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Nata

Client:

LumCAT: 2-1778-L

Luminaire: 92.70.135.00

Report No: NT2018010902

Test No: GC2018010902

LampCAT: LUMILEDS 1208

Lamp flux(lm): 2981.0

Number of Lamps: 1

Length(mm): 64

Phm Type: C

Voltage(V): 35.0000

Current(A): 0.6400

Power (W): 22.4000

PF: 0.0000

Ballast type: DC

Width(mm): 64

Height(mm): 0

Photometric Results

Lumens(lm): 2881.76, Efficiency(%): 96.67% , Luminous Efficacy(lm/W): 128.65

Central intensity(cd): 9193.868, Maximum intensity(cd): 9193.868

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=28.6

[C90/270]Total=28.6

Field angle(10%Imax): [C0/180]Total=58.4

[C90/270]Total=58.4

Maximum s/h(1/2): C0_180=0.48 C90_270=0.48

Maximum s/h(1/4): C0_180=0.47 C90_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 98.42%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.687%

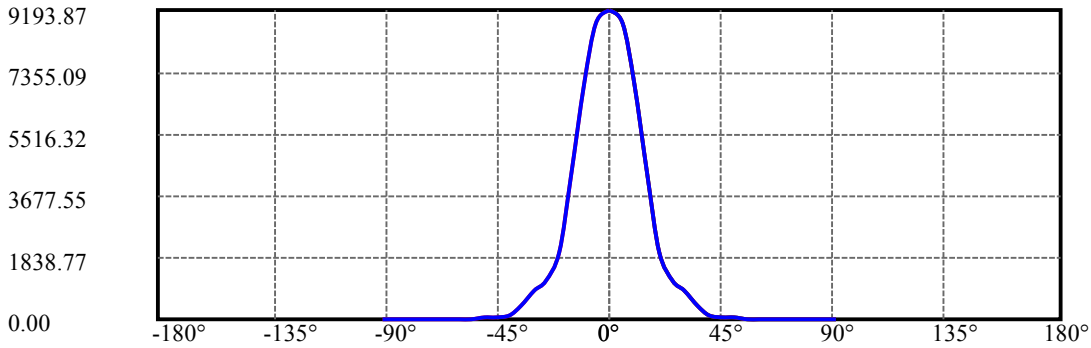
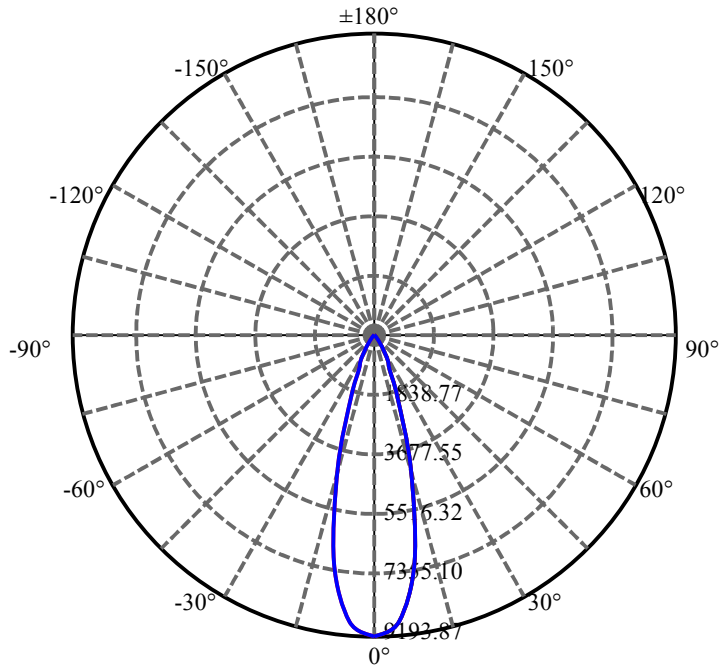
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9193.868	54.981	54.981	1.844%	1.908%
5.0	8784.386	419.659	474.64	14.078%	16.471%
10.0	7000.421	666.322	1140.962	22.352%	39.593%
15.0	4202.524	596.205	1737.167	20.000%	60.282%
20.0	2021.465	378.972	2116.139	12.713%	73.432%
25.0	1153.260	267.156	2383.295	8.962%	82.703%
30.0	877.062	240.375	2623.671	8.064%	91.044%
35.0	425.558	133.795	2757.466	4.488%	95.687%
40.0	93.224	32.846	2790.312	1.102%	96.827%
45.0	30.770	11.926	2802.238	.400%	97.241%
50.0	28.705	12.053	2814.291	.404%	97.659%
55.0	25.925	11.640	2825.931	.390%	98.063%
60.0	22.890	10.866	2836.797	.365%	98.440%
65.0	19.573	9.723	2846.52	.326%	98.777%
70.0	16.985	8.749	2855.269	.293%	99.081%
75.0	14.734	7.801	2863.07	.262%	99.352%
80.0	14.012	7.564	2870.634	.254%	99.614%
85.0	13.682	7.471	2878.105	.251%	99.873%
90.0	13.331	3.653	2881.758	.123%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2623.67	88.01%	91.04%
0-40	2790.31	93.60%	96.83%
0-60	2836.80	95.16%	98.44%
0-90	2878.10	96.55%	99.87%
0-120	2878.10	96.55%	99.87%
0-180	2881.76	96.67%	100.00%
60-90	52.17	1.75%	1.81%
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%
0-23.54	2305.41	77.34%	80.00%

