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Nata

Client: NT

LumCAT: 11-0161-S3

Luminaire: 69-0030-1

Report No: 20260803-B009

Ballast type: DC

Test No: 20260803-C009

Voltage(V): 22.150

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1126.0

Power (W): 10.056

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1007.41, Efficiency(%): 89.47% , Luminous Efficacy(lm/W): 100.18

Central intensity(cd): 959.140, Maximum intensity(cd): 962.272

Angle of maximum intensity: C=22.5 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=62.0

[C90/270]Total=62.6

Field angle(10%Imax): [C0/180]Total=90.5

[C90/270]Total=91.4

Maximum s/h(1/2): C0_180=0.97 C90_270=0.95

Maximum s/h(1/4): C0_180=0.97 C90_270=0.94

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.40%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.562%

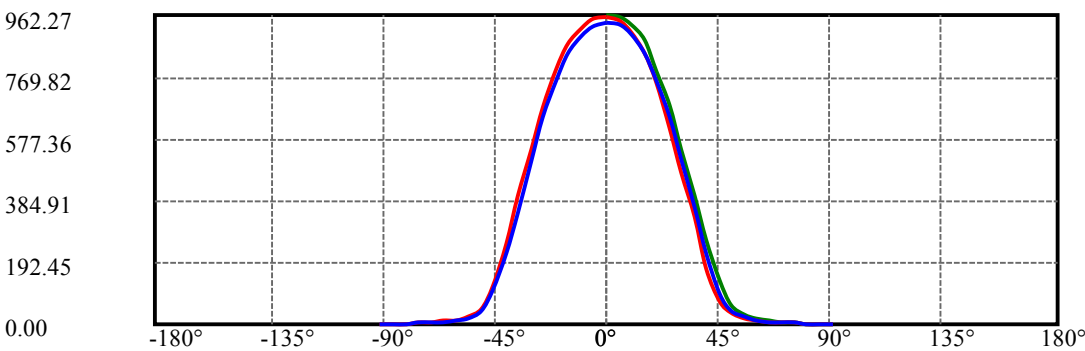
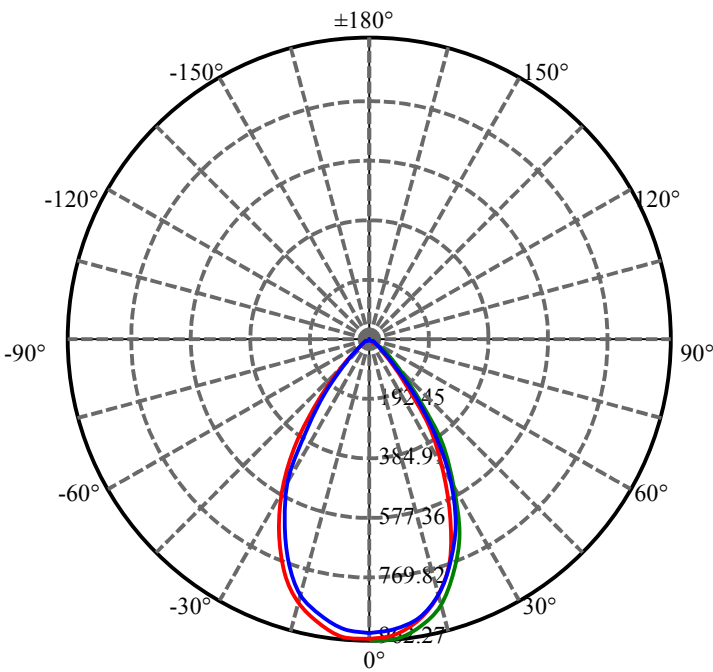
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	952.782	0.000	0	0.00%	0.00%
5.0	942.525	22.658	22.658	2.01%	2.25%
10.0	911.218	66.314	88.972	5.89%	8.83%
15.0	853.848	104.703	193.675	9.30%	19.22%
20.0	767.336	133.608	327.283	11.87%	32.49%
25.0	652.283	148.892	476.175	13.22%	47.27%
30.0	515.807	147.823	623.998	13.13%	61.94%
35.0	372.204	130.766	754.763	11.61%	74.92%
40.0	238.669	101.920	856.683	9.05%	85.04%
45.0	128.954	68.068	924.751	6.05%	91.79%
50.0	60.518	38.286	963.037	3.40%	95.60%
55.0	27.942	19.234	982.271	1.71%	97.50%
60.0	14.791	9.878	992.149	0.88%	98.48%
65.0	9.379	5.876	998.024	0.52%	99.07%
70.0	6.163	3.935	1001.96	0.35%	99.46%
75.0	3.724	2.584	1004.544	0.23%	99.72%
80.0	2.015	1.536	1006.08	0.14%	99.87%
85.0	1.005	0.821	1006.901	0.07%	99.95%
90.0	0.862	0.511	1007.412	0.05%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	624.00	55.42%	61.94%
0-40	856.68	76.08%	85.04%
0-60	992.15	88.11%	98.48%
0-90	1006.90	89.42%	99.95%
0-120	1006.90	89.42%	99.95%
0-180	1007.41	89.47%	100.00%
60-90	14.75	1.31%	1.46%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.51	805.93	71.57%	80.00%

