



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 4-2222-A
Luminaire: BJB47.319.2030
Report No: NT2017091911
Test No: GC2017091911
LampCAT: CITIZEN CLU044
Lamp flux(lm): 5761.0
Number of Lamps: 1
Length(mm): 100
Phm Type: C

Voltage(V): 51.4000
Current(A): 0.8000
Power (W): 41.1200
PF: 0.0000
Ballast type: DC
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 5099.28
Efficiency(%): 88.51%
Lumens(lm)/Power(W): 124.01
Central intensity(cd): 5328.221
Maximum intensity(cd): 5422.161
Angle of maximum intensity: C=0.0 γ =10.0
Beam Angle(50%Imax): [C0/180]Total=62.9
 [C90/270]Total=62.9
Field angle(10%Imax): [C0/180]Total=78.6
 [C90/270]Total=78.6
Maximum s/h(1/2): C0_180=1.04 C90_270=1.04
Maximum s/h(1/4): C0_180=0.91 C90_270=0.91
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.98%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.189%

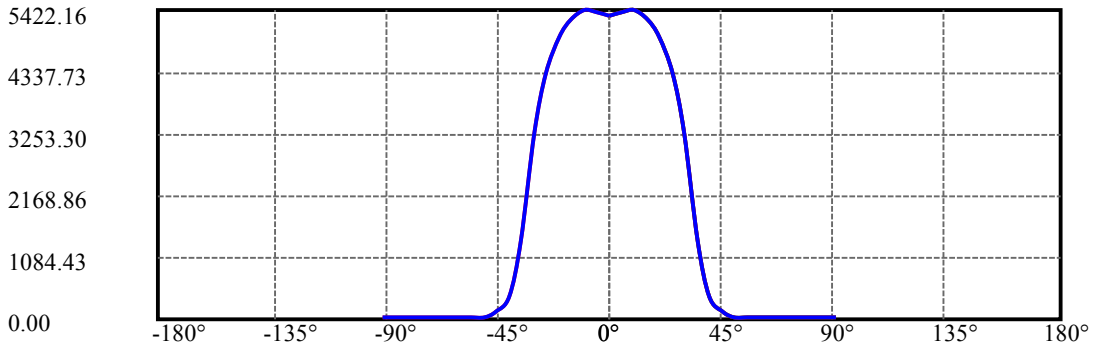
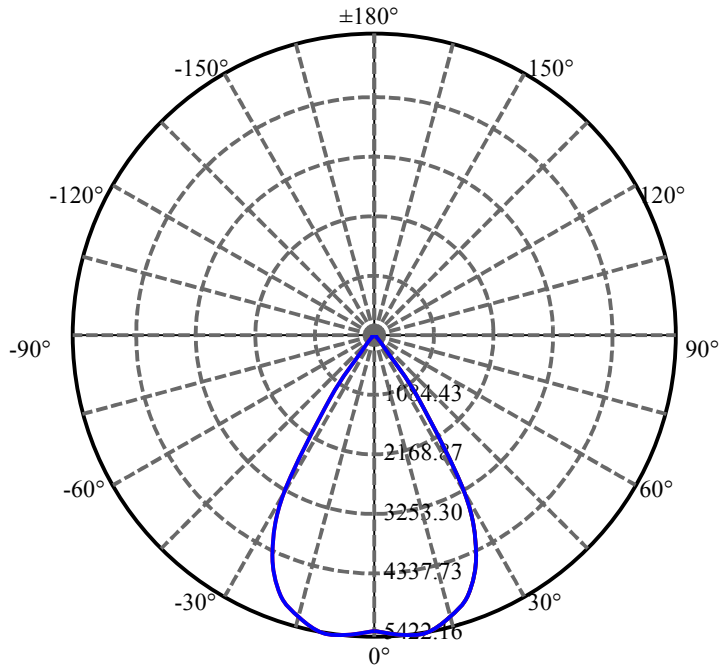
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5328.221	31.864	31.864	.553%	.625%
5.0	5399.588	257.956	289.82	4.478%	5.684%
10.0	5422.161	516.098	805.918	8.958%	15.805%
15.0	5267.039	747.226	1553.144	12.970%	30.458%
20.0	4957.416	929.387	2482.531	16.132%	48.684%
25.0	4303.690	996.962	3479.493	17.305%	68.235%
30.0	3255.416	892.208	4371.701	15.487%	85.732%
35.0	1372.597	431.543	4803.244	7.491%	94.195%
40.0	402.510	141.819	4945.063	2.462%	96.976%
45.0	118.784	46.040	4991.102	.799%	97.879%
50.0	43.481	18.257	5009.36	.317%	98.237%
55.0	27.810	12.487	5021.847	.217%	98.482%
60.0	24.459	11.611	5033.457	.202%	98.709%
65.0	23.303	11.576	5045.034	.201%	98.936%
70.0	22.793	11.740	5056.774	.204%	99.166%
75.0	22.594	11.962	5068.737	.208%	99.401%
80.0	22.518	12.155	5080.892	.211%	99.639%
85.0	22.470	12.270	5093.162	.213%	99.880%
90.0	22.312	6.115	5099.277	.106%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	4371.70	75.88%	85.73%
0-40	4945.06	85.84%	96.98%
0-60	5033.46	87.37%	98.71%
0-90	5093.16	88.41%	99.88%
0-120	5093.16	88.41%	99.88%
0-180	5099.28	88.51%	100.00%
60-90	71.32	1.24%	1.40%
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%
0-28.36	4079.42	70.81%	80.00%

