
Nata

LumCAT: 3-2093-M	
Luminaire: 92.70.136.00	
Report No: GC2017082801	Voltage(V): 36.7000
Test No: NT-0010	Current(A): 1.0000
LampCAT: CREE CXA3050	Power (W): 36.7000
Lamp flux(lm): 3994.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 3570.10
Efficiency(%): 89.39%
Lumens(lm)/Power(W): 97.28
Central intensity(cd): 13177.750
Maximum intensity(cd): 13177.750
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.5
[C90/270]Total=23.5
Field angle(10%Imax): [C0/180]Total=56.9
[C90/270]Total=56.9
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.39%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.728%

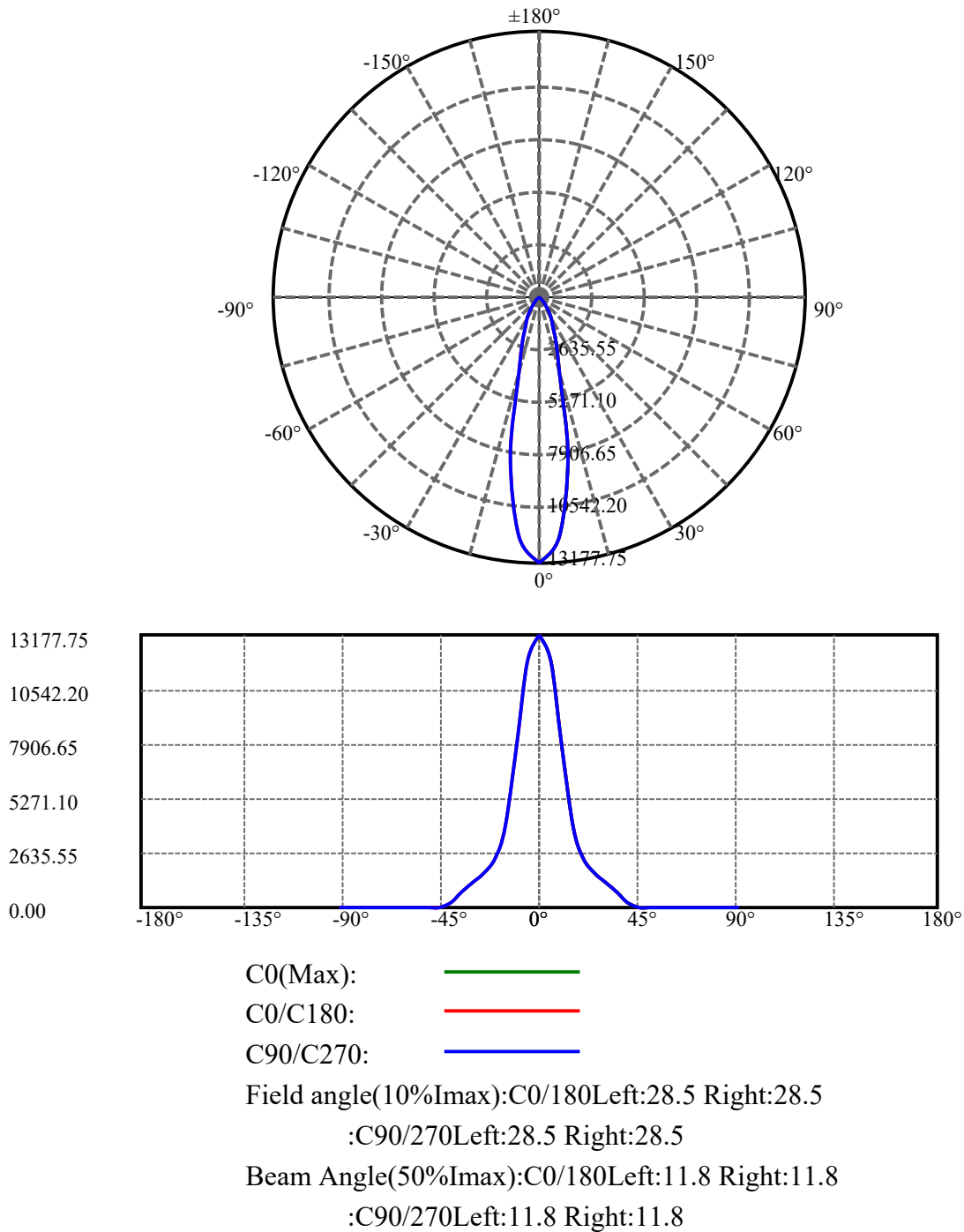
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13177.749	0.000	0	.000%	.000%
5.0	11850.408	299.204	299.204	7.491%	8.381%
10.0	8047.869	711.824	1011.029	17.822%	28.319%
15.0	3926.622	710.319	1721.347	17.785%	48.216%
20.0	2373.206	519.194	2240.542	12.999%	62.758%
25.0	1614.116	418.197	2658.738	10.471%	74.472%
30.0	1187.085	354.494	3013.233	8.876%	84.402%
35.0	711.494	279.579	3292.812	7.000%	92.233%
40.0	245.448	159.659	3452.47	3.997%	96.705%
45.0	23.867	49.866	3502.336	1.249%	98.102%
50.0	16.971	8.252	3510.588	.207%	98.333%
55.0	15.540	7.069	3517.657	.177%	98.531%
60.0	14.845	7.023	3524.68	.176%	98.728%
65.0	14.748	7.194	3531.874	.180%	98.929%
70.0	15.003	7.533	3539.407	.189%	99.140%
75.0	14.521	7.717	3547.124	.193%	99.356%
80.0	14.177	7.679	3554.803	.192%	99.571%
85.0	14.053	7.671	3562.474	.192%	99.786%
90.0	13.805	7.628	3570.102	.191%	100.000%

