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NATA

Client:

LumCAT: 4-2140-B

Luminaire: 92.76.263.00

Report No:

Test No:

LampCAT: BRIDGELUX Vero 18 LES18

Lamp flux(lm): 3838.0

Number of Lamps: 1

Length(mm): 100

Phm Type: C

Voltage(V):

Current(A):

Power (W): 27.9300

PF:

Ballast type:

Width(mm): 100

Height(mm): 0

Photometric Results

Lumens(lm): 3530.82, Efficiency(%): 92.00% , Luminous Efficacy(lm/W): 126.42

Central intensity(cd): 5883.877, Maximum intensity(cd): 5951.046

Angle of maximum intensity: C=180.0 $\gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=33.7

[C90/270]Total=58.6

Field angle(10%Imax): [C0/180]Total=73.0

[C90/270]Total=76.7

Maximum s/h(1/2): C0_180=0.63 C90_270=0.97

Maximum s/h(1/4): C0_180=0.61 C90_270=0.85

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.00%

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%

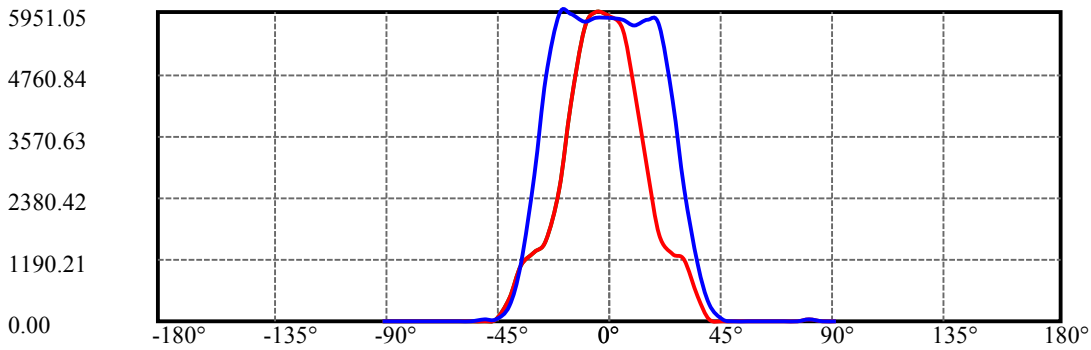
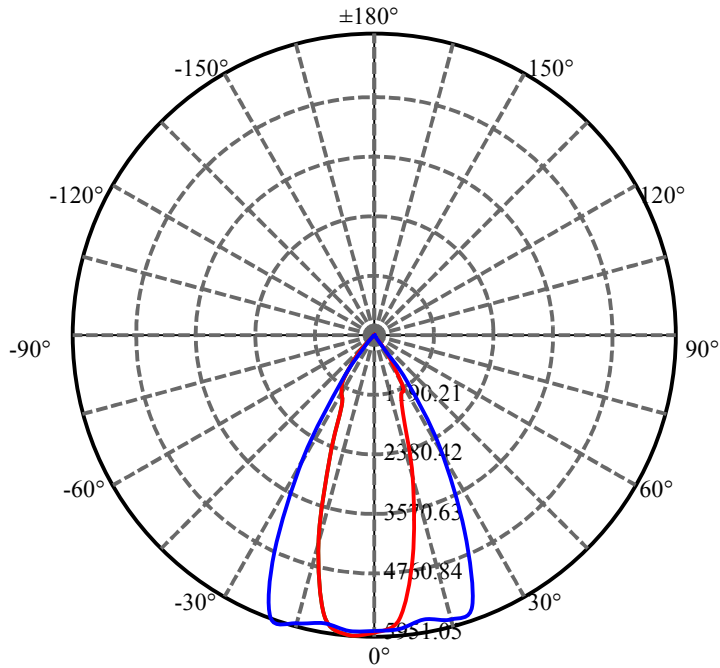
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5877.202	0.000	0	.000%	.000%
5.0	5811.306	139.733	139.733	3.641%	3.958%
10.0	5452.235	402.932	542.665	10.498%	15.369%
15.0	4641.633	598.761	1141.427	15.601%	32.327%
20.0	3416.525	664.105	1805.532	17.303%	51.136%
25.0	2275.928	597.033	2402.565	15.556%	68.045%
30.0	1530.527	481.710	2884.275	12.551%	81.688%
35.0	830.774	347.718	3231.993	9.060%	91.537%
40.0	233.835	177.622	3409.615	4.628%	96.567%
45.0	22.305	47.426	3457.041	1.236%	97.910%
50.0	17.580	8.059	3465.101	.210%	98.139%
55.0	16.548	7.421	3472.521	.193%	98.349%
60.0	16.039	7.532	3480.054	.196%	98.562%
65.0	15.684	7.712	3487.766	.201%	98.781%
70.0	15.440	7.881	3495.646	.205%	99.004%
75.0	15.801	8.166	3503.812	.213%	99.235%
80.0	18.145	9.083	3512.895	.237%	99.492%
85.0	16.345	9.372	3522.267	.244%	99.758%
90.0	14.903	8.556	3530.823	.223%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2884.28	75.15%	81.69%
0-40	3409.62	88.84%	96.57%
0-60	3480.05	90.67%	98.56%
0-90	3522.27	91.77%	99.76%
0-120	3522.27	91.77%	99.76%
0-180	3530.82	92.00%	100.00%
60-90	49.75	1.30%	1.41%
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%
0-29.38	2824.66	73.60%	80.00%