ZONAL LUMEN SUMMARY

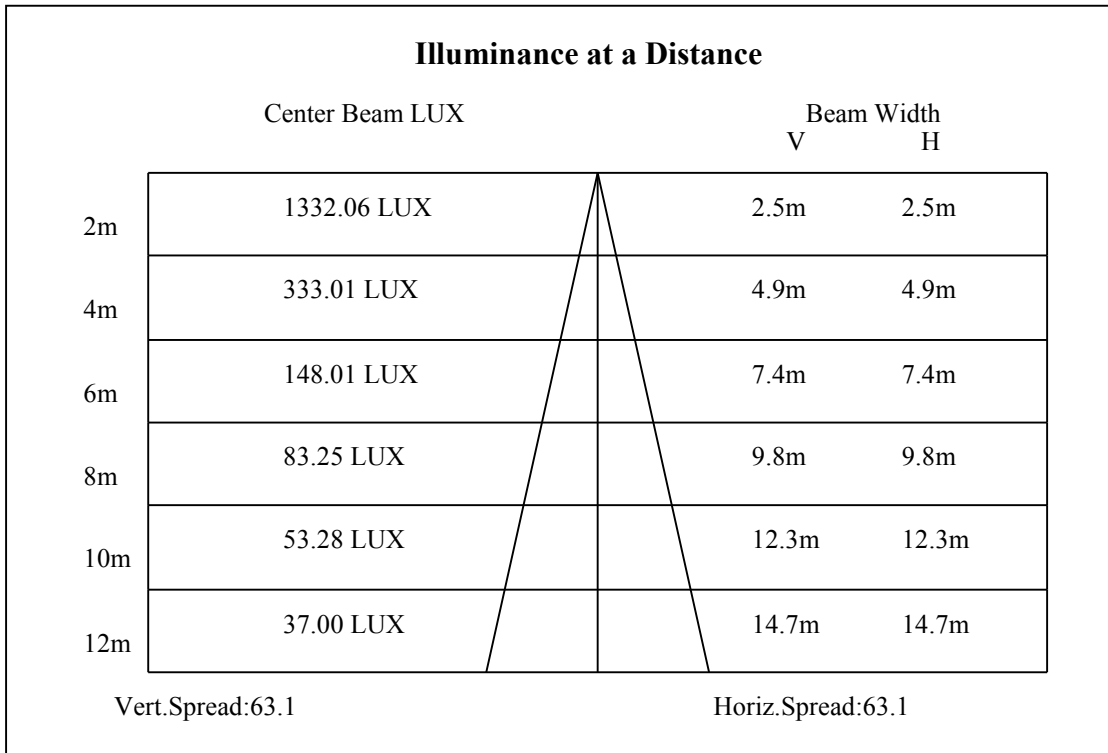
0-10	805.92
10-20	1676.61
20-30	1889.17
30-40	573.36
40-50	64.30
50-60	24.10
60-70	23.32
70-80	24.12
80-90	12.27
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