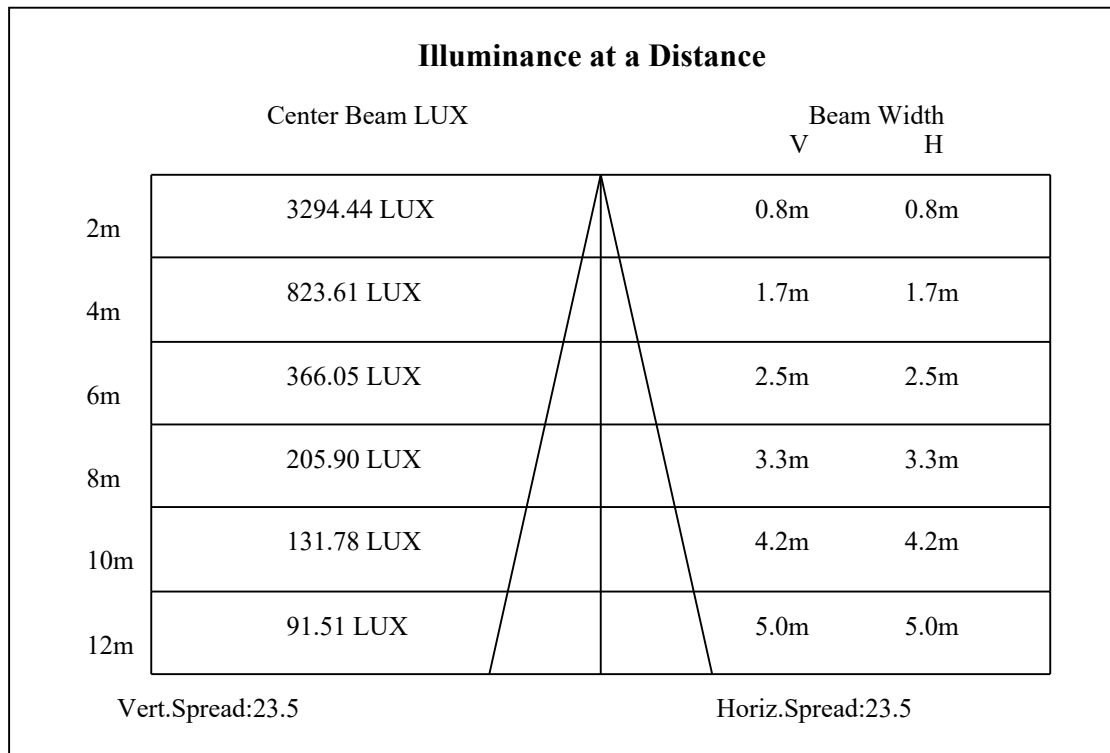
ZONAL LUMEN SUMMARY

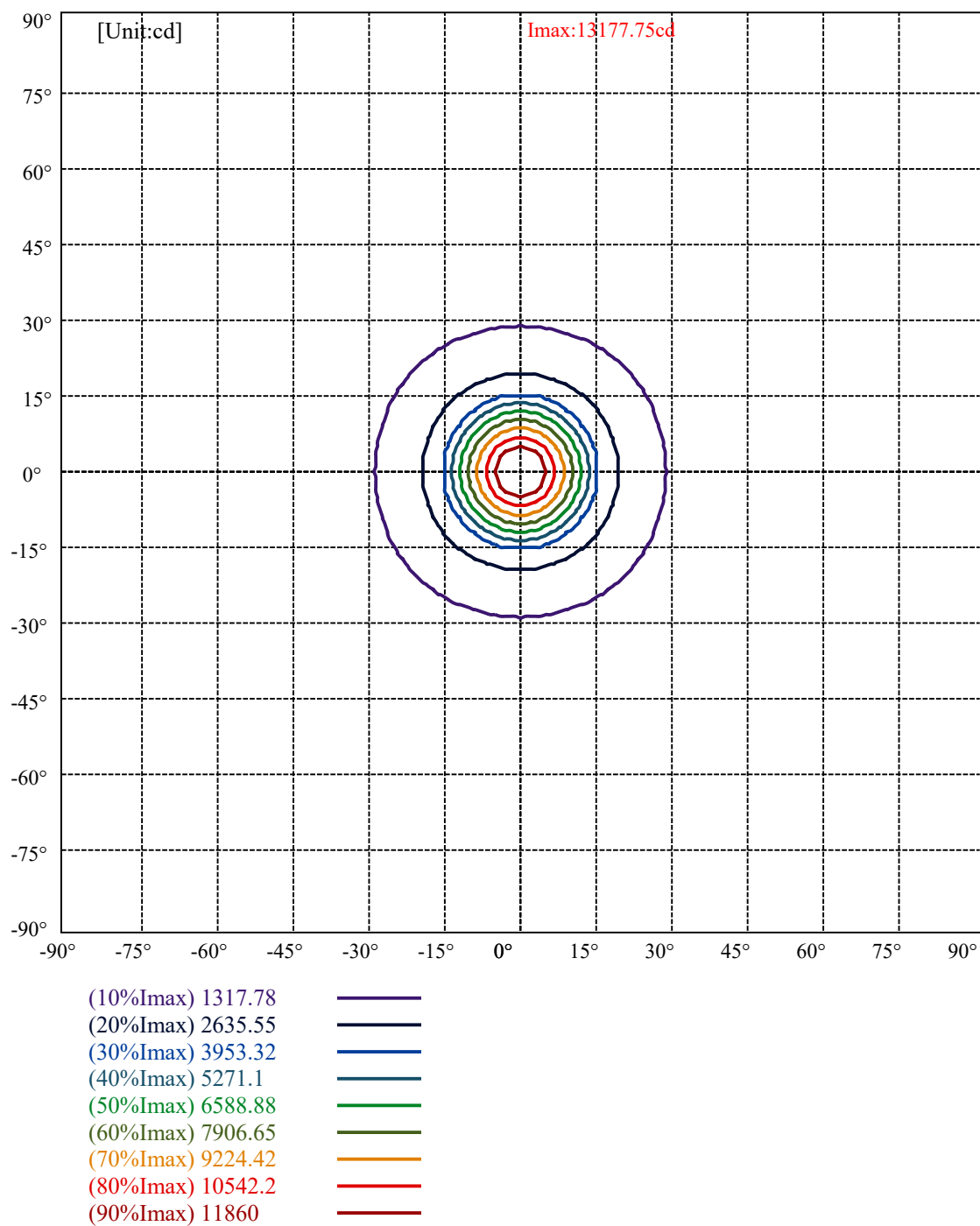
Zone	Lumens	%Lamp	%Fixt
0-30	3013.23	75.44%	84.40%
0-40	3452.47	86.44%	96.71%
0-60	3524.68	88.25%	98.73%
0-90	3562.47	89.20%	99.79%
0-120	3562.47	89.20%	99.79%
0-180	3570.10	89.39%	100.00%
60-90	44.82	1.12%	1.26%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.78	2856.08	71.51%	80.00%