ZONAL LUMEN SUMMARY

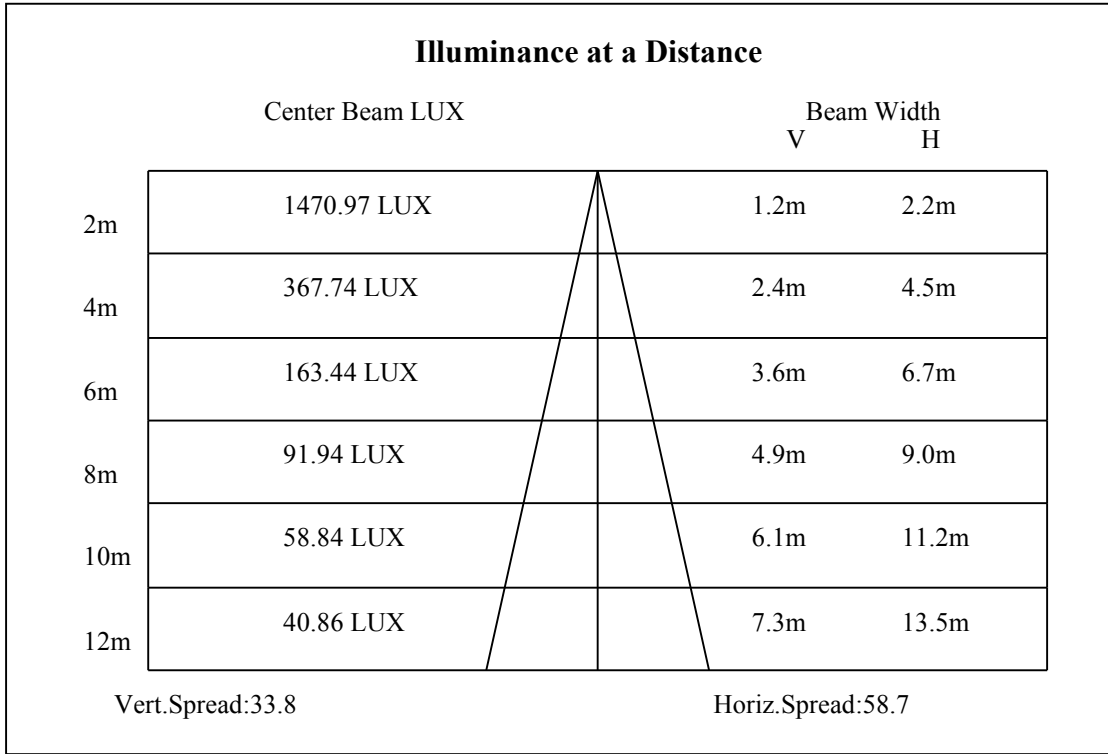
0-10	542.67
10-20	1262.87
20-30	1078.74
30-40	525.34
40-50	55.49
50-60	14.95
60-70	15.59
70-80	17.25
80-90	9.37
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