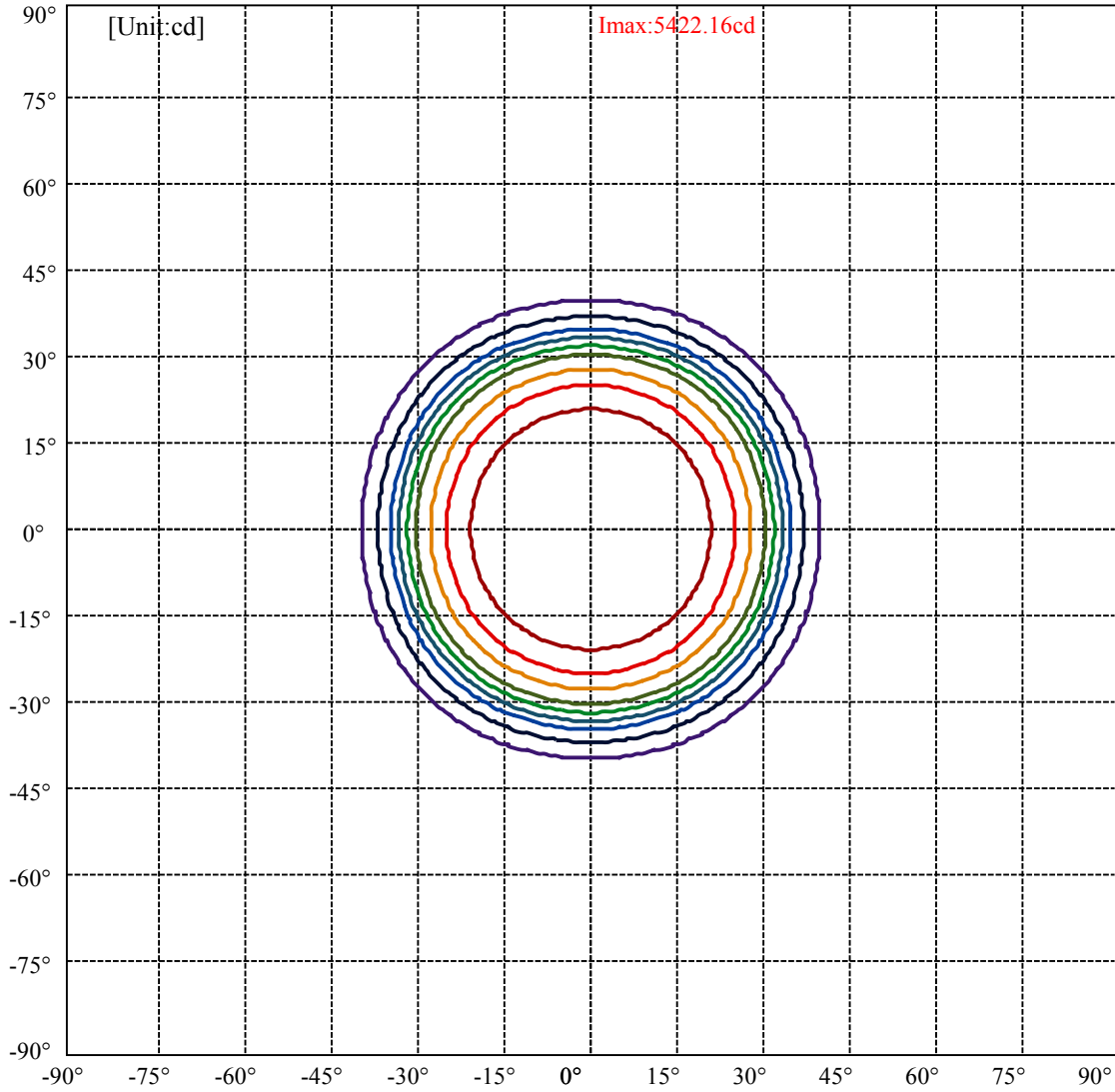


C0(Max): ———
 C0/C180: ———
 C90/C270: ———