ZONAL LUMEN SUMMARY

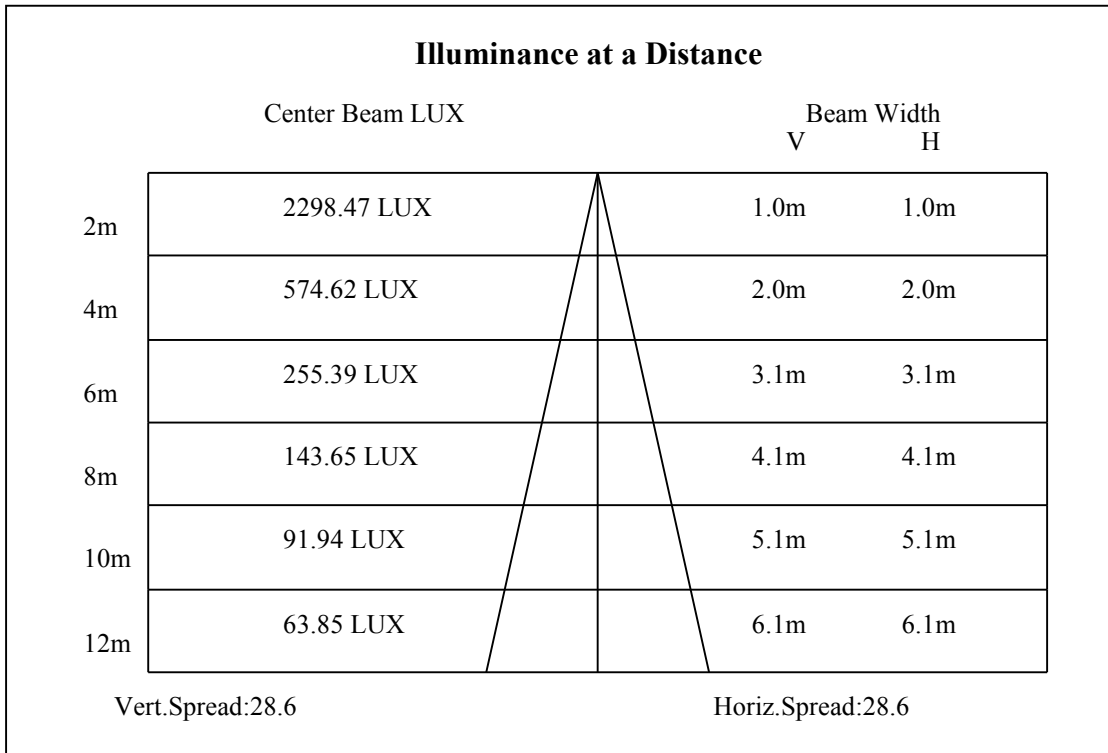
0-10	1140.96
10-20	975.18
20-30	507.53
30-40	166.64
40-50	23.98
50-60	22.51
60-70	18.47
70-80	15.37
80-90	7.47
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