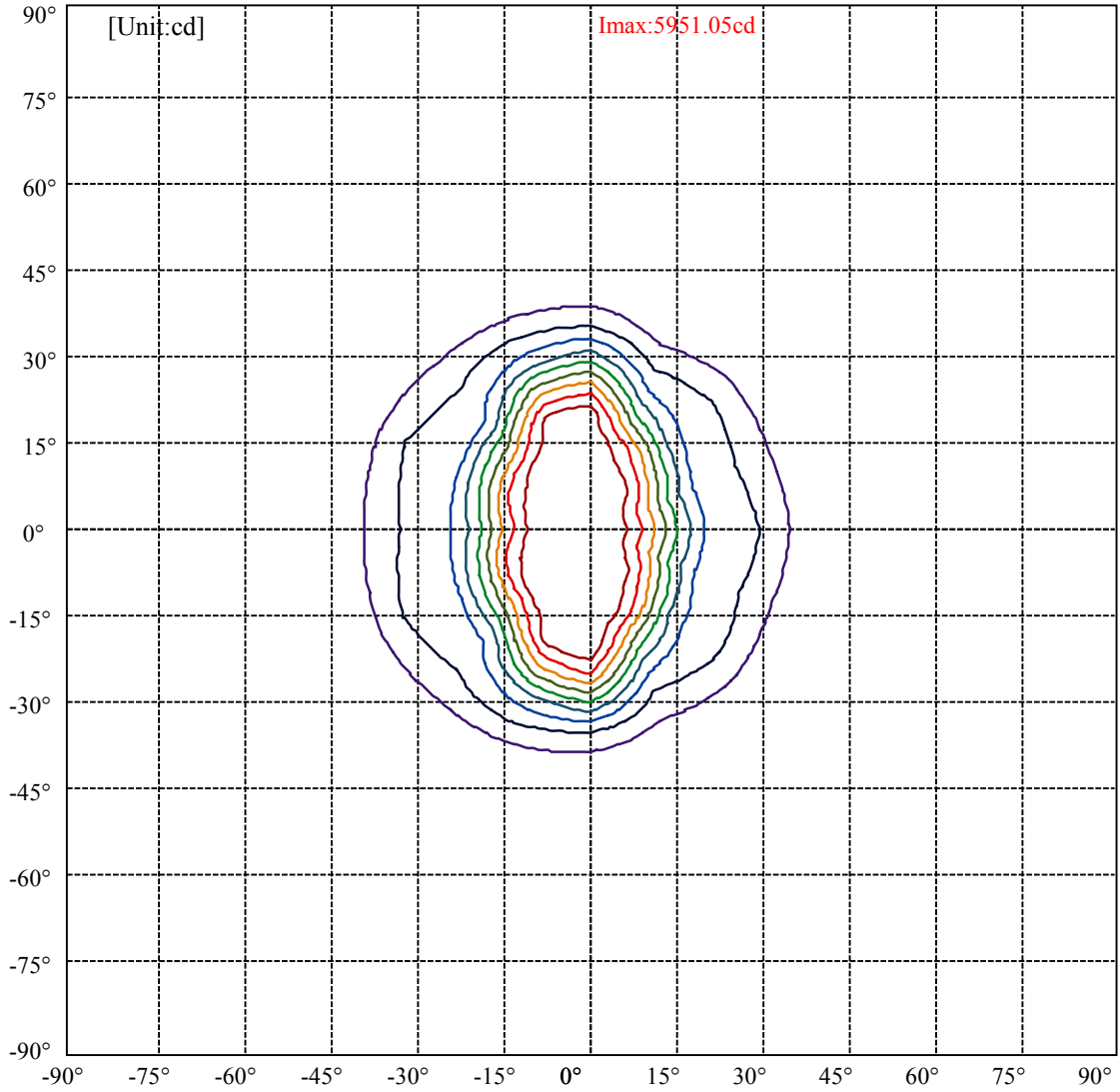


C180(Max): —————
 C0/C180: —————
 C90/C270: —————

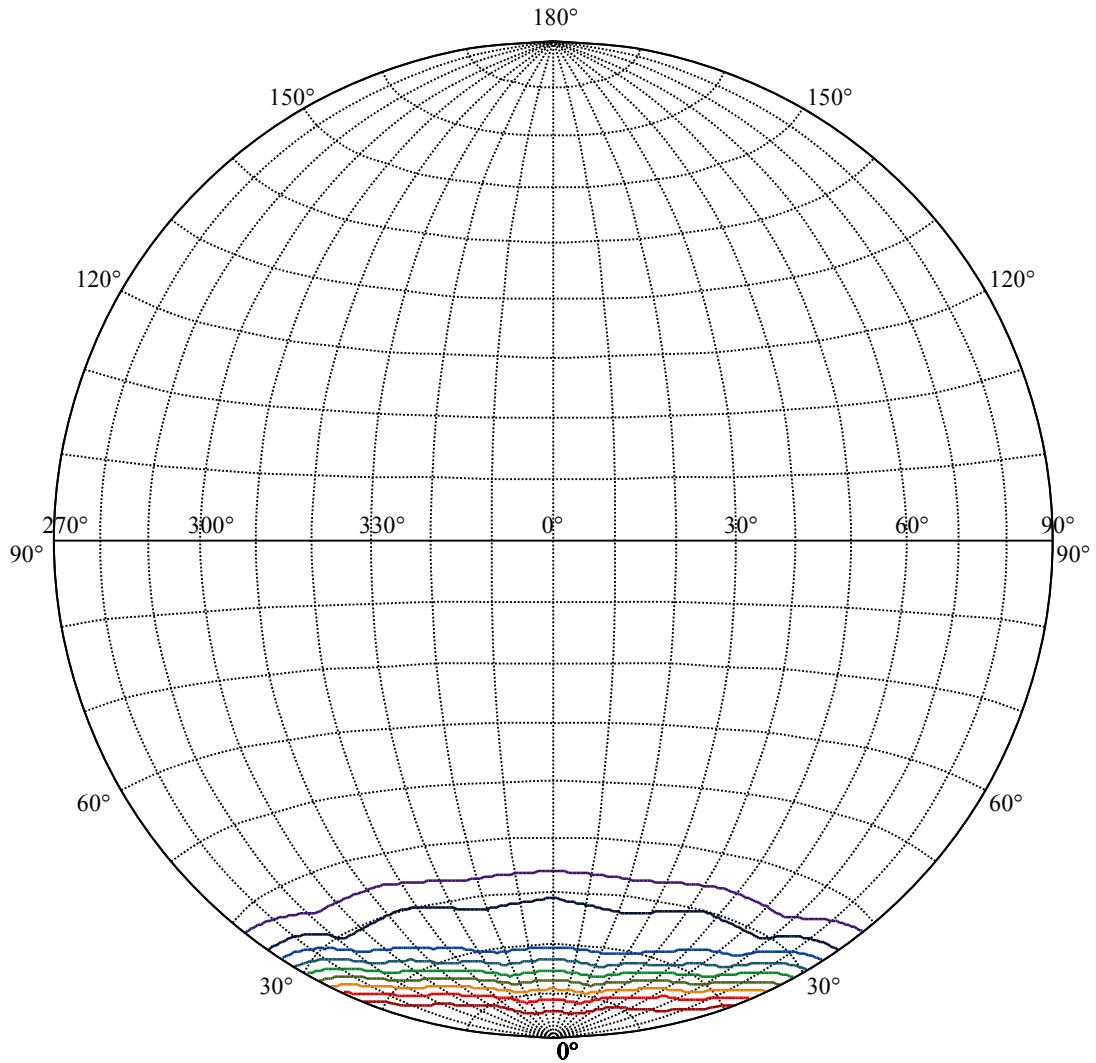
Field angle(10%Imax):C0/180Left:38.9 Right:34.1
 :C90/270Left:38.3 Right:38.4

Beam Angle(50%Imax):C0/180Left:18.8 Right:14.9
 :C90/270Left:29.7 Right:28.9





(10%Imax) 595.105	—
(20%Imax) 1190.21	—
(30%Imax) 1785.31	—
(40%Imax) 2380.42	—
(50%Imax) 2975.52	—
(60%Imax) 3570.63	—
(70%Imax) 4165.73	—
(80%Imax) 4760.84	—
(90%Imax) 5355.94	—