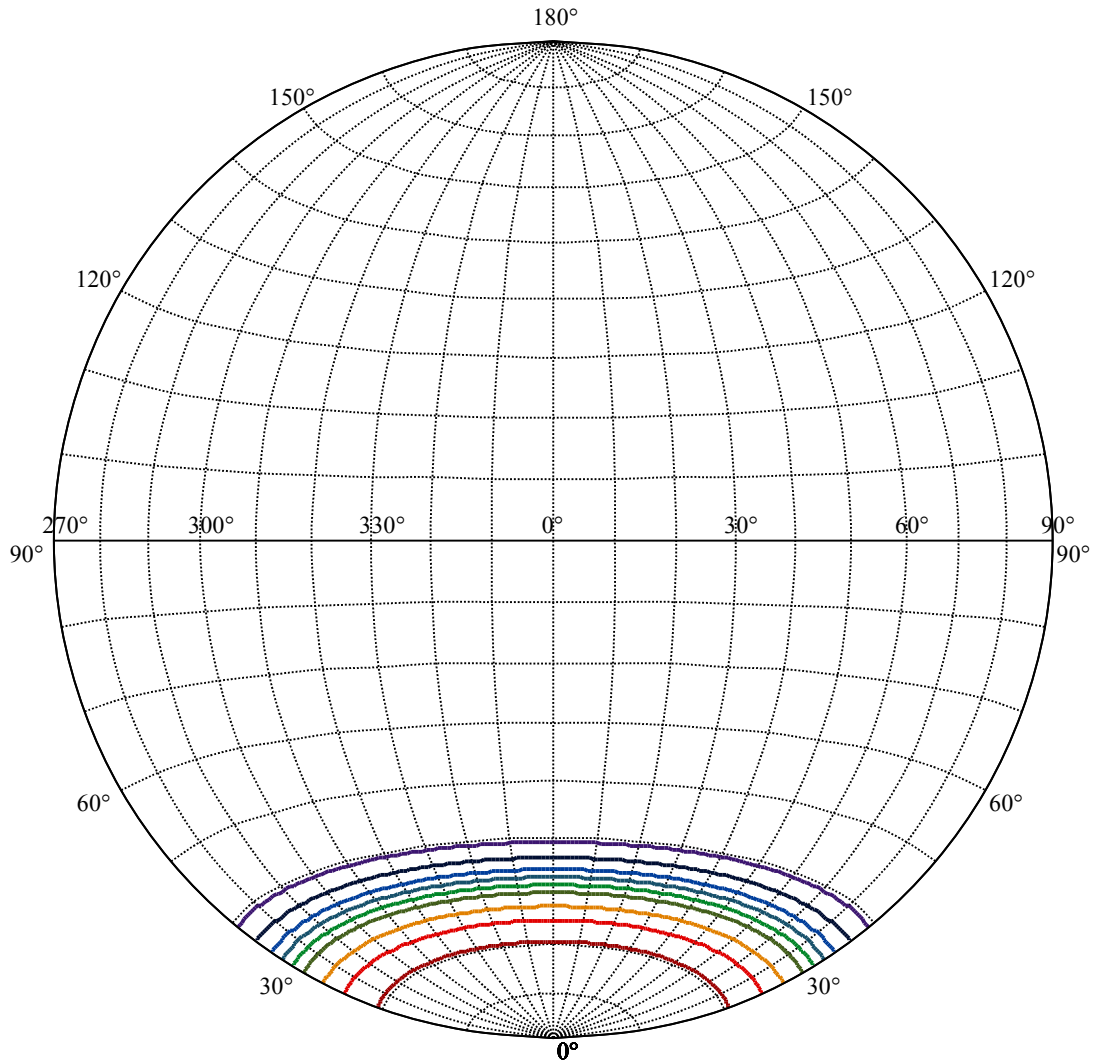
Field angle(10%Imax):C0/180Left:49.3 Right:29.3
 :C90/270Left:49.3 Right:29.3