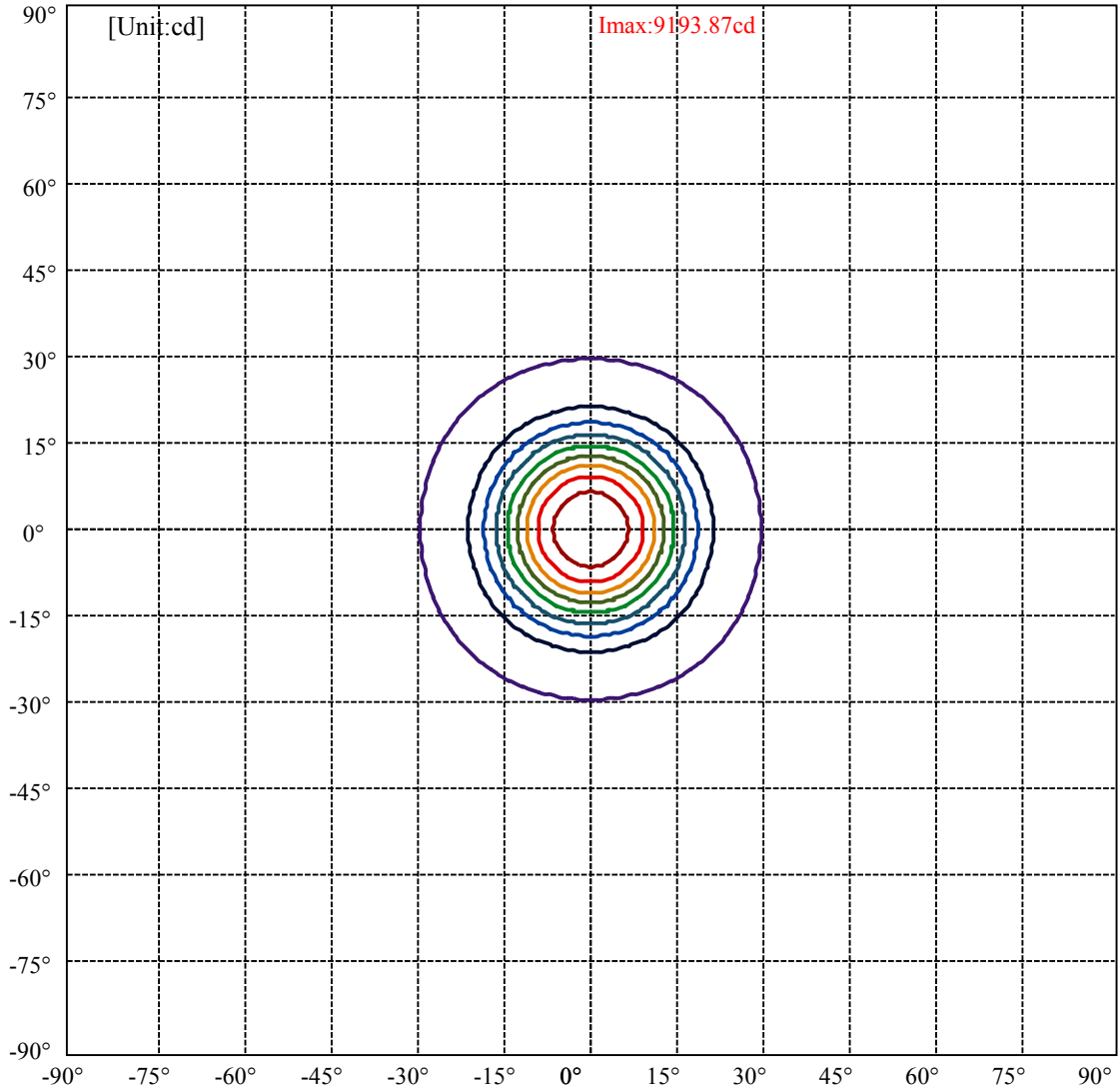


C0(Max): ———
C0/C180: ———
C90/C270: ———

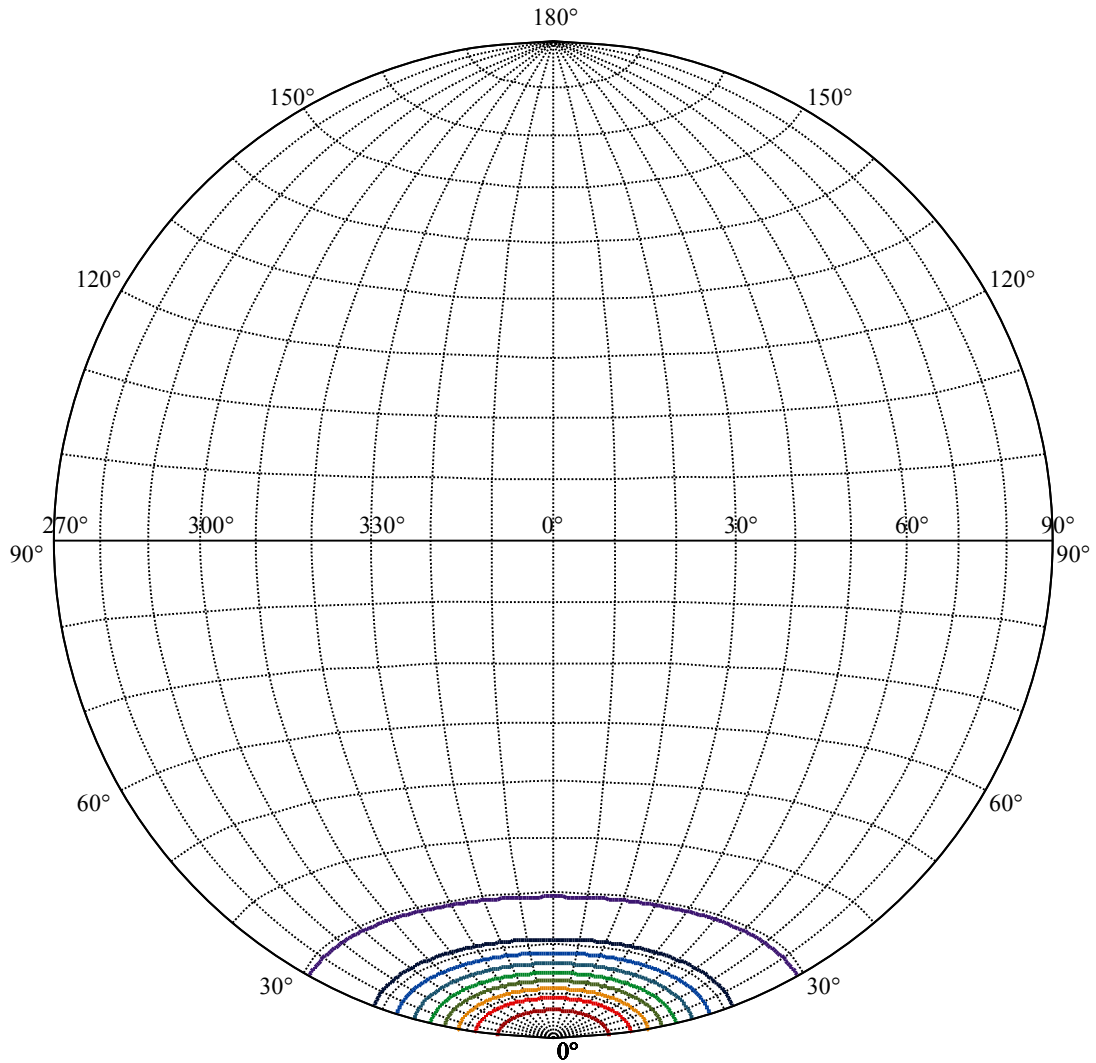
Field angle(10%Imax):C0/180Left:29.2 Right:29.2
:C90/270Left:29.2 Right:29.2