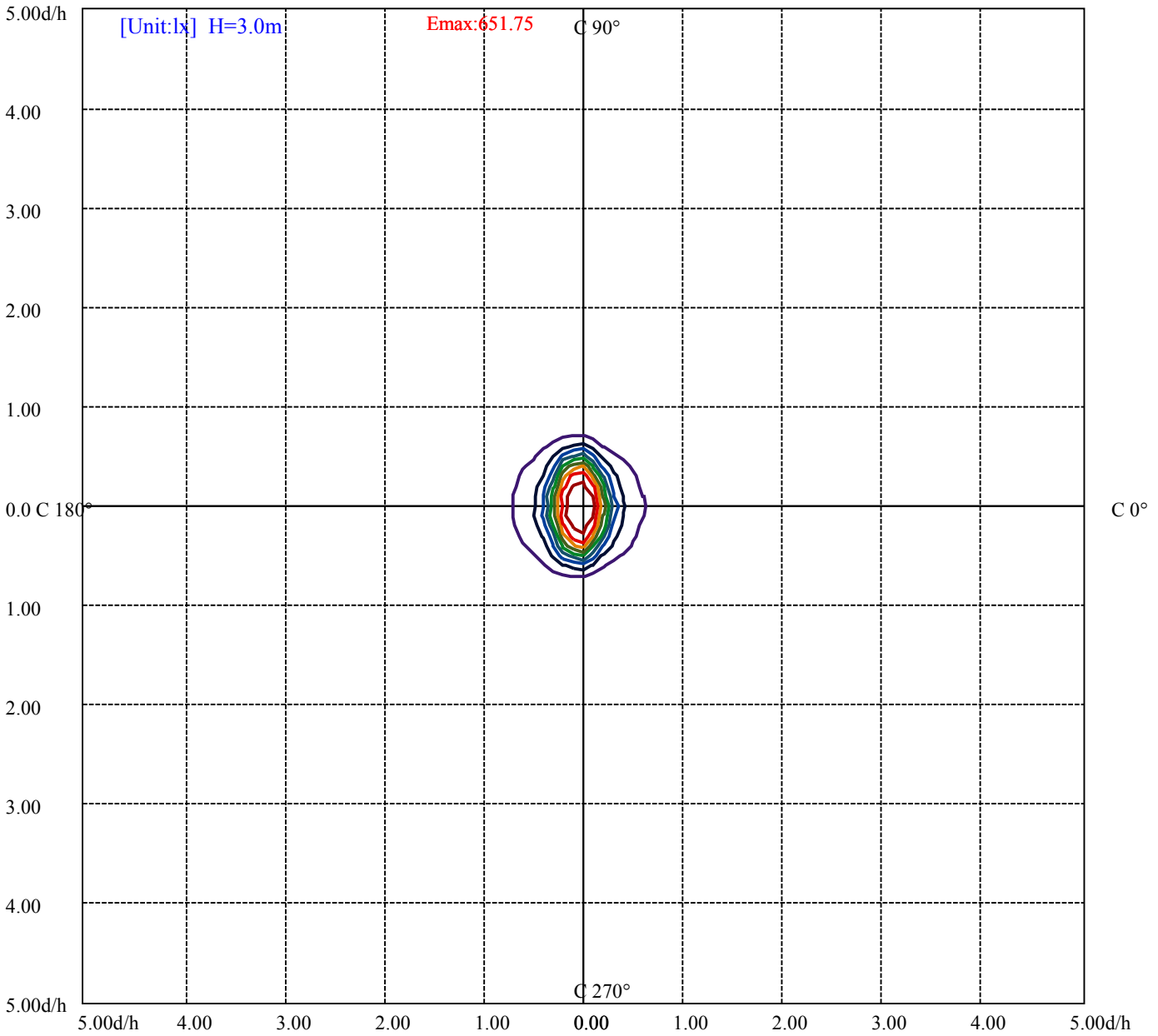
House

[Unit:cd]