Beam Angle(50%Imax):C0/180Left:41.4 Right:21.4
 :C90/270Left:41.4 Right:21.4





(10%Imax) 542.216	—
(20%Imax) 1084.43	—
(30%Imax) 1626.65	—
(40%Imax) 2168.86	—
(50%Imax) 2711.08	—
(60%Imax) 3253.3	—
(70%Imax) 3795.51	—
(80%Imax) 4337.73	—
(90%Imax) 4879.94	—












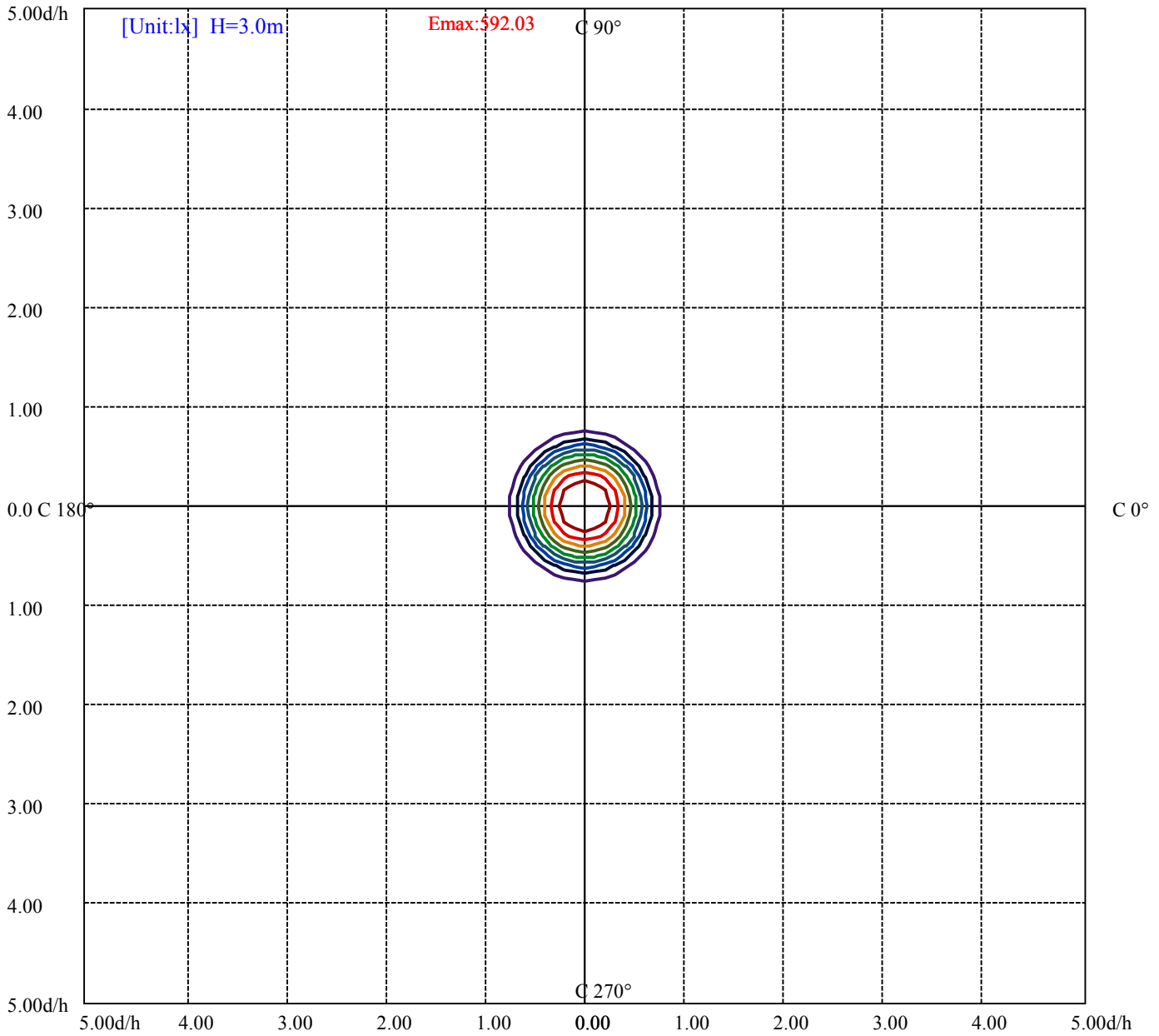
House

[Unit:cd]