Beam Angle(50%Imax):C0/180Left:14.3 Right:14.3
:C90/270Left:14.3 Right:14.3





(10%Imax) 919.387	—
(20%Imax) 1838.77	—
(30%Imax) 2758.16	—
(40%Imax) 3677.55	—
(50%Imax) 4596.93	—
(60%Imax) 5516.32	—
(70%Imax) 6435.71	—
(80%Imax) 7355.09	—
(90%Imax) 8274.48	—



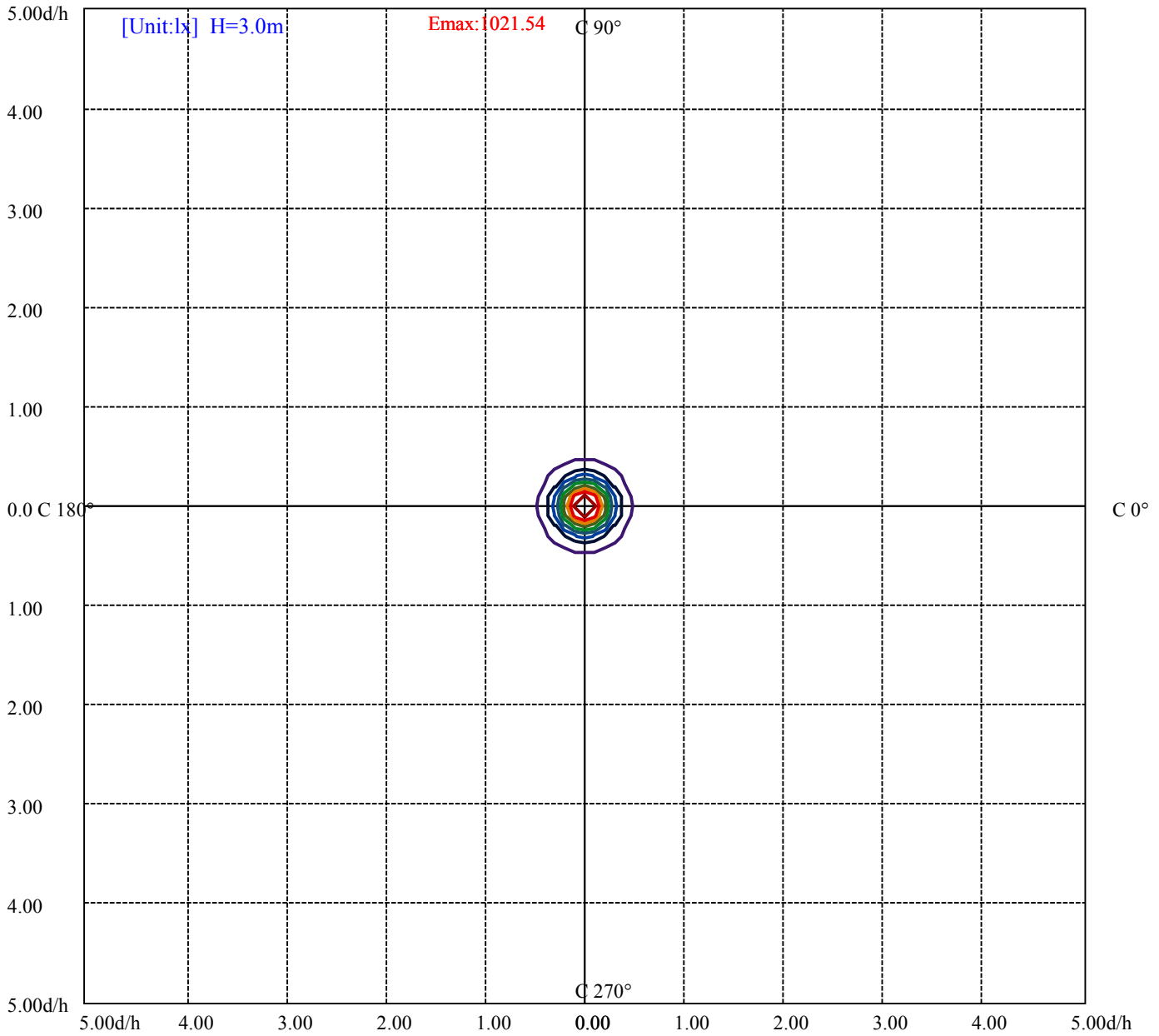
House

[Unit:cd]