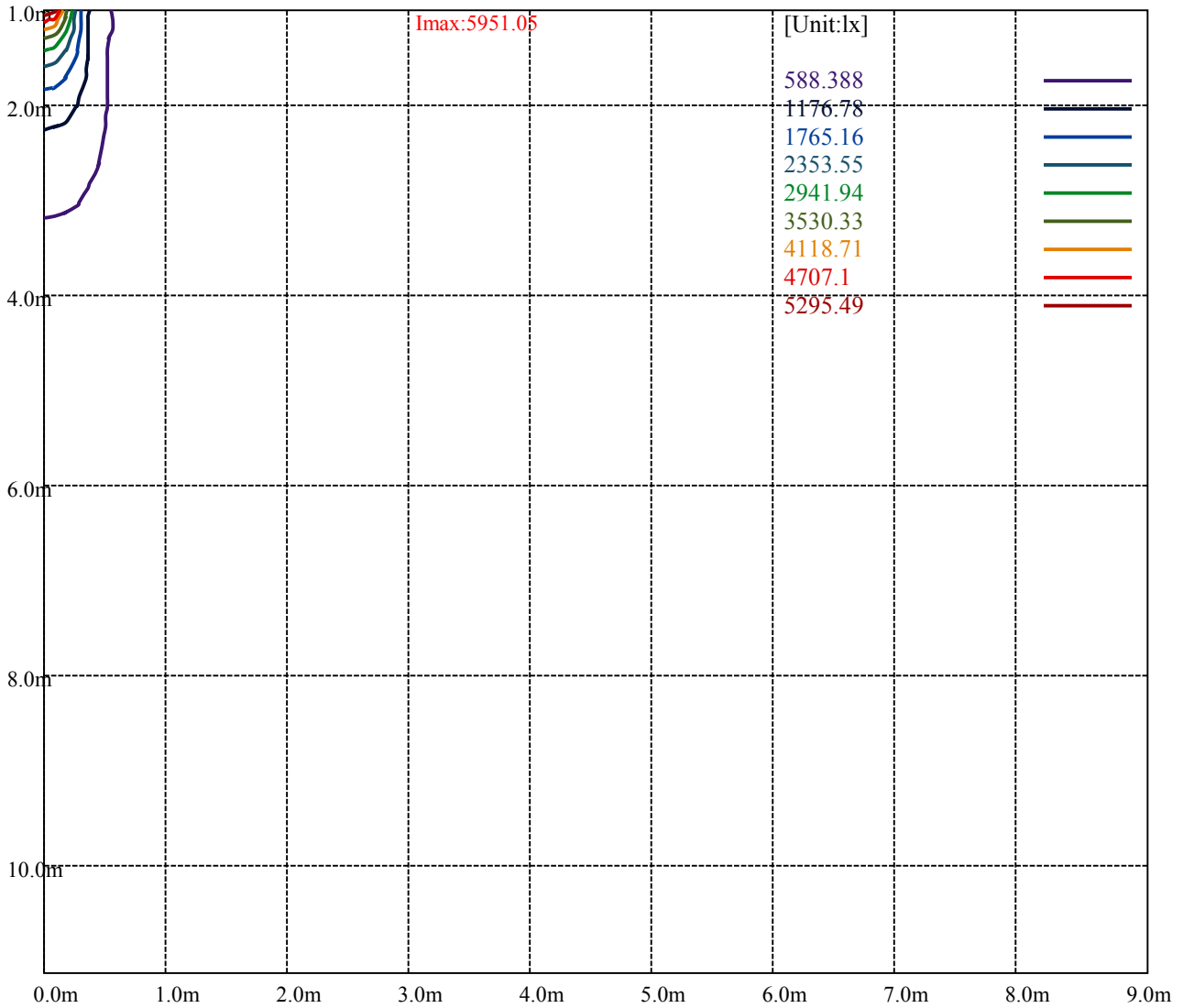
Road

Imax:5951.05

(10%Imax) 595.105	—
(20%Imax) 1190.21	—
(30%Imax) 1785.31	—
(40%Imax) 2380.42	—
(50%Imax) 2975.52	—
(60%Imax) 3570.63	—
(70%Imax) 4165.73	—
(80%Imax) 4760.84	—
(90%Imax) 5355.94	—



- (10%Emax) 65.17455
- (20%Emax) 130.3489
- (30%Emax) 195.5233
- (40%Emax) 260.6978
- (50%Emax) 325.8722
- (60%Emax) 391.0467
- (70%Emax) 456.2211
- (80%Emax) 521.3956
- (90%Emax) 586.5711



Luminance Table

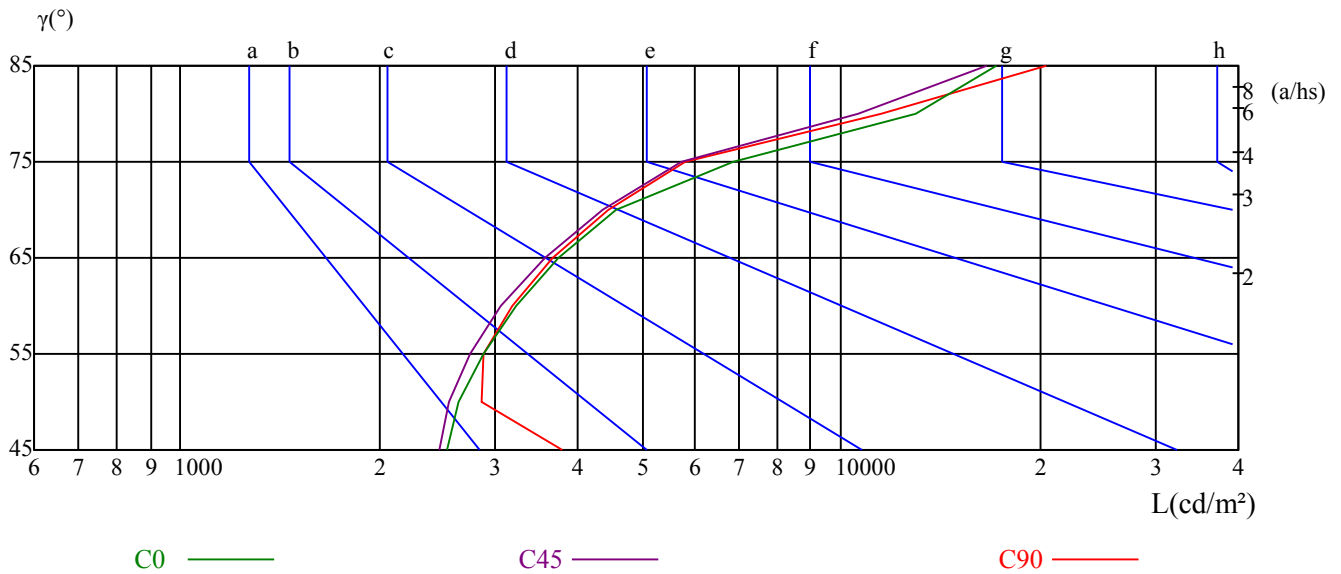
γ	45	50	55	60	65	70	75	80	85
C0	2538	2638	2870	3215	3726	4556	6892	12999	17245
C45	2460	2544	2736	3061	3556	4346	5722	10590	16614
C90	3784	2861	2870	3171	3661	4443	5828	11477	20530