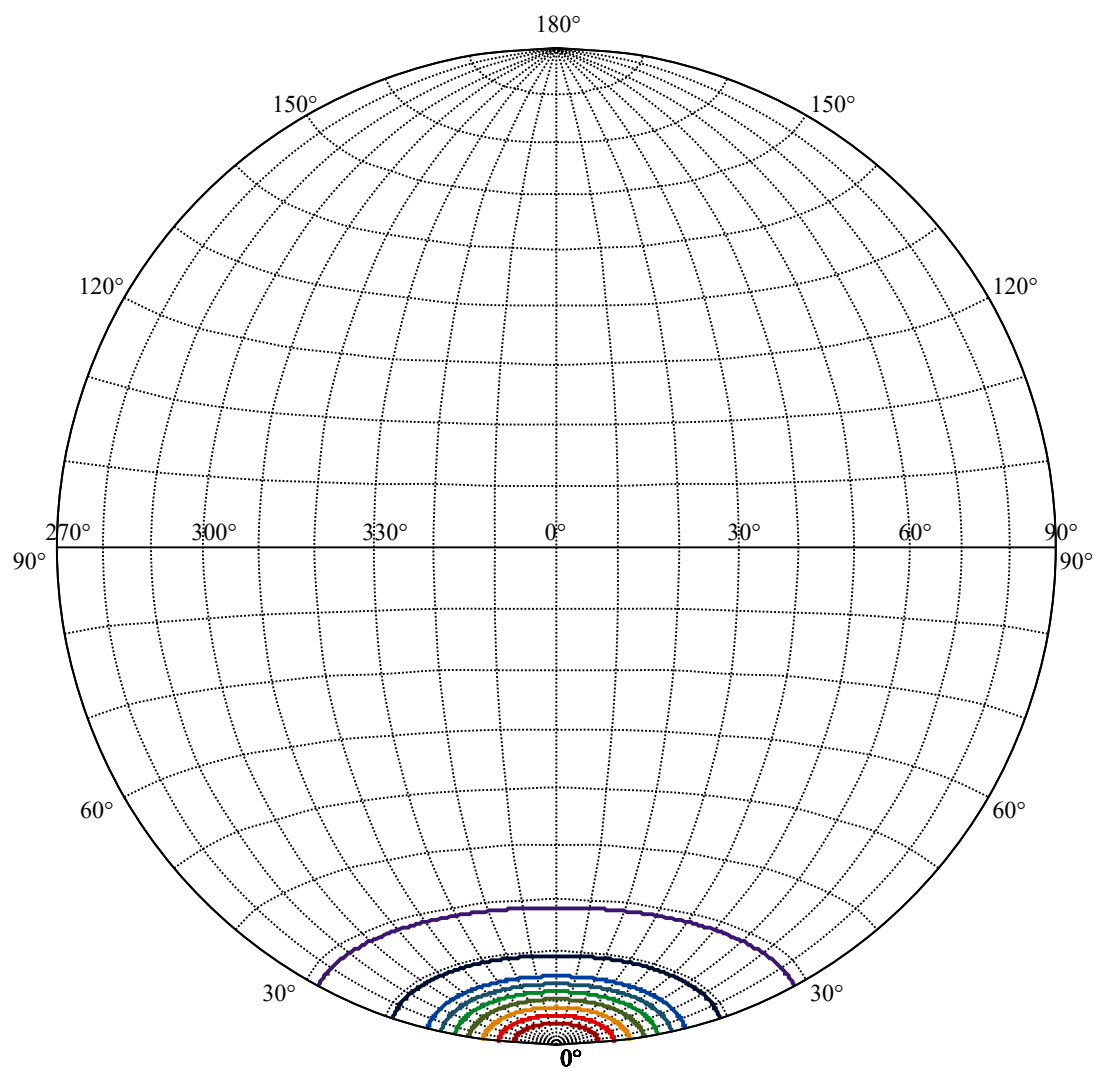
ZONAL LUMEN SUMMARY

0-10	1011.03
10-20	1229.51
20-30	772.69
30-40	439.24
40-50	58.12
50-60	14.09
60-70	14.73
70-80	15.40
80-90	7.67
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









House

[Unit:cd]