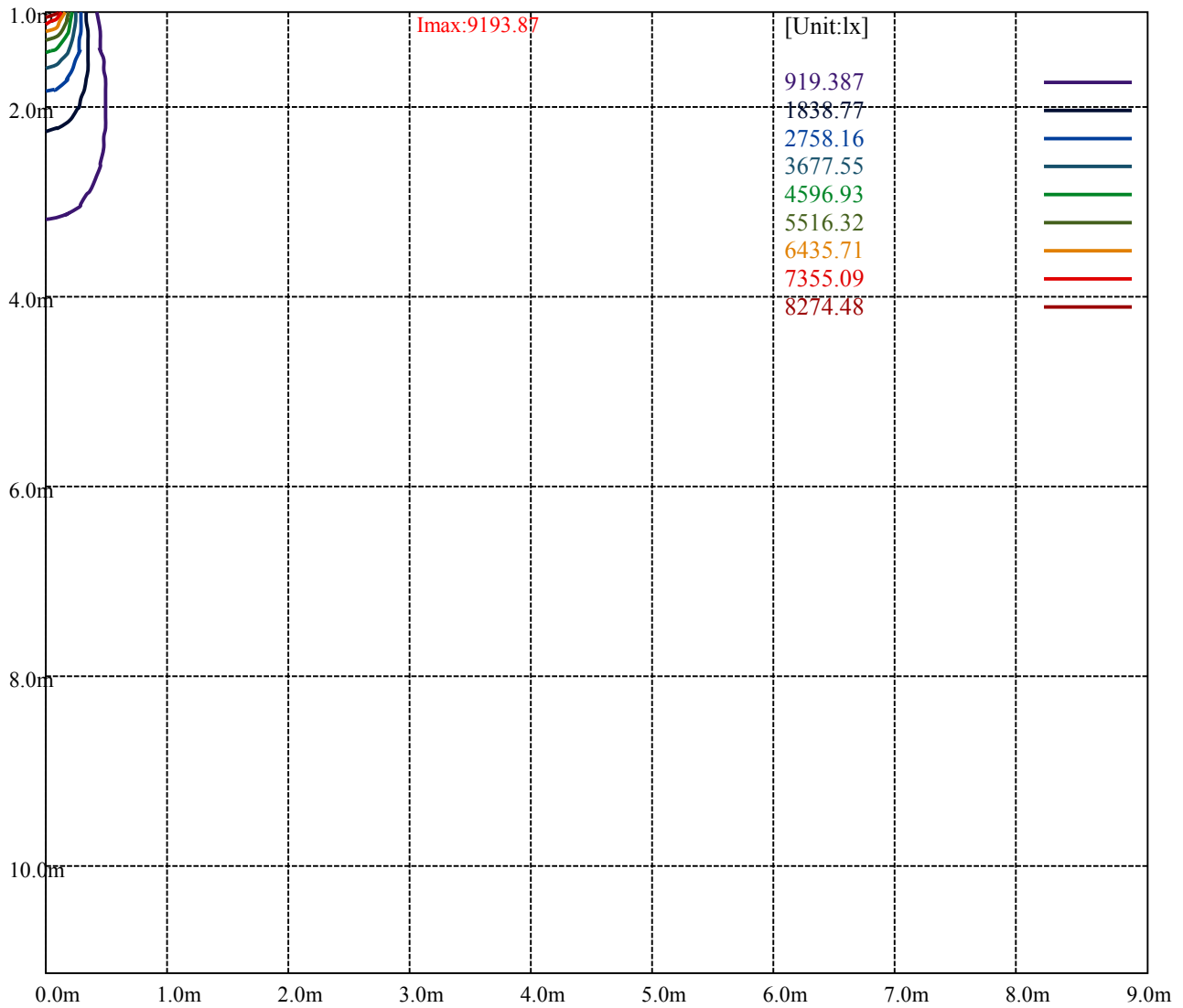
Road

Imax:9193.87

(10%Imax) 919.387	—
(20%Imax) 1838.77	—
(30%Imax) 2758.16	—
(40%Imax) 3677.55	—
(50%Imax) 4596.93	—
(60%Imax) 5516.32	—
(70%Imax) 6435.71	—
(80%Imax) 7355.09	—
(90%Imax) 8274.48	—



(10%Emax) 102.154	—
(20%Emax) 204.3078	—
(30%Emax) 306.4622	—
(40%Emax) 408.6156	—
(50%Emax) 510.77	—
(60%Emax) 612.9233	—
(70%Emax) 715.0778	—
(80%Emax) 817.2311	—
(90%Emax) 919.3855	—



Luminance Table

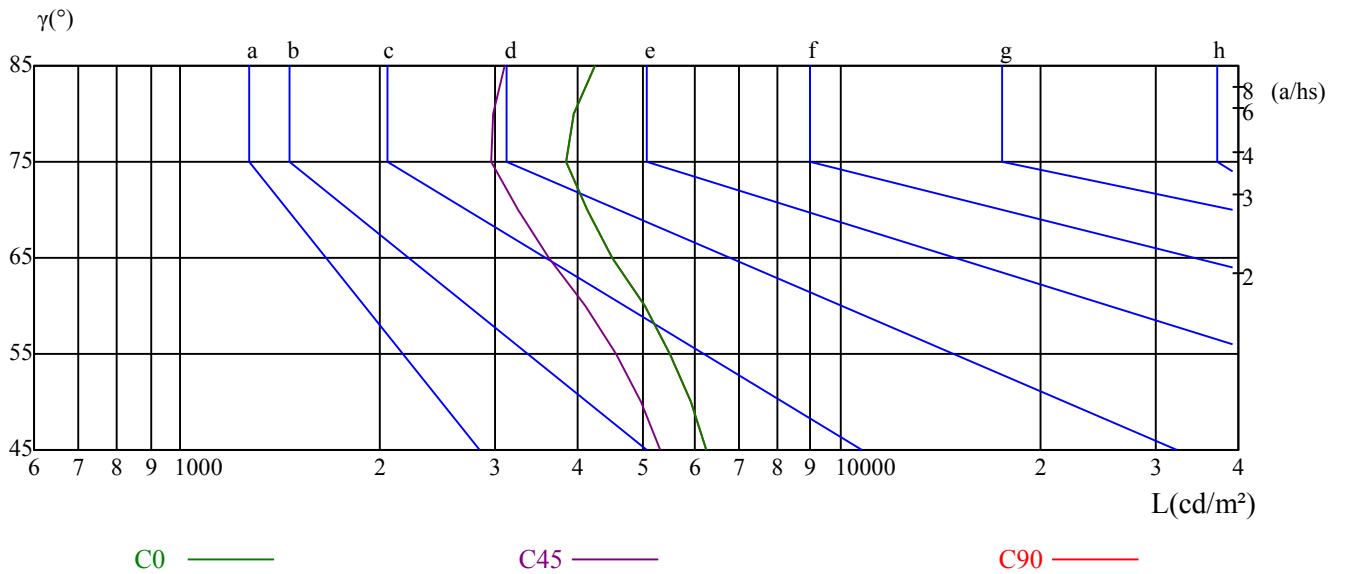
γ	45	50	55	60	65	70	75	80	85
C0	6238	5932	5506	5039	4509	4135	3835	3950	4241
C45	5327	4990	4560	4106	3610	3249	2950	2967	3099
C90	6238	5932	5506	5039	4509	4135	3835	3950	4241

