	34.45
95°	34.17	33.56	33.45	34.33	33.67	33.42	33.24	32.55	33.54	33.35	33.51	34.39
96°	34.89	34.21	33.78	34.73	34.16	33.90	33.70	33.04	34.11	34.02	34.16	34.89
97°	36.03	35.42	35.20	35.95	35.38	35.13	34.95	34.35	35.12	35.18	35.26	35.98
98°	38.14	37.39	37.08	37.94	37.28	37.09	36.82	36.25	37.11	37.20	37.20	37.67
99°	40.82	40.41	39.66	40.68	39.99	39.83	39.50	39.43	40.28	40.69	40.50	40.17
100°	44.82	43.93	43.51	44.25	44.00	43.61	43.28	42.99	43.64	44.62	44.24	44.03
101°	49.19	48.43	47.85	48.66	48.39	47.94	47.69	47.48	47.87	48.54	48.08	48.46
102°	53.85	53.01	52.40	53.15	52.97	52.43	52.27	52.02	52.32	53.13	52.59	52.92
103°	58.50	57.65	56.96	57.66	57.66	57.21	56.85	56.65	56.85	57.83	57.07	57.50
104°	63.14	62.35	61.57	62.37	62.40	61.70	61.55	61.44	61.51	62.45	61.72	62.25
105°	68.04	67.09	66.42	67.14	67.25	66.61	66.39	66.30	66.24	66.71	66.36	66.68
106°	72.98	72.10	71.33	71.97	72.19	71.66	71.33	71.42	71.21	71.36	71.39	71.33
107°	77.95	77.23	76.35	76.91	77.25	76.69	76.43	76.60	76.46	76.44	76.97	76.47
108°	83.29	82.56	81.60	82.16	82.56	81.77	81.61	82.32	82.99	82.08	82.86	82.14
109°	88.90	88.04	86.87	87.69	88.22	87.59	86.88	88.45	90.14	88.51	88.16	87.95
110°	91.53	93.61	91.26	91.57	94.01	92.19	90.92	91.24	93.47	92.42	90.59	90.52
111°	92.39	89.99	89.51	90.12	91.00	93.58	93.22	89.37	88.93	94.45	87.79	86.92
112°	78.88	81.77	80.49	79.65	80.71	81.82	87.73	86.59	77.54	83.78	78.16	75.55
113°	61.87	61.40	59.06	59.57	57.75	58.07	67.89	68.37	55.10	52.46	56.17	54.63
114°	31.57	36.58	33.81	34.93	27.68	18.36	21.27	35.45	16.22	14.03	13.52	29.34
115°	8.75	10.60	12.83	12.33	4.31	5.23	4.53	8.86	2.84	2.91	2.43	9.56

116°	3.73	2.10	1.70	2.56	2.02	2.73	1.47	2.58	0.94	1.12	0.77	1.34
117°	1.02	1.06	0.97	0.93	1.12	1.90	0.99	0.94	0.68	0.72	0.57	0.78
118°	0.85	0.91	0.79	0.71	0.82	1.54	0.75	0.69	0.54	0.51	0.46	0.60
119°	0.79	0.90	0.80	0.68	0.69	1.37	0.73	0.55	0.46	0.47	0.42	0.48
120°	0.77	0.90	0.79	0.62	0.63	1.40	0.78	0.49	0.45	0.44	0.42	0.43
121°	0.76	0.87	0.76	0.58	0.66	1.31	0.83	0.49	0.48	0.43	0.44	0.44
122°	0.76	0.80	0.68	0.60	0.68	1.07	0.83	0.50	0.51	0.43	0.44	0.44
123°	0.76	0.74	0.61	0.62	0.65	0.92	0.90	0.54	0.54	0.45	0.43	0.44
124°	0.78	0.66	0.61	0.64	0.62	0.80	1.08	0.60	0.59	0.47	0.43	0.43
125°	0.78	0.64	0.63	0.65	0.57	0.71	1.35	0.76	0.64	0.54	0.47	0.43
126°	0.78	0.66	0.70	0.65	0.55	0.64	1.23	0.95	0.71	0.64	0.52	0.47
127°	0.79	0.70	0.74	0.66	0.57	0.57	1.00	1.10	0.79	0.74	0.60	0.54
128°	0.79	0.75	0.76	0.68	0.57	0.52	0.83	1.26	0.89	0.82	0.69	0.62
129°	0.80	0.76	0.76	0.68	0.54	0.51	0.71	1.34	1.01	0.89	0.79	0.71
130°	0.81	0.76	0.76	0.70	0.51	0.51	0.62	1.01	1.16	0.98	0.85	0.79
131°	0.82	0.76	0.76	0.68	0.51	0.51	0.56	0.82	1.38	1.10	0.91	0.83
132°	0.83	0.76	0.76	0.67	0.53	0.52	0.51	0.69	1.12	1.26	1.00	0.89
133°	0.84	0.76	0.76	0.68	0.55	0.51	0.52	0.60	0.85	1.40	1.13	0.98
134°	0.85	0.77	0.75	0.72	0.57	0.51	0.53	0.54	0.70	0.97	1.29	1.09
135°	0.85	0.78	0.74	0.76	0.60	0.51	0.53	0.51	0.61	0.76	0.96	1.10