Road

Imax:13177.75

(10%Imax) 1317.78

(20%Imax) 2635.55

(30%Imax) 3953.32

(40%Imax) 5271.1

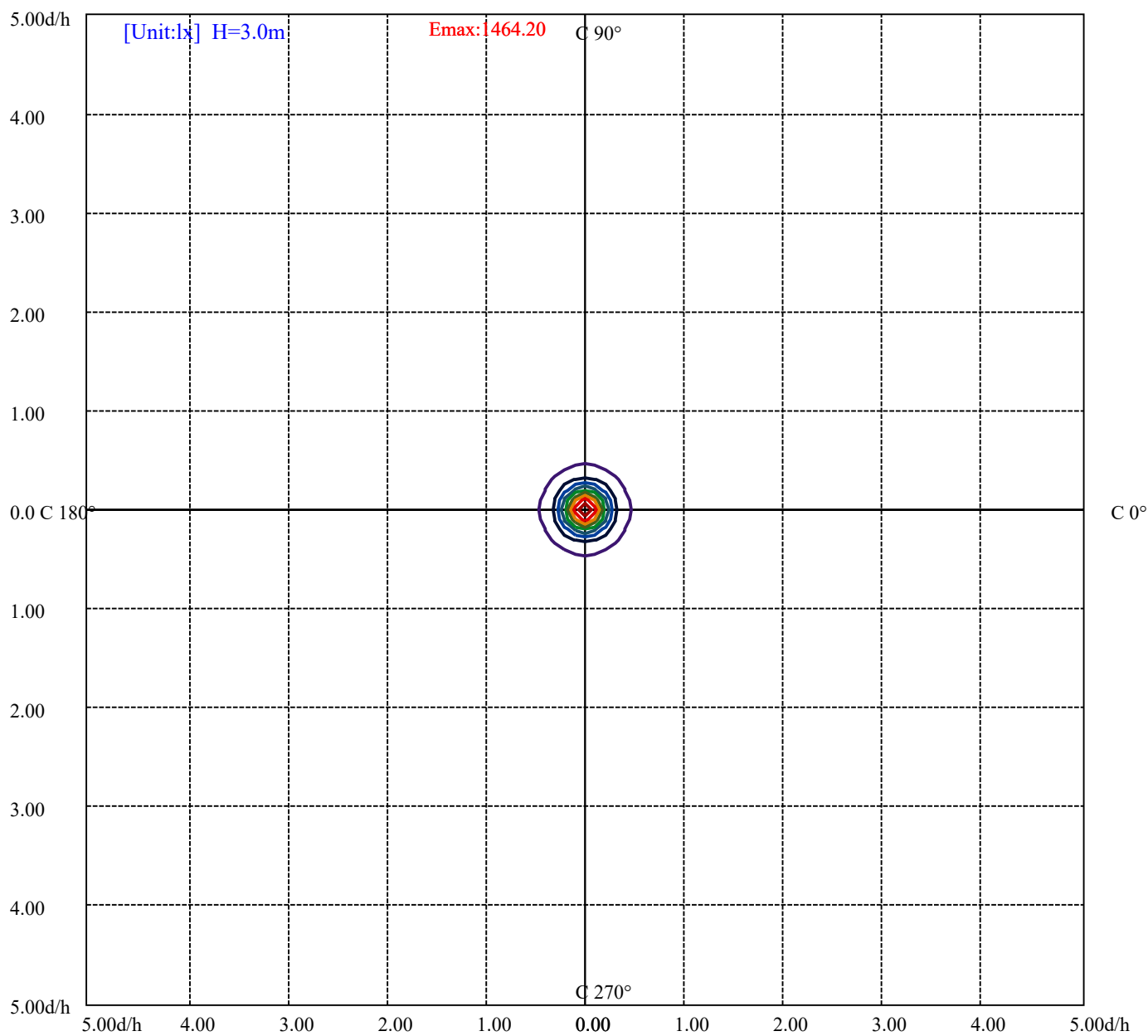
(50%Imax) 6588.88

(60%Imax) 7906.65

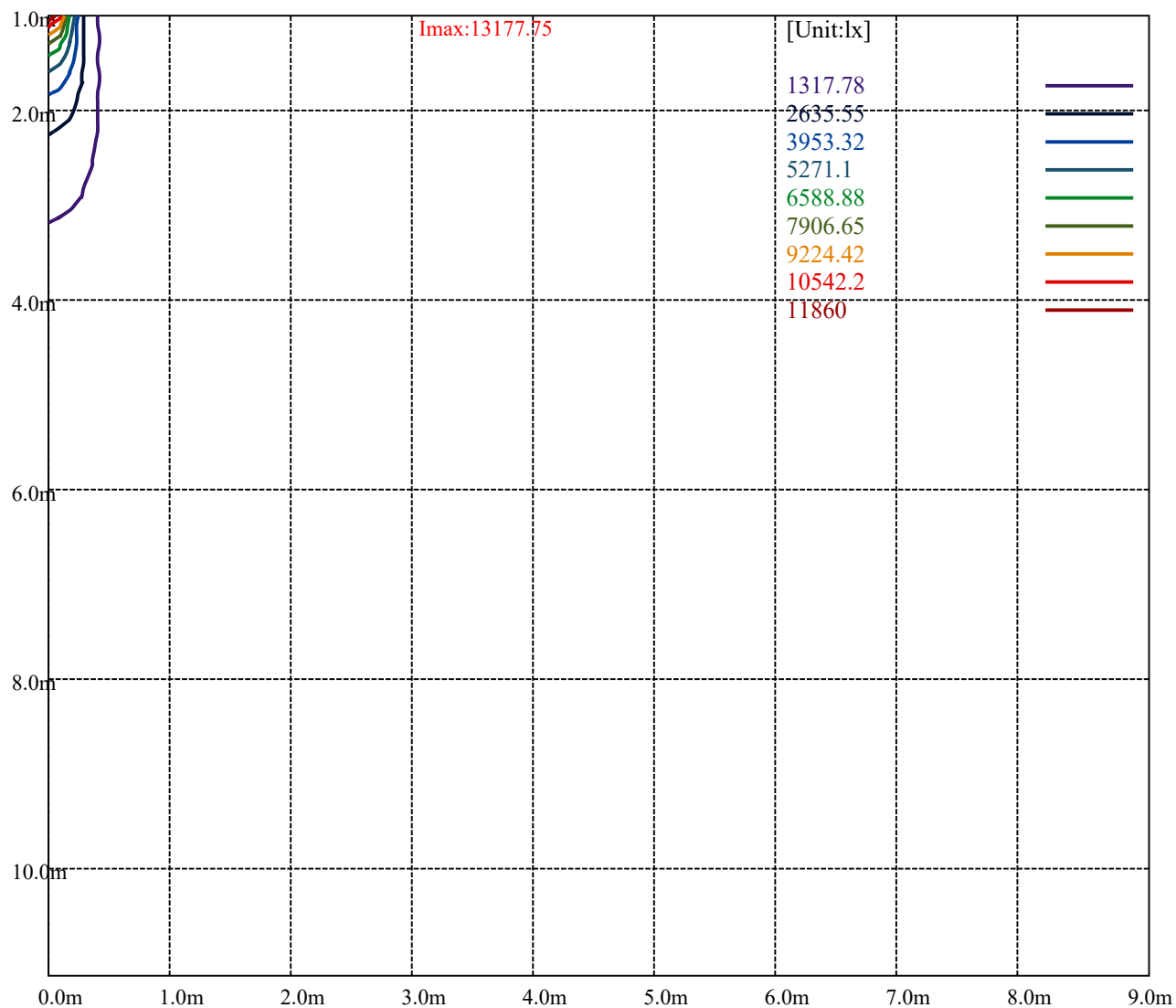
(70%Imax) 9224.42

(80%Imax) 10542.2

(90%Imax) 11860



(10%E _{max}) 146.4189	—
(20%E _{max}) 292.8378	—
(30%E _{max}) 439.2567	—
(40%E _{max}) 585.6755	—