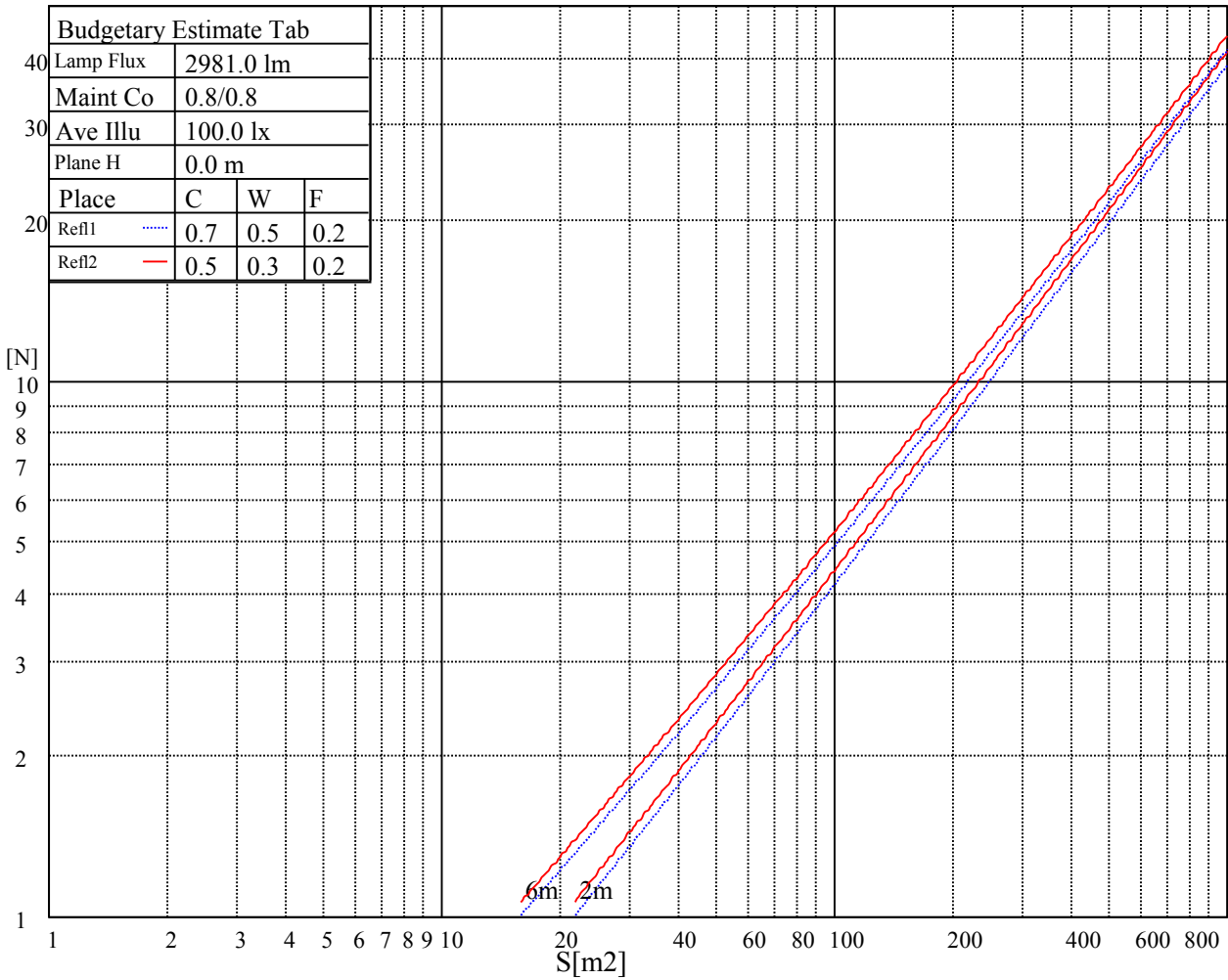
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11307	11307	11307	13899	13899	13899	38325	38325	38325