ZONAL LUMEN SUMMARY

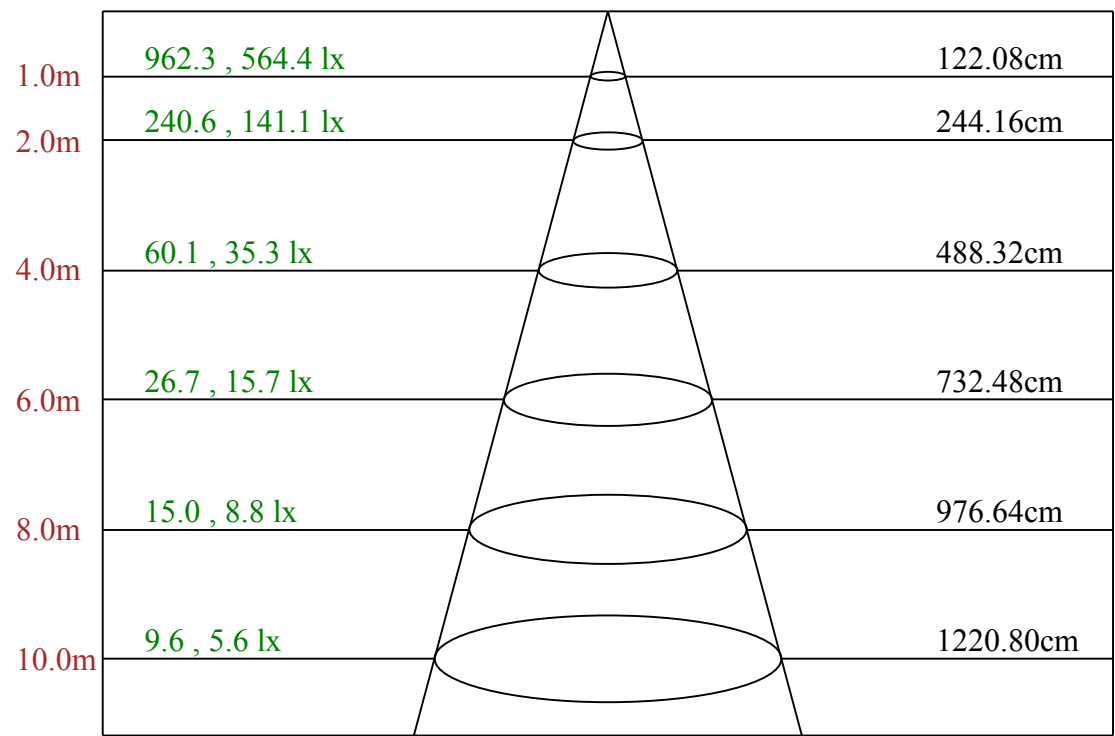
0-10	88.97
10-20	238.31
20-30	296.71
30-40	232.69
40-50	106.35
50-60	29.11
60-70	9.81
70-80	4.12
80-90	0.82
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



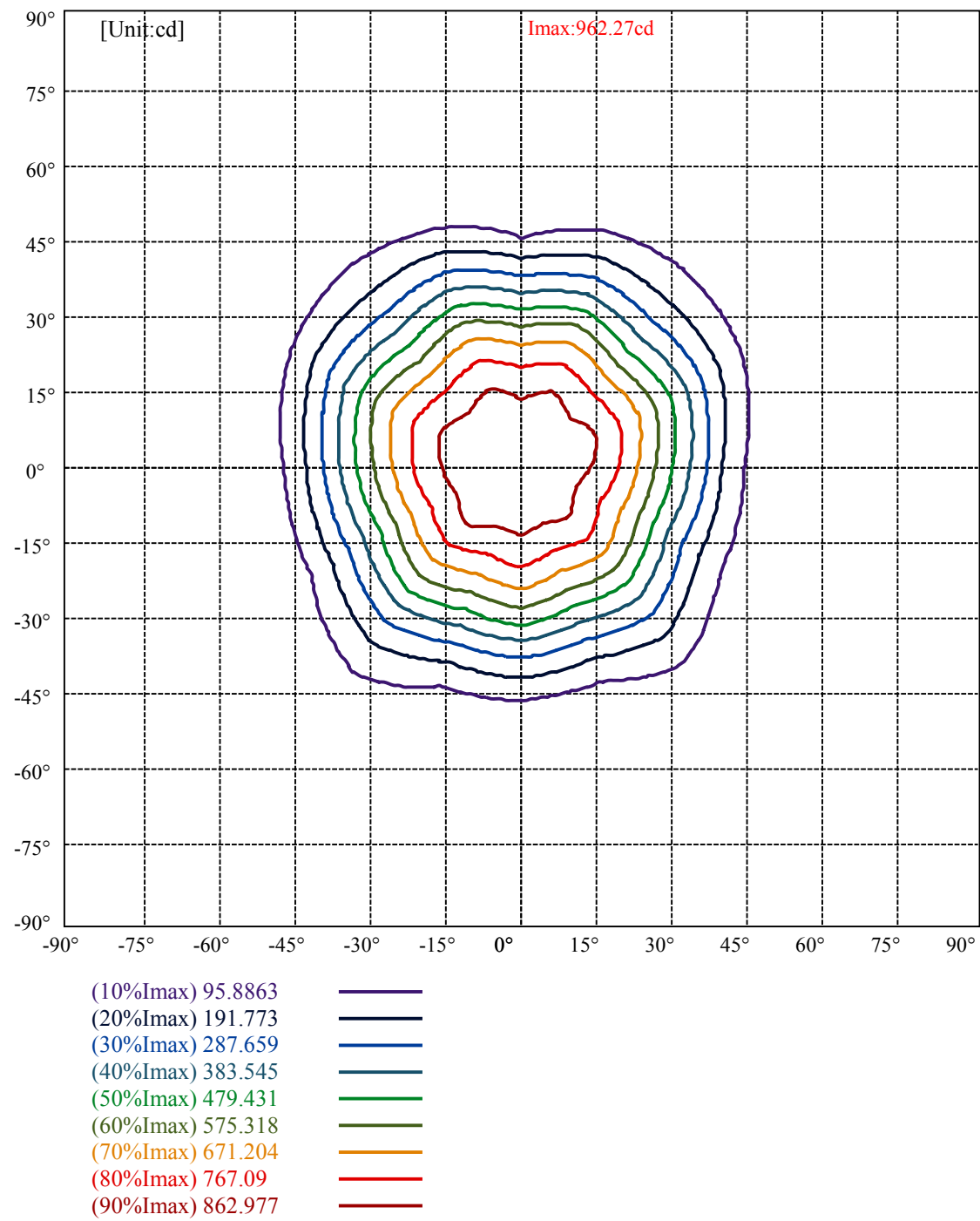
C22.5(Max):
C0/C180:
C90/C270:

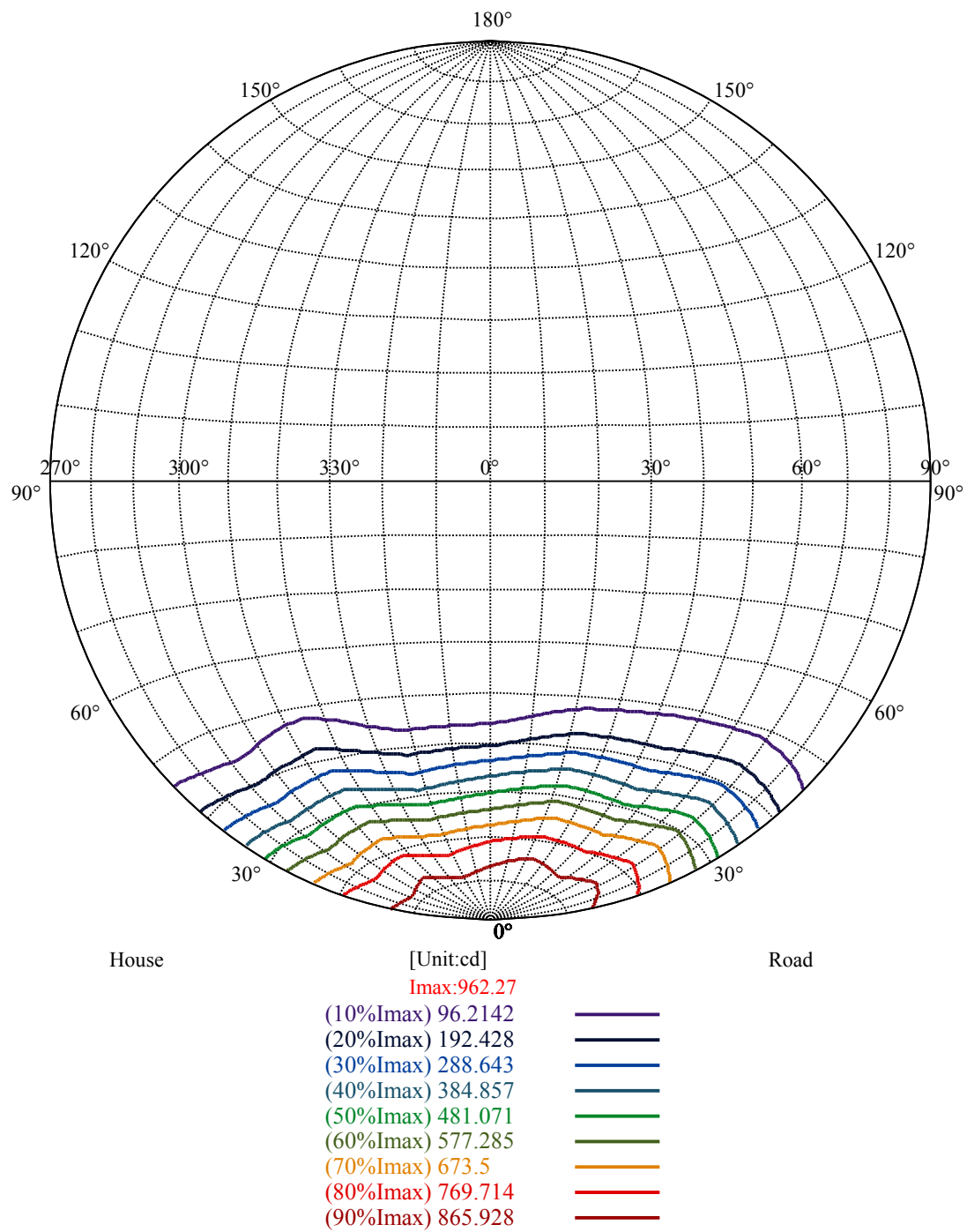
Field angle(10%Imax):C0/180Left:46.7 Right:44.0
:C90/270Left:46.2 Right:45.6