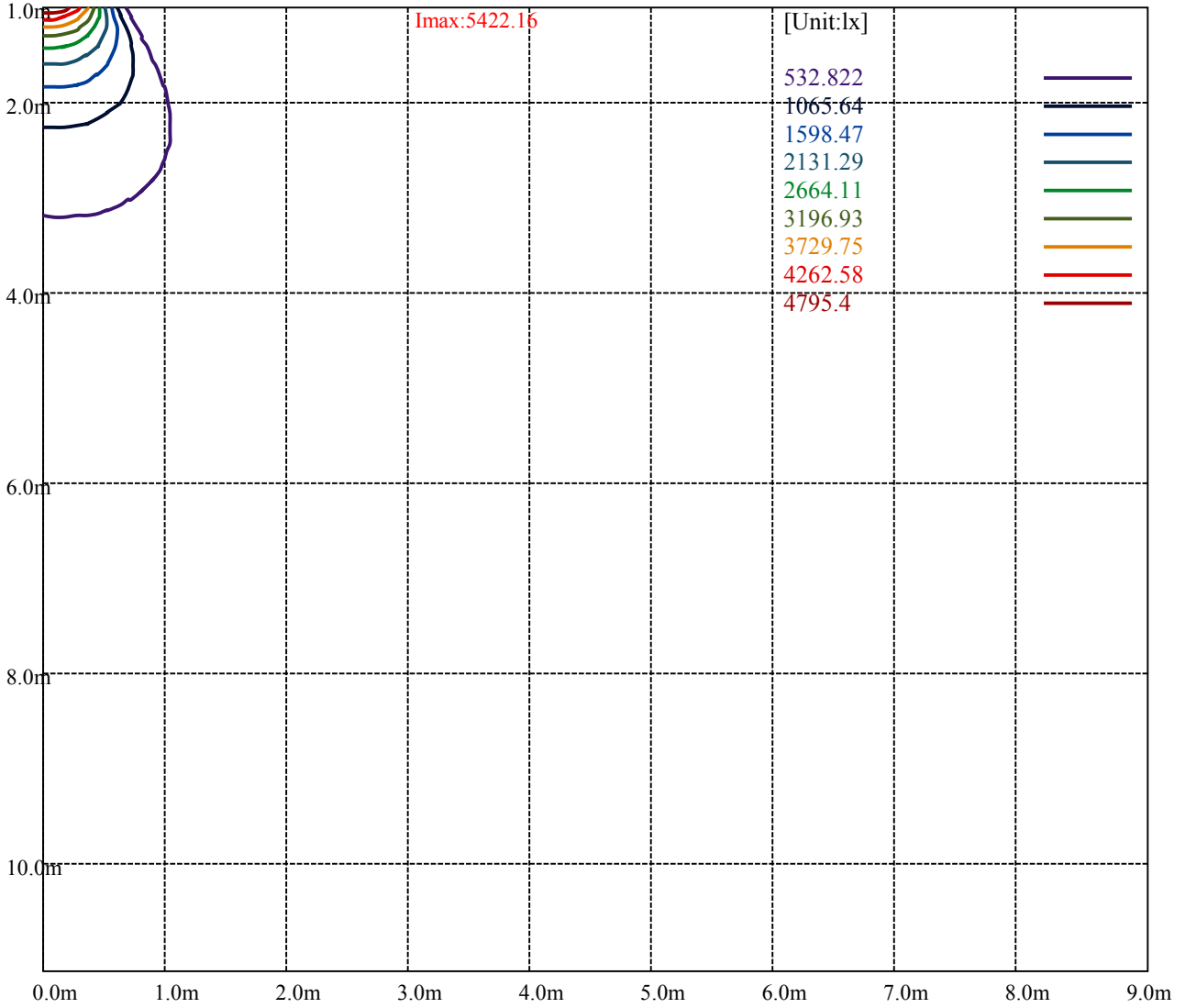
Road

Imax:5422.16

(10%Imax)	542.216	
(20%Imax)	1084.43	
(30%Imax)	1626.65	
(40%Imax)	2168.86	
(50%Imax)	2711.08	
(60%Imax)	3253.3	
(70%Imax)	3795.51	
(80%Imax)	4337.73	
(90%Imax)	4879.94	



- (10%Emax) 59.20245
- (20%Emax) 118.4044
- (30%Emax) 177.6078
- (40%Emax) 236.81
- (50%Emax) 296.0122
- (60%Emax) 355.2144
- (70%Emax) 414.4178