Glare Table

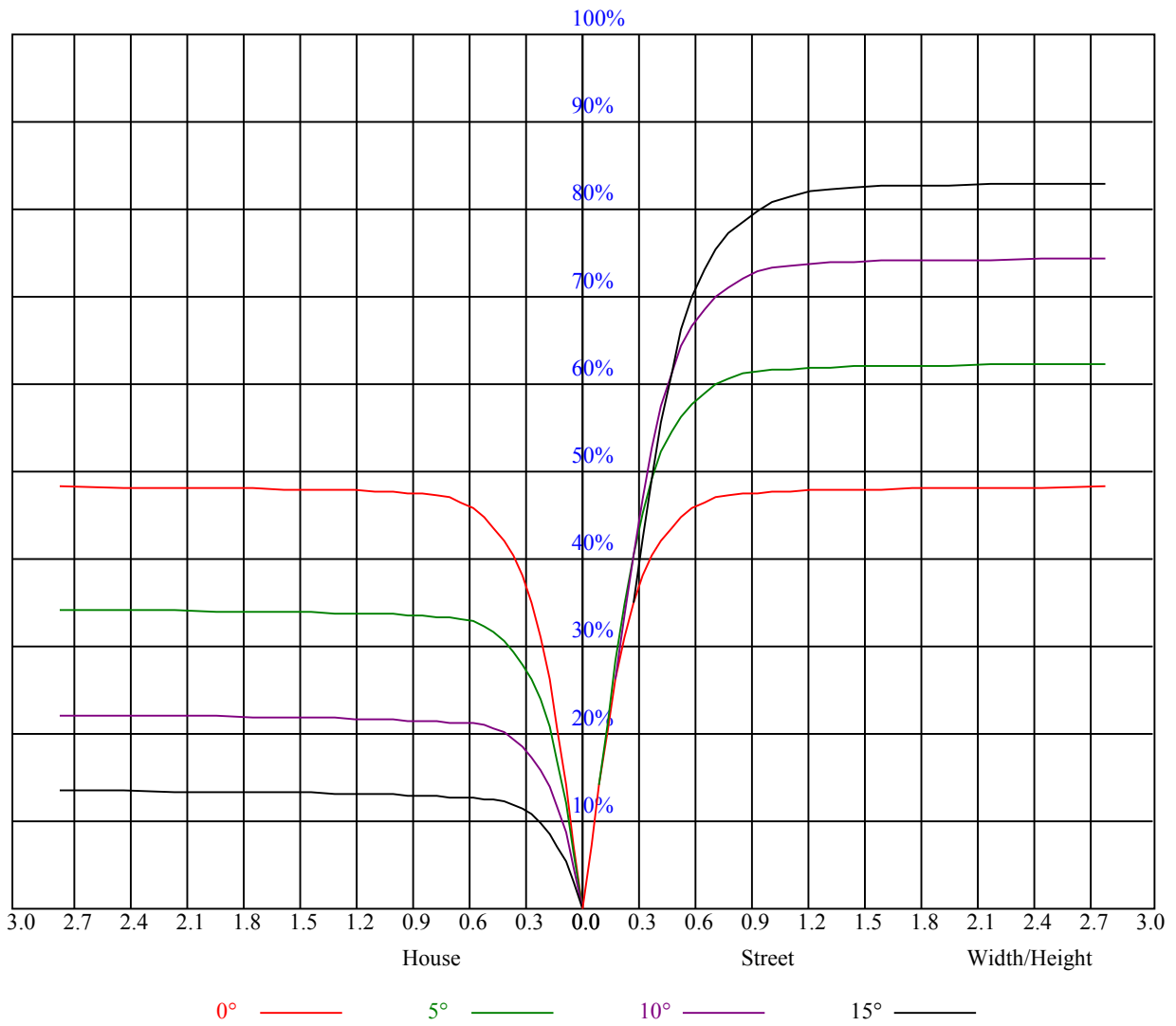
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