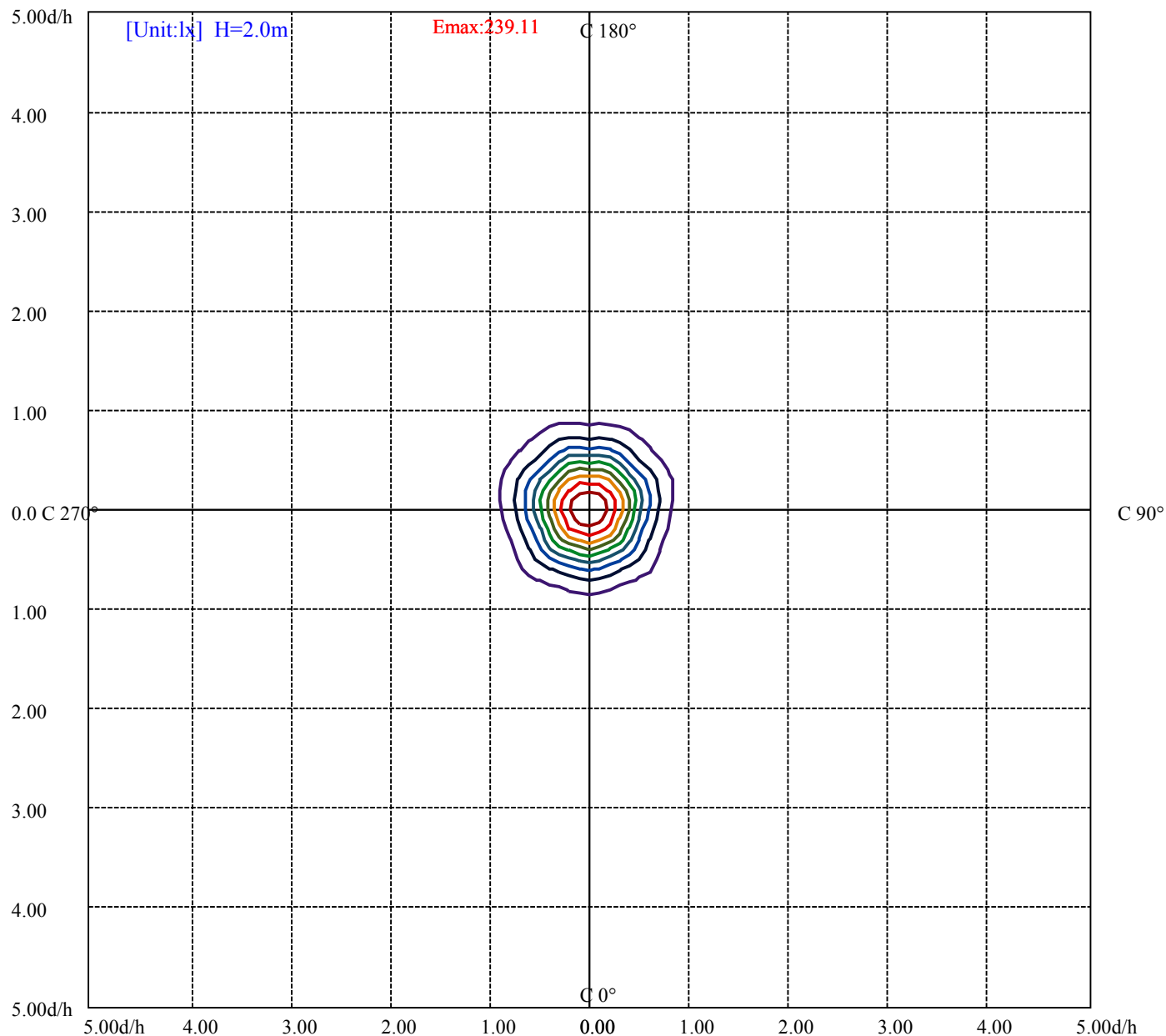
Beam Angle(50%Imax):C0/180Left:32.5 Right:29.8
:C90/270Left:31.2 Right:31.5