(50%E _{max}) 732.0945	—
(60%E _{max}) 878.5144	—
(70%E _{max}) 1024.933	—
(80%E _{max}) 1171.356	—
(90%E _{max}) 1317.767	—



Luminance Table

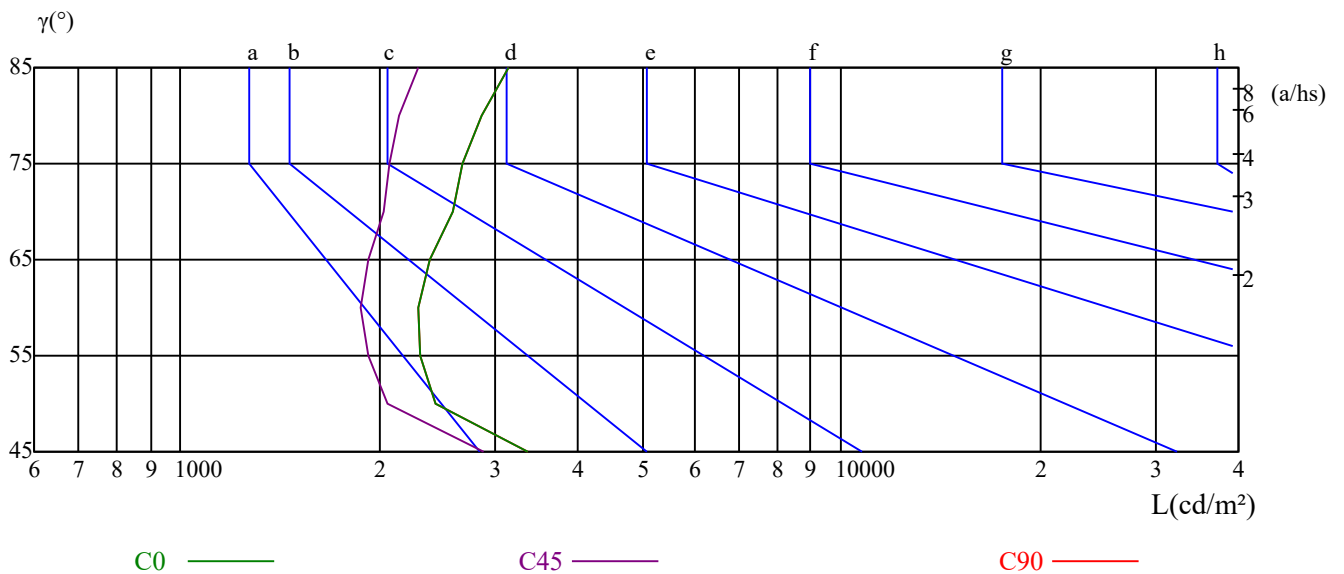
γ	45	50	55	60	65	70	75	80	85
C0	3354	2439	2303	2288	2388	2578	2681	2850	3128
C45	2882	2065	1919	1876	1923	2036	2072	2149	2291
C90	3354	2439	2303	2288	2388	2578	2681	2850	3128