136°	0.86	0.79	0.74	0.76	0.63	0.52	0.52	0.52	0.55	0.65	0.73	0.73
137°	0.85	0.78	0.74	0.74	0.67	0.53	0.52	0.53	0.51	0.57	0.59	0.56
138°	0.82	0.77	0.76	0.71	0.71	0.54	0.51	0.53	0.51	0.52	0.51	0.48
139°	0.75	0.73	0.74	0.68	0.75	0.55	0.51	0.52	0.51	0.51	0.43	0.42
140°	0.69	0.65	0.67	0.67	0.73	0.55	0.51	0.52	0.53	0.52	0.43	0.39
141°	0.65	0.60	0.62	0.65	0.63	0.57	0.52	0.51	0.52	0.52	0.44	0.41
142°	0.64	0.58	0.61	0.59	0.56	0.59	0.54	0.51	0.51	0.52	0.46	0.44
143°	0.65	0.57	0.59	0.51	0.52	0.59	0.56	0.51	0.51	0.52	0.49	0.47
144°	0.67	0.57	0.57	0.51	0.51	0.58	0.58	0.54	0.51	0.51	0.51	0.51
145°	0.68	0.59	0.55	0.51	0.51	0.59	0.60	0.56	0.53	0.51	0.52	0.56
146°	0.68	0.60	0.56	0.54	0.54	0.60	0.59	0.58	0.55	0.53	0.52	0.56
147°	0.70	0.62	0.57	0.57	0.61	0.62	0.58	0.60	0.57	0.56	0.54	0.56
148°	0.70	0.63	0.60	0.62	0.66	0.63	0.59	0.59	0.60	0.58	0.56	0.57
149°	0.71	0.66	0.68	0.68	0.68	0.65	0.61	0.60	0.60	0.60	0.59	0.59
150°	0.71	0.71	0.74	0.72	0.69	0.65	0.64	0.61	0.60	0.60	0.60	0.60
151°	0.73	0.74	0.74	0.74	0.71	0.67	0.65	0.63	0.61	0.60	0.60	0.57
152°	0.76	0.73	0.76	0.72	0.72	0.68	0.64	0.65	0.63	0.62	0.60	0.56
153°	0.80	0.71	0.72	0.69	0.73	0.71	0.62	0.63	0.65	0.64	0.62	0.55
154°	0.85	0.70	0.65	0.67	0.72	0.69	0.60	0.62	0.64	0.65	0.64	0.54
155°	0.88	0.64	0.60	0.65	0.69	0.65	0.59	0.61	0.62	0.63	0.64	0.53
156°	0.88	0.60	0.55	0.62	0.67	0.60	0.57	0.60	0.61	0.62	0.62	0.53
157°	0.92	0.62	0.55	0.60	0.62	0.57	0.57	0.58	0.59	0.60	0.62	0.54
158°	1.03	0.70	0.57	0.57	0.60	0.57	0.57	0.57	0.57	0.59	0.60	0.54
159°	1.18	0.79	0.62	0.55	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.55
160°	1.26	0.92	0.68	0.58	0.55	0.57	0.57	0.56	0.57	0.57	0.57	0.57
161°	1.22	1.06	0.77	0.63	0.57	0.55	0.56	0.56	0.56	0.57	0.57	0.57
162°	1.18	1.22	0.90	0.72	0.62	0.56	0.55	0.56	0.56	0.56	0.57	0.57
163°	1.15	1.25	1.08	0.84	0.69	0.61	0.56	0.55	0.55	0.56	0.57	0.57
164°	1.13	1.23	1.32	1.01	0.81	0.68	0.61	0.57	0.54	0.55	0.57	0.57

165°	1.13	1.21	1.35	1.23	0.97	0.79	0.68	0.63	0.60	0.57	0.57	0.56
166°	1.12	1.18	1.27	1.29	1.15	0.93	0.80	0.72	0.67	0.64	0.62	0.61
167°	1.12	1.17	1.23	1.26	1.30	1.11	0.96	0.85	0.79	0.74	0.72	0.70
168°	1.10	1.15	1.18	1.19	1.21	1.26	1.18	1.04	0.96	0.90	0.85	0.82
169°	1.07	1.12	1.15	1.15	1.17	1.18	1.23	1.27	1.19	1.11	1.06	1.01
170°	1.04	1.08	1.11	1.13	1.14	1.15	1.17	1.18	1.23	1.26	1.27	1.28
171°	0.96	1.04	1.08	1.10	1.12	1.14	1.15	1.17	1.21	1.23	1.25	1.26
172°	0.87	0.97	1.04	1.07	1.10	1.12	1.15	1.18	1.21	1.24	1.25	1.25
173°	0.79	0.87	0.96	1.03	1.06	1.09	1.14	1.18	1.22	1.25	1.25	1.24
174°	0.71	0.79	0.85	0.91	0.97	1.06	1.12	1.16	1.21	1.21	1.22	1.22
175°	0.64	0.70	0.74	0.78	0.82	0.85	0.92	0.99	1.06	1.11	1.15	1.17
176°	0.55	0.59	0.62	0.64	0.66	0.68	0.62	0.73	0.76	0.77	0.79	0.79
177°	0.49	0.51	0.53	0.54	0.56	0.57	0.59	0.60	0.61	0.62	0.62	0.63
178°	0.46	0.47	0.48	0.49	0.50	0.51	0.51	0.52	0.52	0.53	0.53	0.54
179°	0.43	0.43	0.43	0.44	0.44	0.45	0.45	0.46	0.46	0.46	0.46	0.46
180°	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39