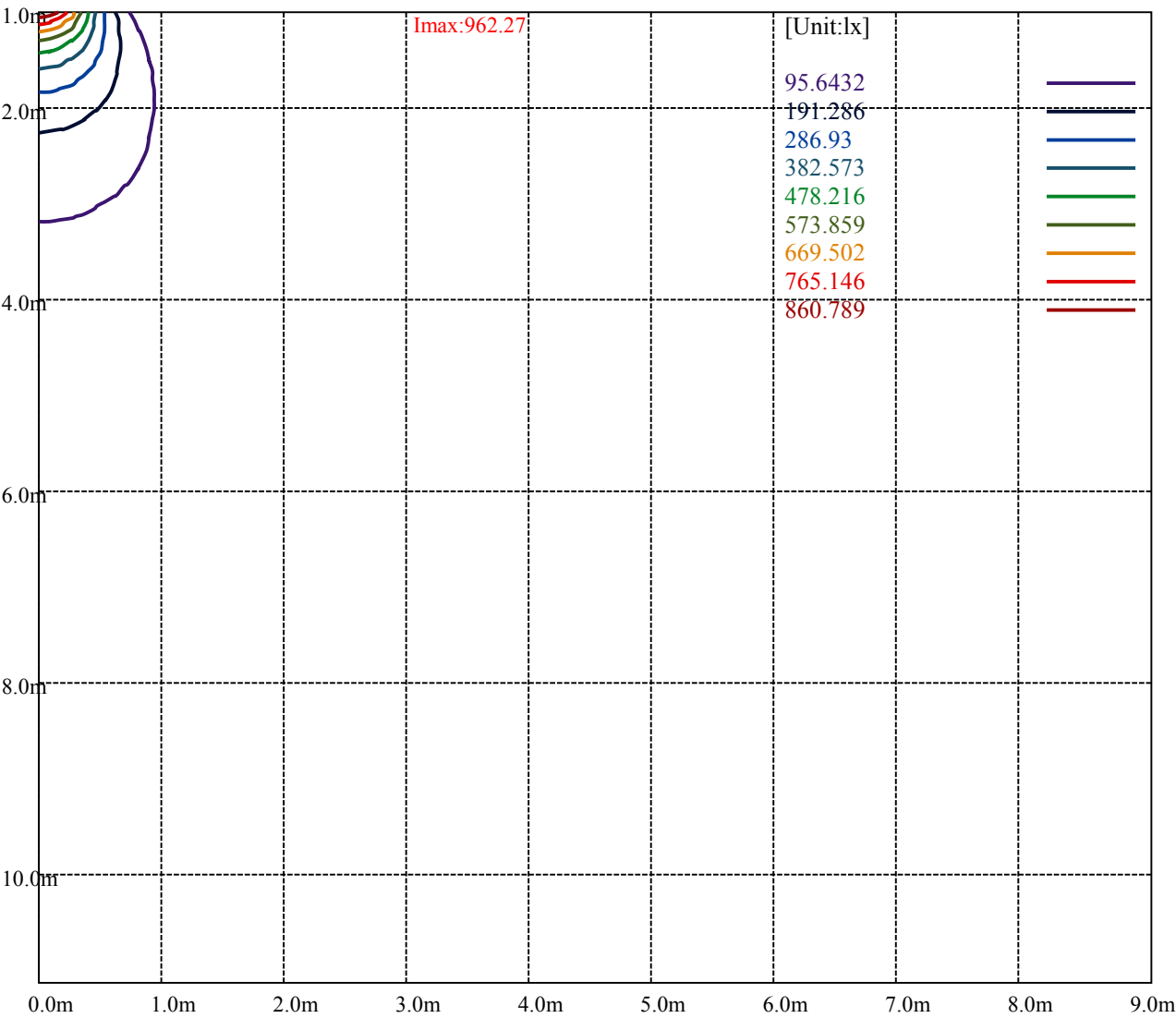
Max , Ave Beam angle of C22.5 plane 62.80







(10%Emax)	23.91077	—
(20%Emax)	47.8215	—
(30%Emax)	71.73225	—
(40%Emax)	95.643	—
(50%Emax)	119.5537	—
(60%Emax)	143.4645	—
(70%Emax)	167.3752	—
(80%Emax)	191.286	—
(90%Emax)	215.1967	—



Luminance Table

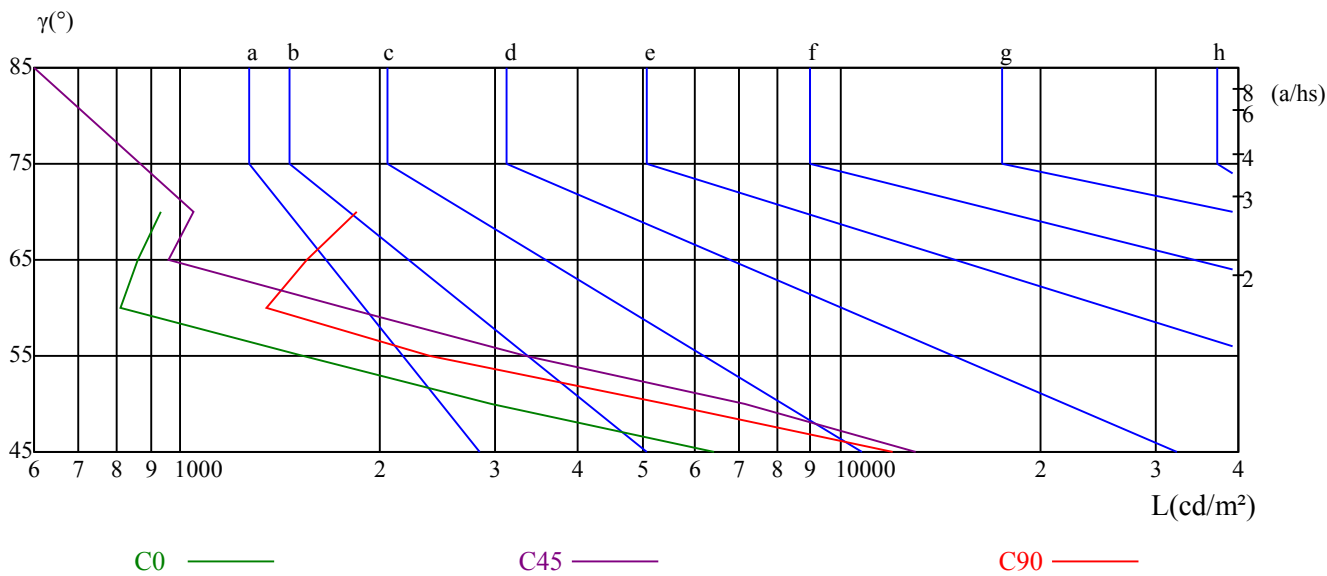
γ	45	50	55	60	65	70	75	80	85
C0	6412	2947	1537	810	863	931	0	0	0
C45	12940	7142	3342	1778	958	1047	0	0	185
C90	11970	5417	2391	1345	1551	1847	0	0	0