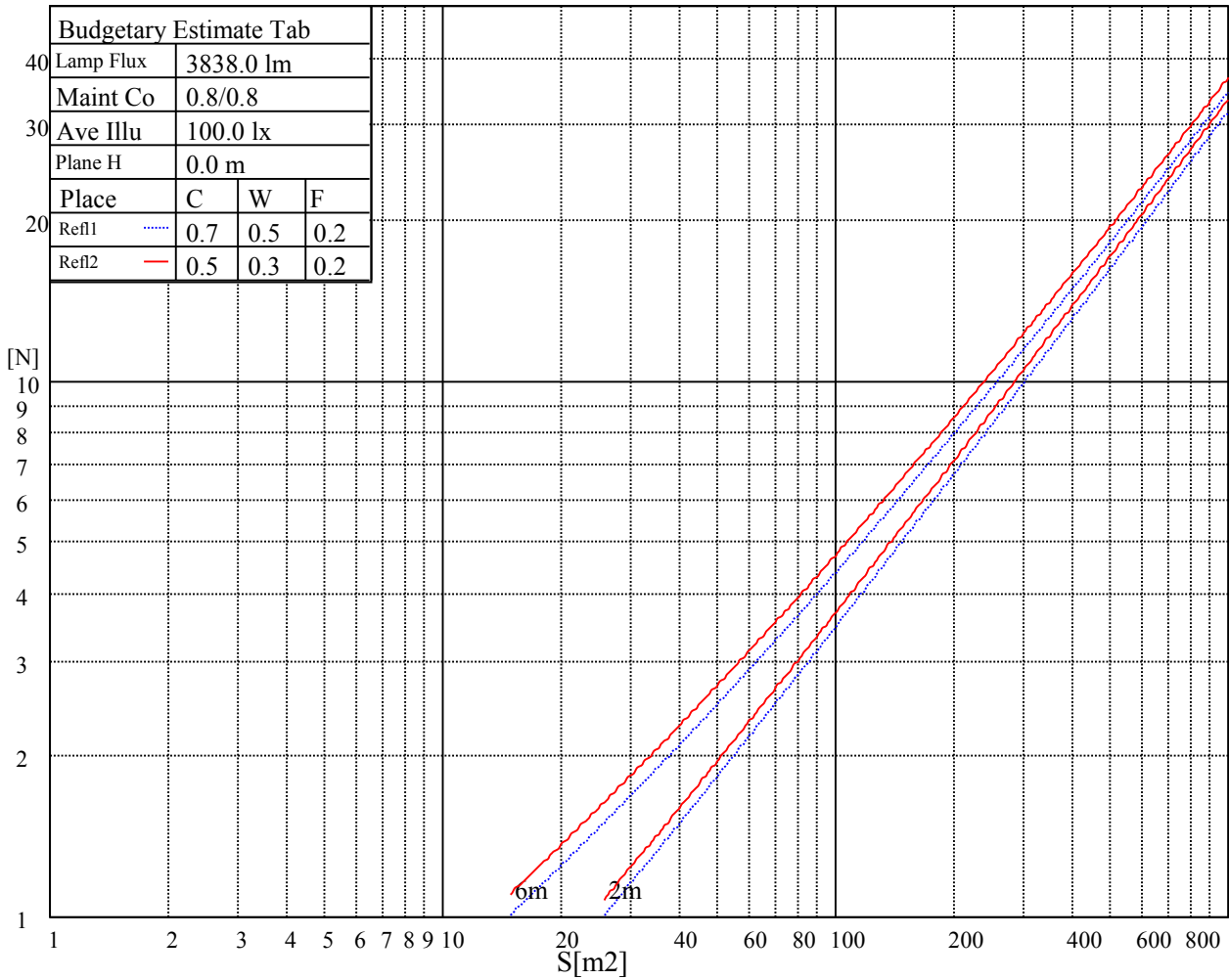
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3732	3661	3706	6403	5818	5935	18350	19583	18604