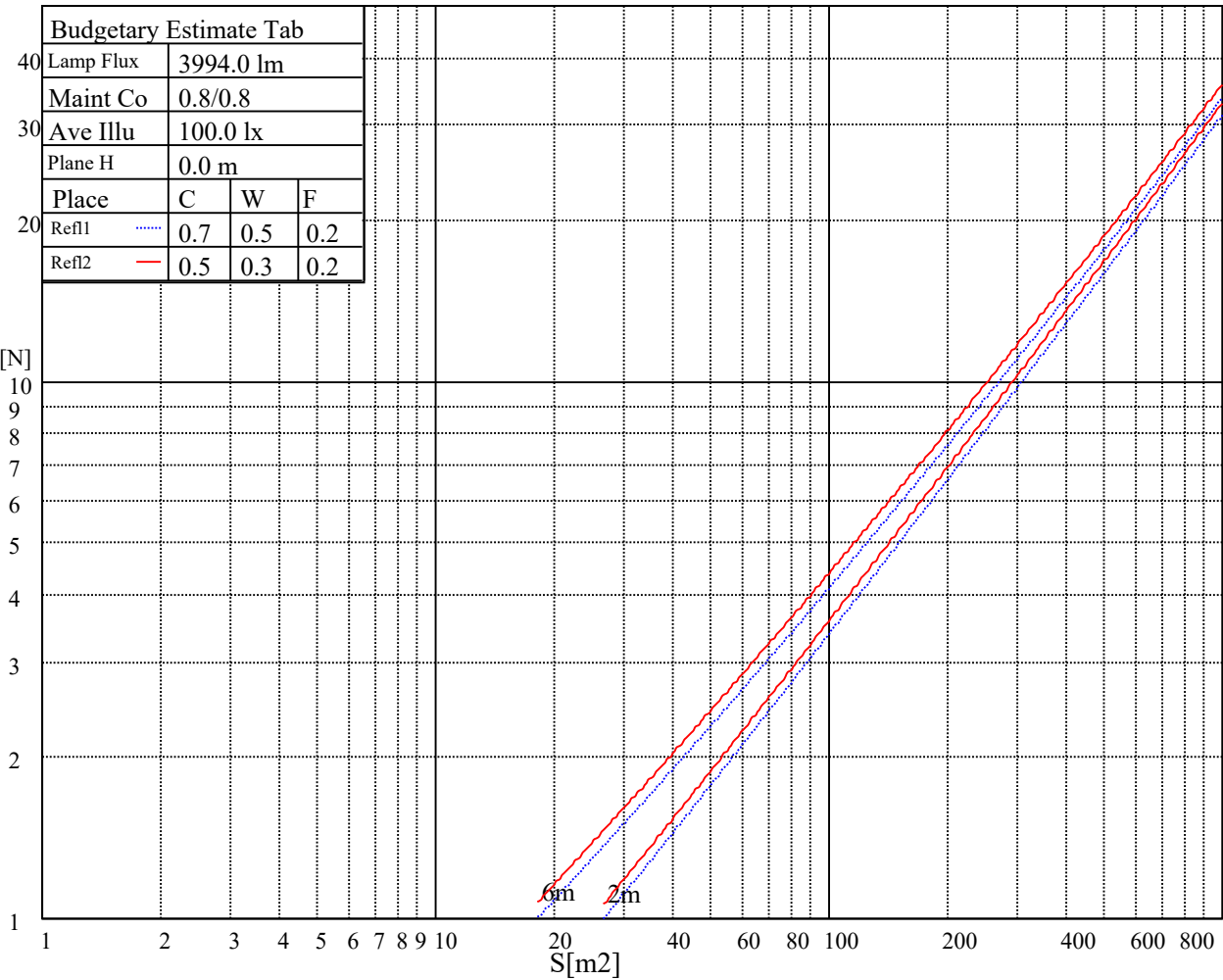
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5736	5736	5736	9222	9222	9222	26503	26503	26503