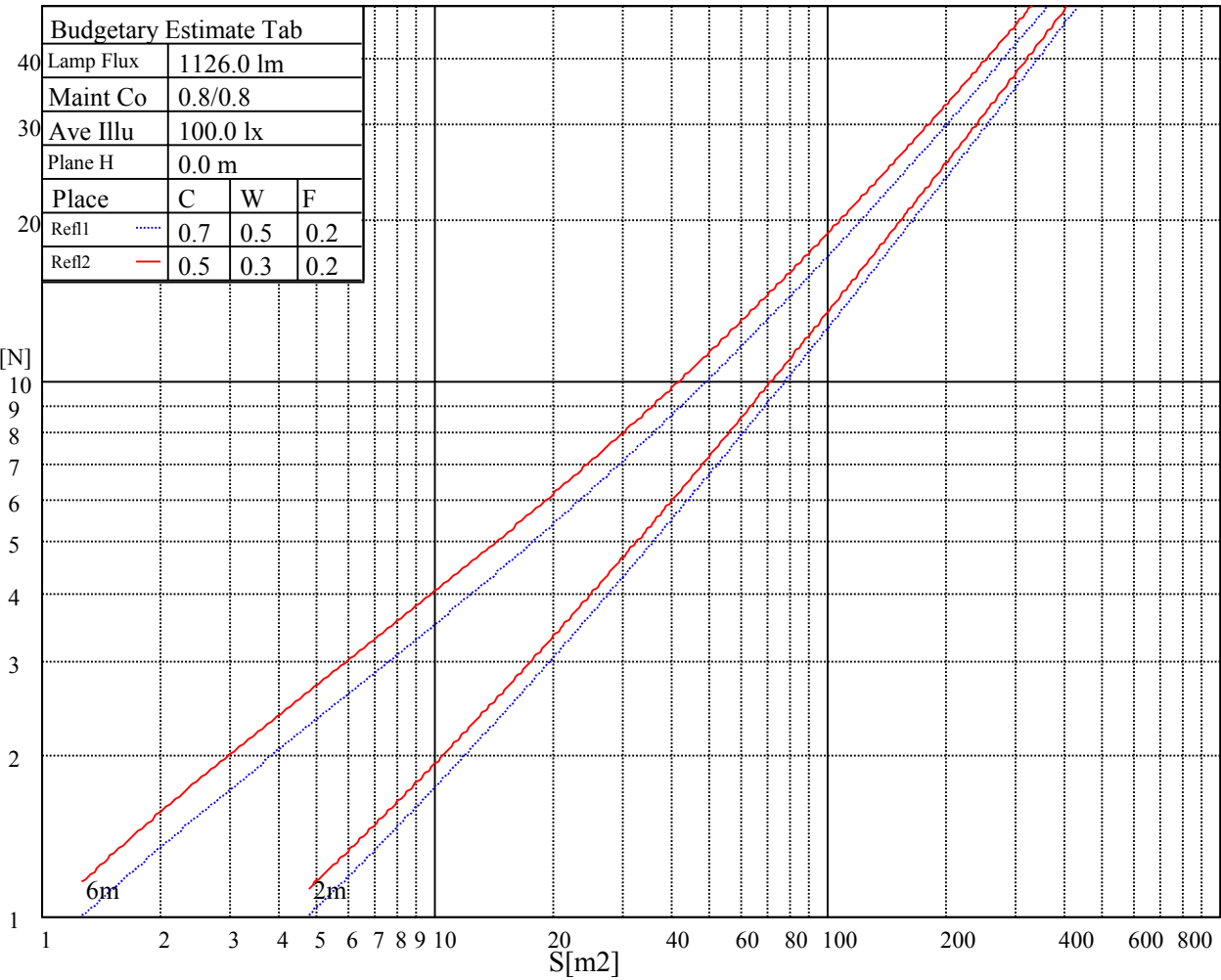
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1788	1788	1788	1460	0	0	0	0	260