Glare Table

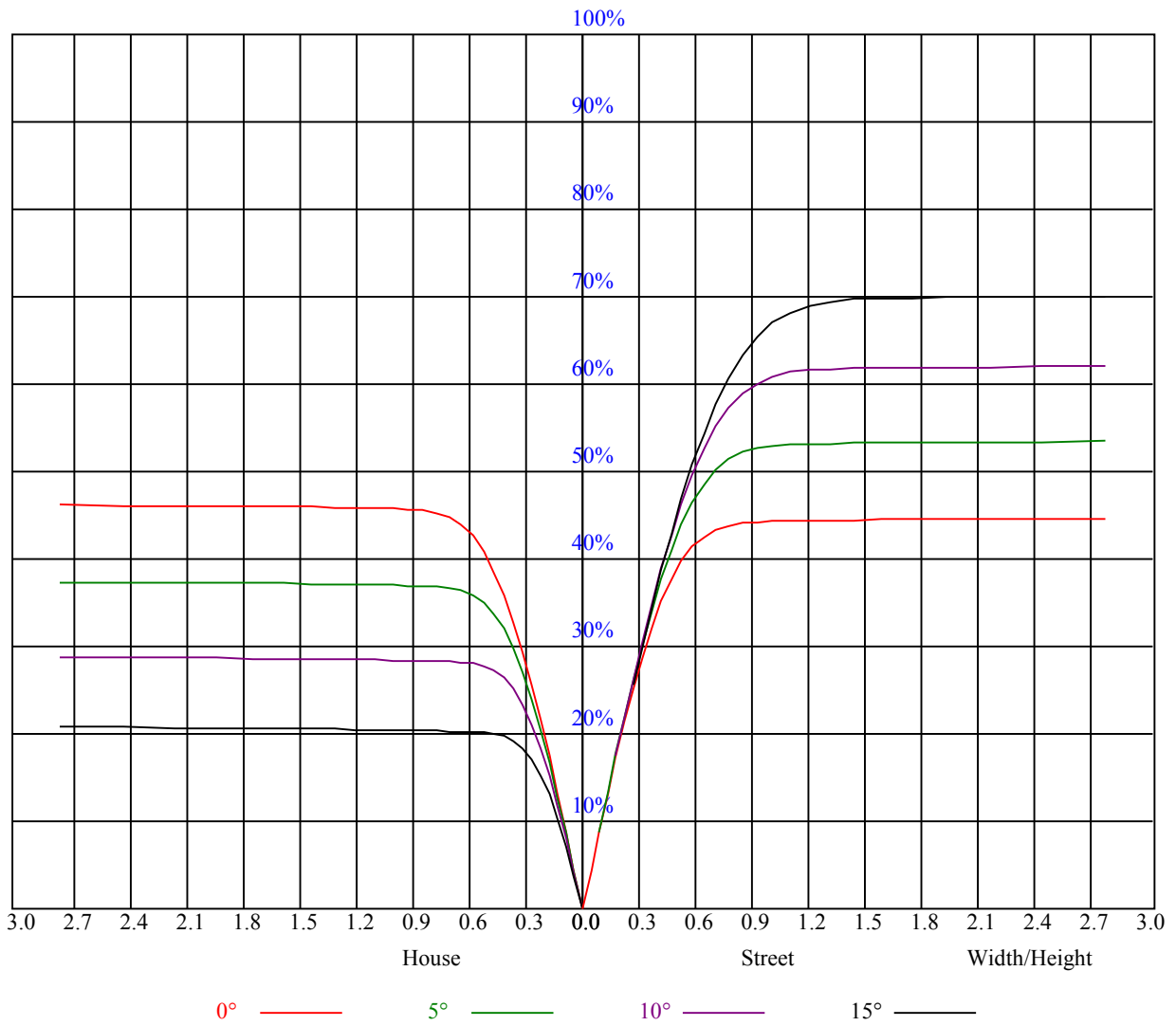
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