Glare Table

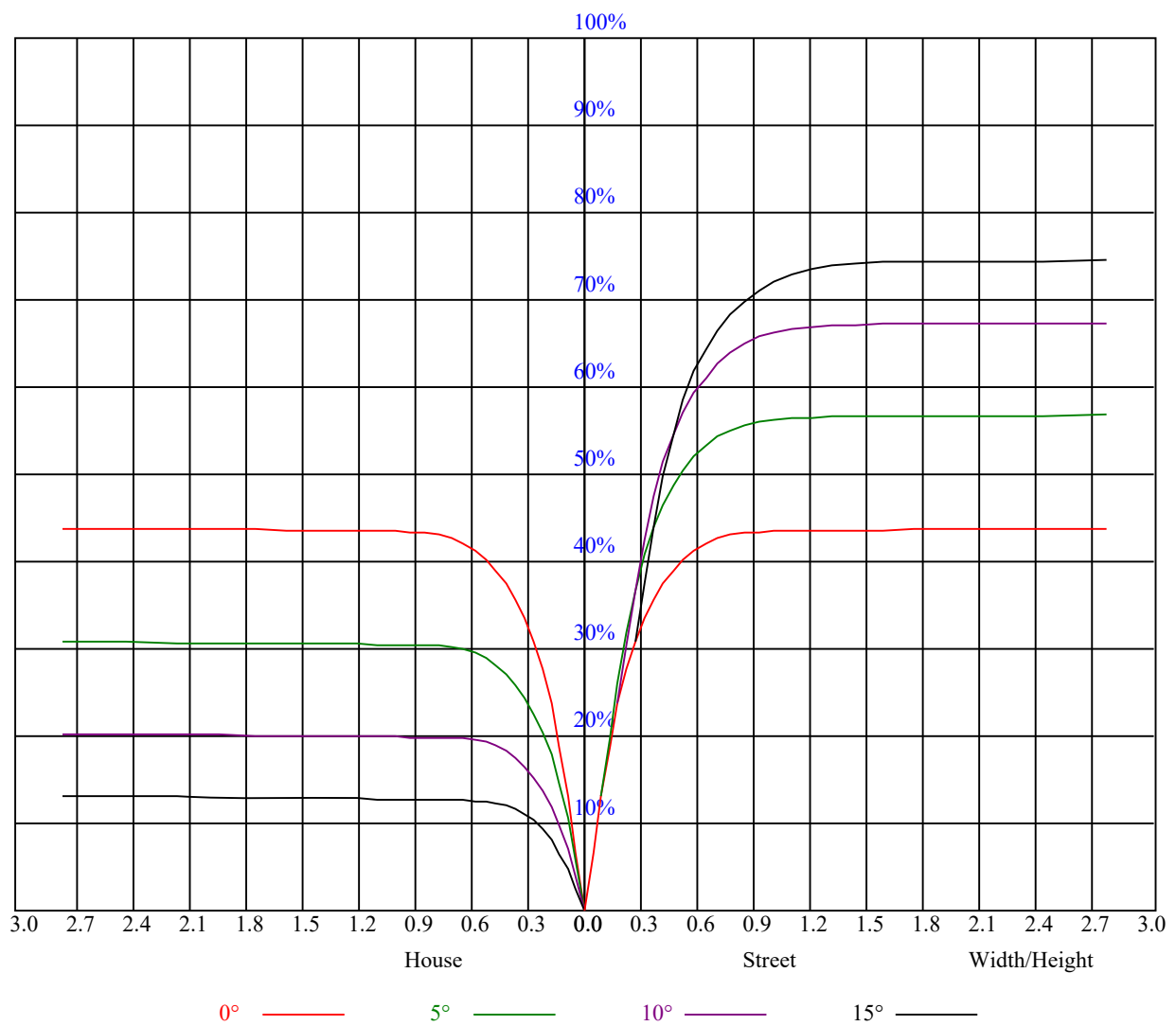
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	1.06	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	1.00	0.98	0.96	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.91	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.85	0.84	0.82	0.81
3	0.89	0.86	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.77
4	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.71
6	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58



Intensity data(cd)

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C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	13169.49	12618.93	8506.21	4074.17	2796.87	1662.15	1296.58	763.08	300.06
45.0	13191.51	12090.39	8049.25	3831.93	2227.58	1639.58	1250.33	692.06	295.10
90.0	13175.00	10751.41	7009.78	3493.33	2088.84	1529.47	1044.75	620.76	146.45
135.0	13175.00	12426.23	8186.89	4035.63	2507.82	1604.89	1283.92	726.19	300.06
180.0	13169.49	10852.72	7319.20	3668.41	2132.33	1555.89	1087.91	643.55	170.73
225.0	13191.51	12393.20	8394.45	3916.16	2232.54	1606.00	1090.78	701.47	227.38
270.0	13175.00	12696.01	9029.25	4619.23	2791.36	1701.24	1355.49	884.21	305.01
315.0	13175.00	10974.39	7887.93	3774.12	2208.31	1613.70	1086.92	660.62	218.79
360.0	13169.49	12618.93	8506.21	4074.17	2796.87	1662.15	1296.58	763.08	300.06

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	26.21	17.29	15.75	15.03	15.14	15.53	15.25	14.42	14.09
45.0	22.63	16.96	15.53	14.87	15.69	16.57	14.59	14.15	14.04
90.0	18.83	16.63	15.31	14.70	14.48	15.09	14.87	14.26	14.04
135.0	24.83	16.90	15.58	14.92	14.48	14.37	14.09	14.04	13.93
180.0	21.31	16.74	15.36	14.81	15.03	15.14	14.48	14.20	14.09
225.0	23.84	16.57	15.31	14.65	14.31	14.87	14.59	14.26	14.20
270.0	29.62	17.45	15.75	14.87	14.42	14.20	14.09	14.04	13.98
315.0	23.67	17.23	15.75	14.92	14.42	14.26	14.20	14.04	14.04
360.0	26.21	17.29	15.75	15.03	15.14	15.53	15.25	14.42	14.09

C/ γ (°)	90.0
0.0	13.82
45.0	13.76
90.0	13.82
135.0	13.82
180.0	13.82
225.0	13.76
270.0	13.82
315.0	13.82
360.0	13.82