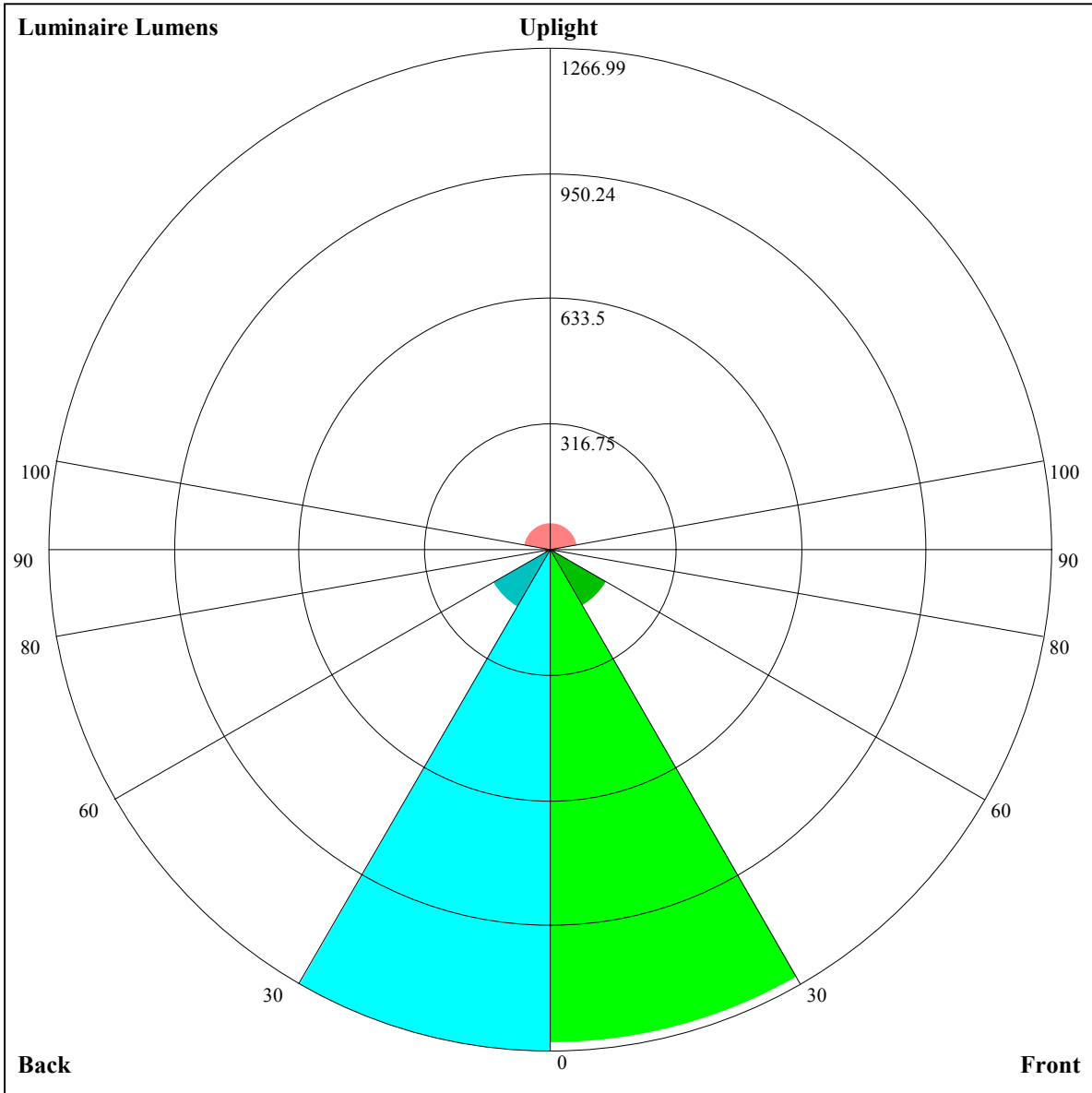
Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.17	1.17	1.17	1.14	1.14	1.14	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	0.98
1	1.08	1.06	1.03	1.06	1.04	1.01	1.02	1.00	0.98	0.98	0.97	0.95	0.95	0.94	0.93	0.91
2	1.03	0.99	0.96	1.01	0.98	0.95	0.98	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.87
3	0.98	0.94	0.90	0.97	0.93	0.90	0.94	0.91	0.88	0.92	0.89	0.87	0.90	0.87	0.86	0.84
4	0.94	0.89	0.86	0.93	0.89	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.87	0.85	0.83	0.81
5	0.90	0.86	0.82	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.79
6	0.87	0.82	0.79	0.86	0.82	0.79	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.76
7	0.84	0.79	0.76	0.83	0.79	0.76	0.82	0.78	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.74
8	0.81	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.73	0.72
9	0.79	0.74	0.72	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.70
10	0.77	0.72	0.69	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.68





Luminaire Lumens:

FL=1248.96,FM=161.93,FH=17.69,FVH=7.46

BL=1266.99,BM=169.44,BH=17.77,BVH=7.47

UL=14.54,UH=69.21

BUG Rating:B3-U2-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	9196.62	8831.05	7010.88	4339.55	2078.38	1207.39	924.40	470.73	70.64
45.0	9194.42	8967.04	7367.10	4673.74	2253.46	1225.00	946.42	502.11	105.38
90.0	9209.83	8978.60	7332.41	4609.87	2195.65	1096.67	938.33	495.56	99.71
135.0	9174.60	9141.56	7732.67	4871.94	2483.59	1292.17	984.41	584.70	292.35
180.0	9196.62	8769.38	6820.94	3890.29	1870.27	1086.70	838.07	373.72	53.90
225.0	9194.42	8597.06	6796.16	3875.42	1794.84	1096.67	816.27	339.26	41.95
270.0	9209.83	8664.78	6838.00	4097.85	1857.60	1144.07	819.24	344.65	41.29
315.0	9174.60	8325.63	6105.20	3261.54	1637.93	1077.40	749.37	293.73	40.58
360.0	9196.62	8831.05	7010.88	4339.55	2078.38	1207.39	924.40	470.73	70.64

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	27.36	25.88	23.78	20.87	18.17	16.24	14.59	13.93	13.60
45.0	32.21	30.89	28.24	25.44	21.31	18.11	15.09	14.20	13.76
90.0	31.49	29.12	26.21	23.34	19.82	17.29	14.98	14.09	13.71
135.0	35.29	31.88	28.63	25.22	21.20	18.55	15.53	14.20	13.65
180.0	29.46	26.54	23.73	20.98	18.22	16.19	14.31	13.82	13.60
225.0	29.51	28.68	26.32	23.29	19.82	16.79	14.48	13.98	13.82
270.0	29.23	27.36	24.67	21.64	18.66	16.19	14.42	13.98	13.71
315.0	31.60	29.29	25.82	22.35	19.38	16.52	14.48	13.87	13.60
360.0	27.36	25.88	23.78	20.87	18.17	16.24	14.59	13.93	13.60

C/ γ (°)	90.0
0.0	13.21
45.0	13.43
90.0	13.32
135.0	13.27
180.0	13.27
225.0	13.54
270.0	13.38
315.0	13.21
360.0	13.21