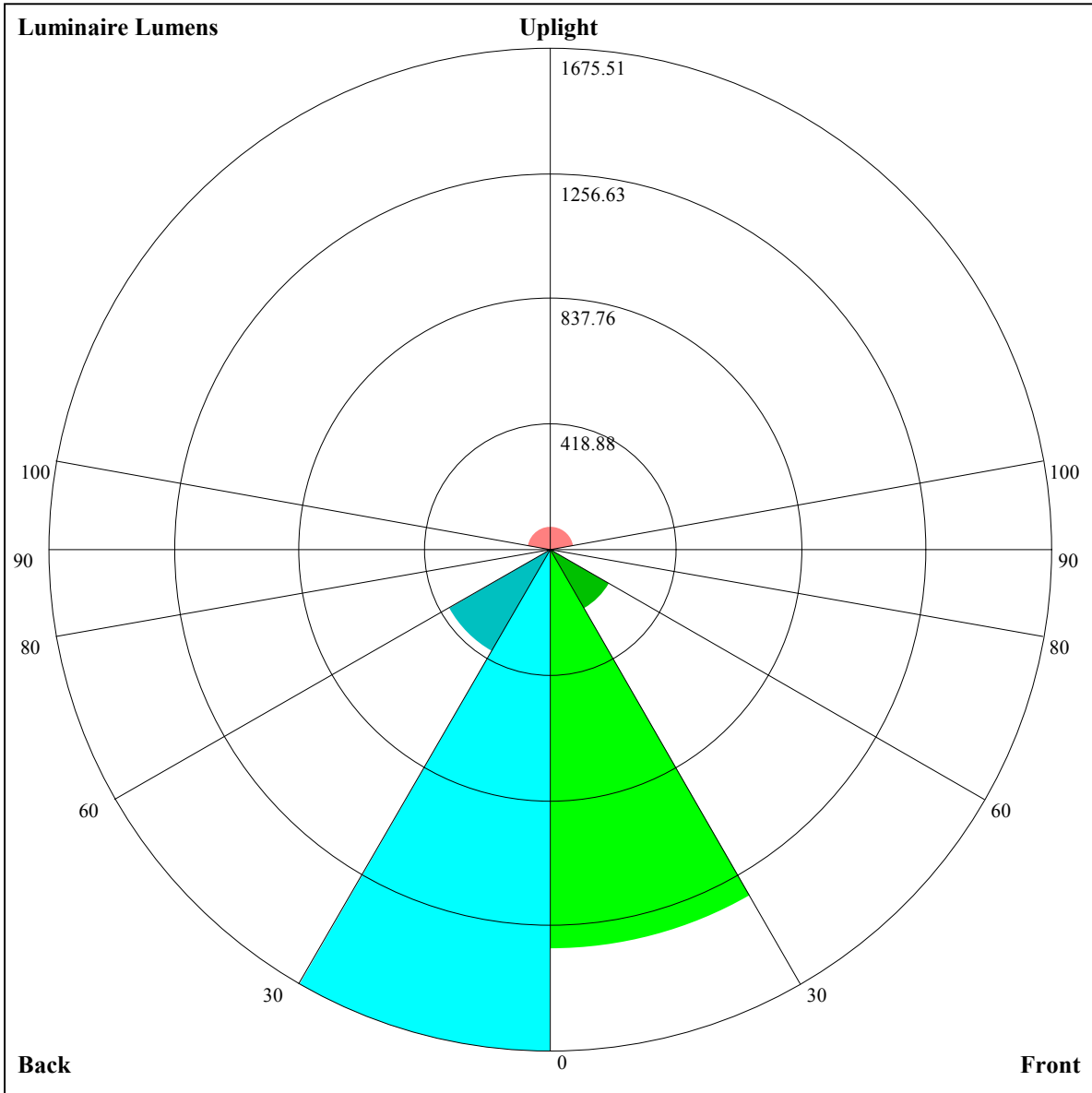
Luminance Limiting Curve





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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.98	1.00	0.98	0.96	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.96	0.92	0.89	0.94	0.91	0.88	0.91	0.89	0.87	0.89	0.86	0.85	0.86	0.84	0.83	0.81
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.83	0.81	0.84	0.82	0.79	0.82	0.80	0.78	0.77
4	0.85	0.80	0.77	0.84	0.80	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.72
5	0.80	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.69
6	0.76	0.71	0.68	0.76	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
7	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.59
9	0.66	0.61	0.57	0.65	0.61	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.56
10	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53





Luminaire Lumens:

FL=1335.72,FM=228.67,FH=16.64,FVH=8.89

BL=1675.51,BM=393.46,BH=16.14,BVH=9.08

UL=16.26,UH=77.38

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	5883.88	5633.37	4461.22	2899.82	1656.65	1291.62	1167.20	466.33	23.29
22.5	5891.04	5568.40	4338.44	2666.38	1525.06	1272.35	1056.97	300.28	19.33
45.0	5865.71	5793.59	5228.16	3695.39	2041.49	1367.60	1190.87	514.78	28.13
67.5	5860.20	5826.07	5640.53	4970.49	3258.79	1901.10	1072.99	396.74	29.29
90.0	5844.79	5817.26	5684.57	5799.09	5681.82	4249.80	2558.47	1122.60	322.63
112.5	5899.29	5877.27	5795.79	5758.35	5604.19	3990.49	2151.05	1168.30	314.37
135.0	5884.98	5898.74	5851.95	5349.28	3569.86	1867.51	1341.72	1005.28	313.16
157.5	5887.73	5905.90	5794.14	4855.42	3113.44	1671.51	1328.51	1185.92	512.58
180.0	5883.88	5951.05	5632.82	4191.44	2542.51	1563.05	1320.25	1082.63	443.09
202.5	5891.04	5902.05	5851.39	5042.07	3147.57	1729.32	1363.75	1203.53	548.91
225.0	5865.71	5888.83	5918.01	5453.89	3607.30	1935.23	1390.73	1029.78	378.57
247.5	5860.20	5848.09	5811.75	5846.99	5691.73	4129.23	2318.98	1265.75	403.56
270.0	5844.79	5843.14	5775.97	5903.15	5929.57	4707.32	2821.09	1093.37	310.52
292.5	5899.29	5875.62	5759.45	5219.90	3524.16	2067.92	1086.81	538.07	38.48
315.0	5884.98	5799.64	5275.50	3857.25	2185.19	1385.22	1220.60	586.90	33.75
337.5	5887.73	5551.89	4416.07	2757.23	1585.07	1285.57	1098.43	332.16	21.69
360.0	5883.88	5633.37	4461.22	2899.82	1656.65	1291.62	1167.20	466.33	23.29
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	17.95	16.96	16.46	16.08	15.75	15.58	17.84	22.57	15.03
22.5	17.18	16.30	15.86	15.53	15.25	15.09	17.51	20.15	14.65
45.0	17.40	16.35	15.69	15.31	15.03	14.87	14.81	18.39	14.48
67.5	17.56	16.35	15.75	15.31	15.03	14.81	15.09	18.28	14.48
90.0	26.76	18.39	16.46	15.86	15.47	15.20	15.09	19.93	17.89
112.5	21.86	18.94	17.51	16.85	16.41	16.13	15.91	21.20	22.52
135.0	19.76	18.11	17.23	16.68	16.30	15.97	15.75	19.11	19.77
157.5	35.51	18.17	17.12	16.57	16.19	15.86	15.64	15.58	17.01
180.0	19.16	17.56	16.63	16.13	15.80	15.53	15.31	15.36	16.96
202.5	33.53	17.45	16.46	15.86	15.53	15.25	15.03	14.87	15.75
225.0	18.72	16.96	16.02	15.53	15.14	14.92	14.65	14.81	15.14
247.5	20.10	17.51	16.35	15.75	15.31	15.03	14.81	14.76	15.42
270.0	35.07	19.71	16.74	15.91	15.47	15.25	15.03	16.79	16.24
292.5	19.33	17.73	16.96	16.46	16.13	15.86	15.97	19.33	15.47
315.0	18.99	17.67	16.96	16.52	16.19	15.97	16.24	18.94	15.47
337.5	18.00	17.12	16.57	16.30	15.97	15.75	18.17	20.26	15.25
360.0	17.95	16.96	16.46	16.08	15.75	15.58	17.84	22.57	15.03
C/γ(°)	90.0								
0.0	15.14								
22.5	14.81								
45.0	14.43								
67.5	14.37								
90.0	14.65								
112.5	15.42								
135.0	15.36								
157.5	15.25								
180.0	14.98								
202.5	14.65								
225.0	14.37								
247.5	14.43								
270.0	14.65								
292.5	15.42								
315.0	15.36								
337.5	15.20								
360.0	15.14								