Glare Table

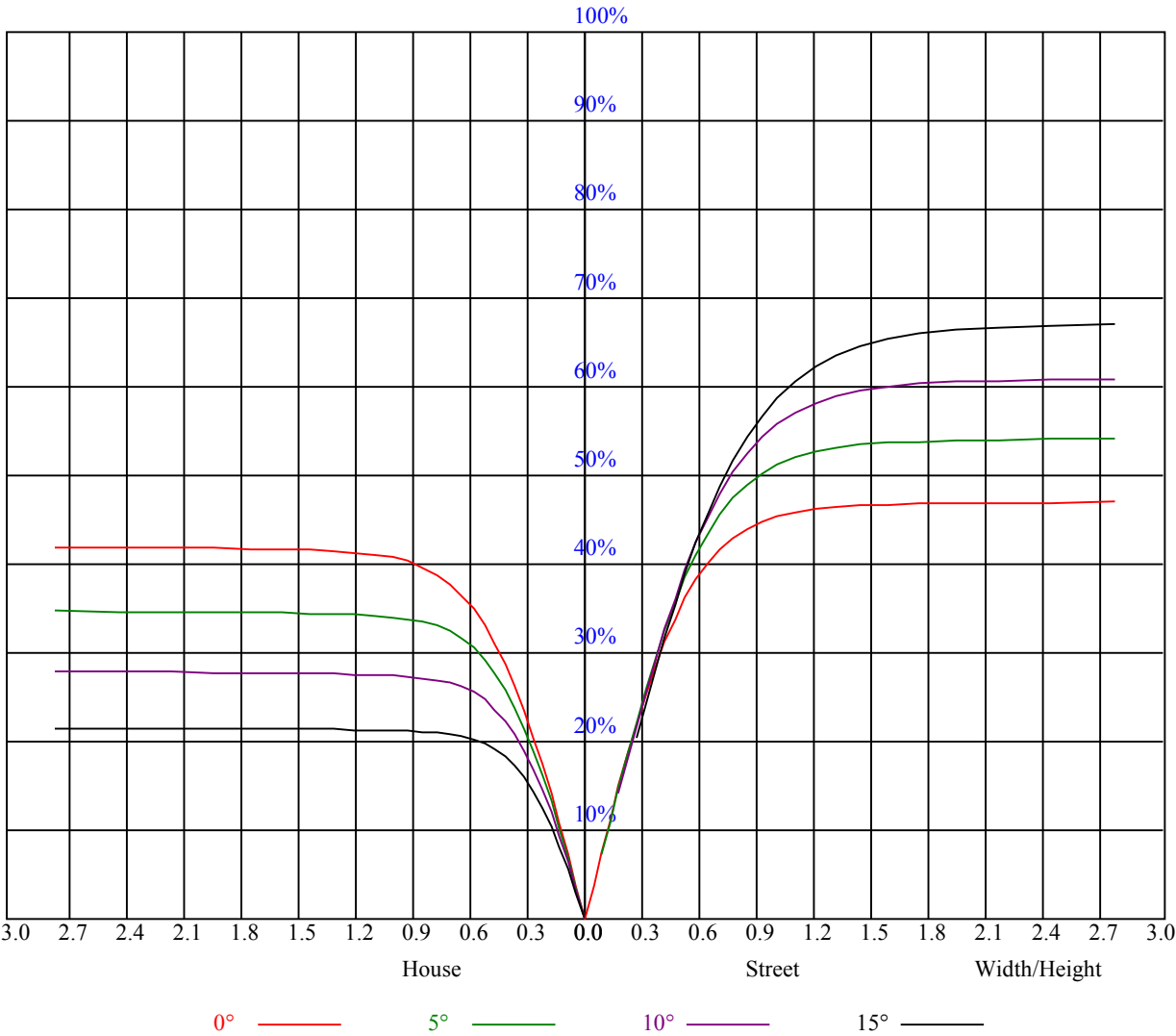
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

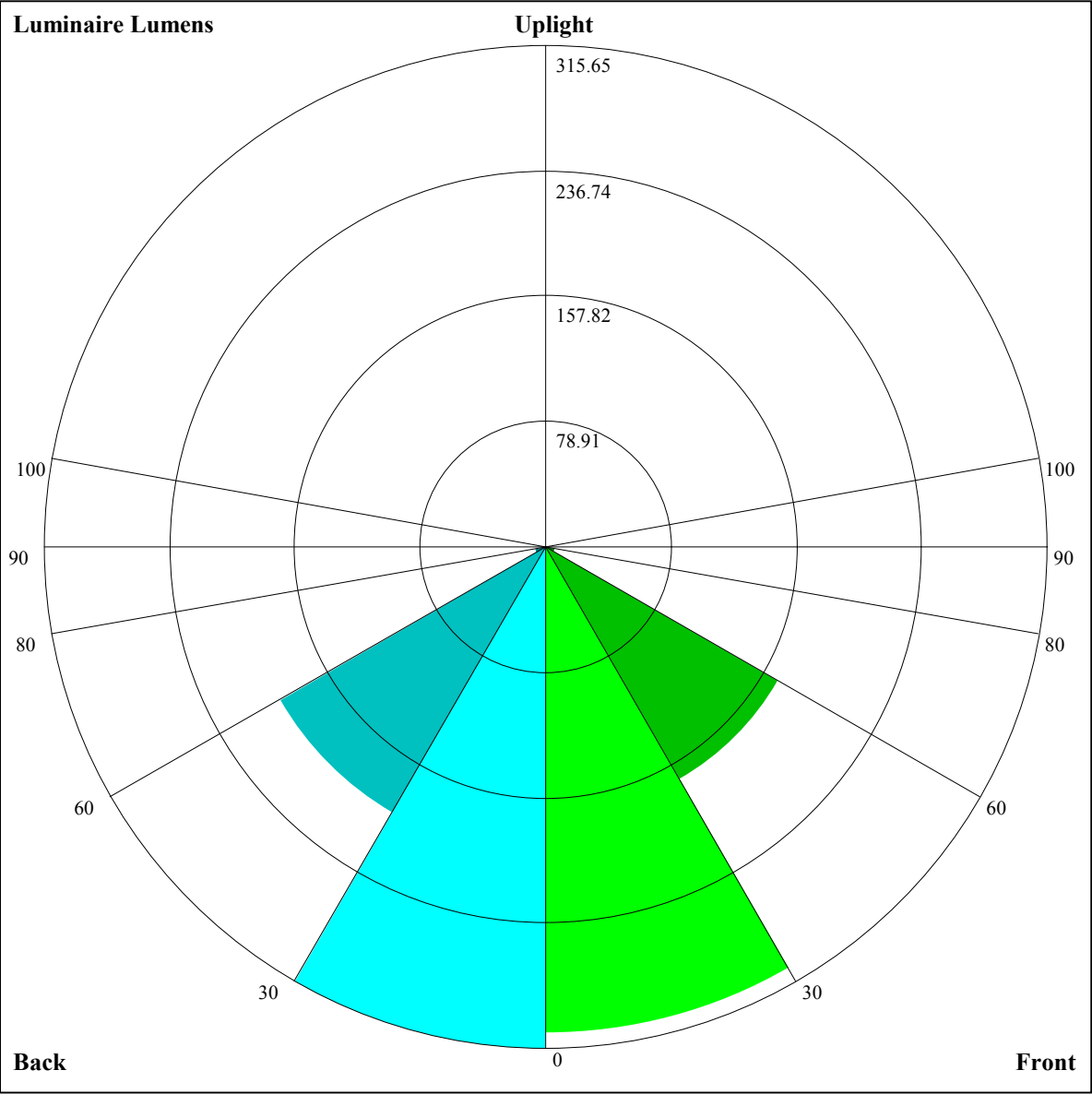
Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.98	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.84	0.81	0.79	0.81	0.79	0.77	0.76
3	0.84	0.79	0.75	0.83	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.72	0.76	0.73	0.71	0.70
4	0.78	0.73	0.68	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.64
5	0.72	0.67	0.63	0.71	0.66	0.62	0.70	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.59
6	0.67	0.62	0.58	0.67	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.56	0.63	0.59	0.56	0.55
7	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.52	0.59	0.55	0.52	0.51
8	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.56	0.52	0.48	0.47
9	0.55	0.50	0.46	0.55	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.45	0.52	0.48	0.45	0.44
10	0.52	0.47	0.43	0.52	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.49	0.45	0.42	0.41





Luminaire Lumens:

FL=305.79,FM=169.31,FH=6.38,FVH=0.63

BL=315.65,BM=193.33,BH=7.37,BVH=0.7

UL=0,UH=0

BUG Rating:B1-U0-G0

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	959.14	945.85	909.03	843.95	750.93	612.03	471.78	334.92	173.77
22.5	962.27	957.96	932.48	882.37	791.21	680.51	543.39	402.55	261.11
45.0	958.04	944.84	911.23	845.55	766.16	647.50	495.40	358.45	239.45
67.5	947.54	946.19	924.01	880.09	807.38	706.32	575.98	418.29	277.37
90.0	939.67	929.52	902.52	843.35	761.08	648.09	512.16	365.56	222.01
112.5	950.34	950.76	929.43	886.86	816.52	721.47	592.90	452.40	308.43
135.0	950.08	940.86	912.42	862.23	784.10	676.95	533.49	399.25	276.43
157.5	955.16	957.19	937.73	897.69	822.11	726.80	615.16	464.59	324.85
180.0	959.14	951.02	919.53	871.71	794.43	676.53	546.86	402.12	251.63
202.5	962.27	945.60	907.51	844.45	752.20	633.28	480.92	342.54	210.50
225.0	958.04	950.85	922.75	873.23	780.21	667.39	548.64	399.67	276.86
247.5	947.54	932.56	895.91	826.00	729.51	608.90	471.70	328.06	198.90
270.0	939.67	928.59	897.27	842.68	759.31	644.96	510.13	346.52	221.16
292.5	950.34	929.60	886.52	814.83	712.25	585.45	448.42	307.75	183.16
315.0	950.08	936.20	906.16	847.25	746.69	627.27	490.23	355.06	239.19
337.5	955.16	932.82	885.00	799.34	703.27	573.10	415.75	277.53	153.88
360.0	959.14	945.85	909.03	843.95	750.93	612.03	471.78	334.92	173.77

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	74.65	33.09	17.27	11.60	8.38	5.33	3.22	1.86	0.85
22.5	139.83	60.77	28.10	15.15	10.16	7.03	4.23	2.29	1.02
45.0	146.85	77.70	33.77	15.32	8.80	5.50	3.22	1.69	1.02
67.5	159.88	74.14	32.25	16.08	10.41	7.03	4.40	2.29	1.18
90.0	98.27	41.14	21.16	12.02	8.46	5.67	3.55	1.95	1.10
112.5	182.82	80.49	35.04	17.27	10.92	7.45	4.82	2.79	1.27
135.0	174.70	97.34	44.35	20.23	11.00	6.77	3.81	2.12	1.10
157.5	193.91	89.97	39.53	20.14	12.02	8.46	5.76	3.05	1.35
180.0	117.82	50.11	22.85	14.39	10.33	6.94	4.40	2.45	0.85
202.5	100.89	43.76	21.84	13.03	9.23	6.18	3.30	1.69	0.85
225.0	174.36	98.44	44.44	20.40	10.33	6.52	4.06	2.12	0.93
247.5	97.08	42.66	20.06	11.34	7.79	5.08	2.96	1.61	0.93
270.0	106.39	41.56	19.55	12.02	8.55	5.67	3.55	1.86	1.02
292.5	82.10	35.89	17.52	10.92	7.36	4.74	2.62	1.52	0.93
315.0	145.75	70.59	33.18	16.25	8.80	5.50	3.22	1.69	0.85
337.5	67.97	30.64	16.17	10.50	7.53	4.74	2.45	1.27	0.85
360.0	74.65	33.09	17.27	11.60	8.38	5.33	3.22	1.86	0.85

C/γ(°)	90.0
0.0	0.85
22.5	0.85
45.0	0.93
67.5	0.85
90.0	0.85
112.5	0.85
135.0	0.85
157.5	0.85
180.0	0.85
202.5	0.85
225.0	0.93
247.5	0.85
270.0	0.85
292.5	0.85
315.0	0.93
337.5	0.85
360.0	0.85