- (80%Emax) 473.62
- (90%Emax) 532.8222



Luminance Table

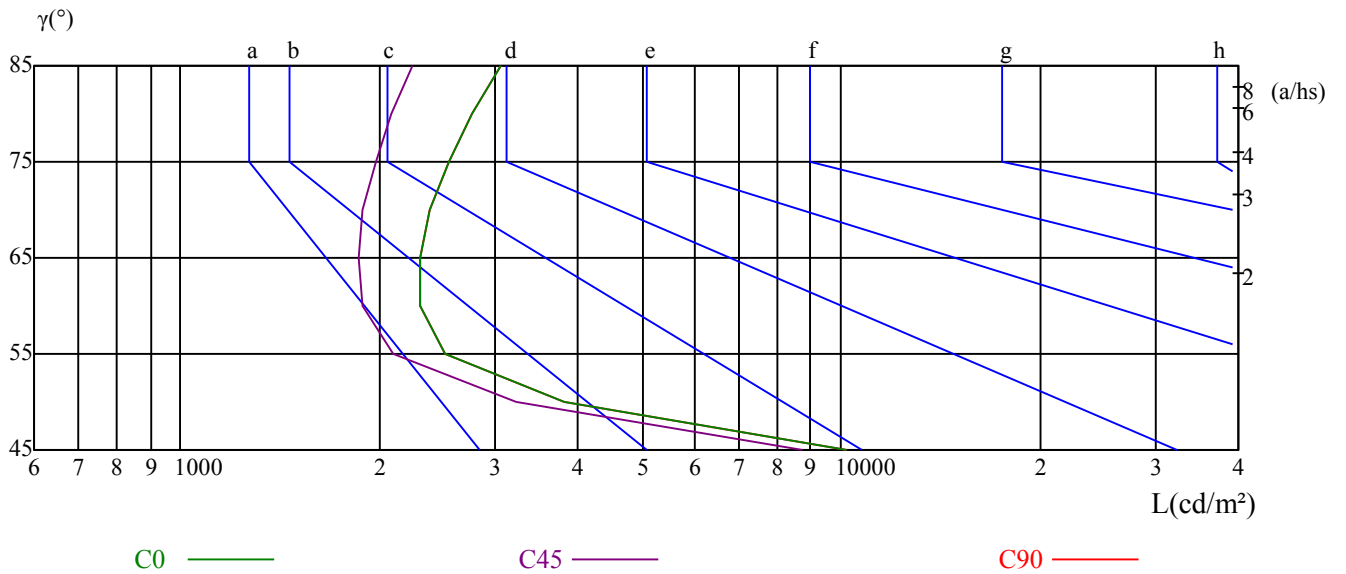
γ	45	50	55	60	65	70	75	80	85
C0	10181	3812	2514	2301	2303	2392	2548	2767	3058
C45	8753	3228	2096	1887	1856	1890	1970	2087	2241
C90	10181	3812	2514	2301	2303	2392	2548	2767	3058

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5514	5514	5514	8730	8730	8730	25781	25781	25781

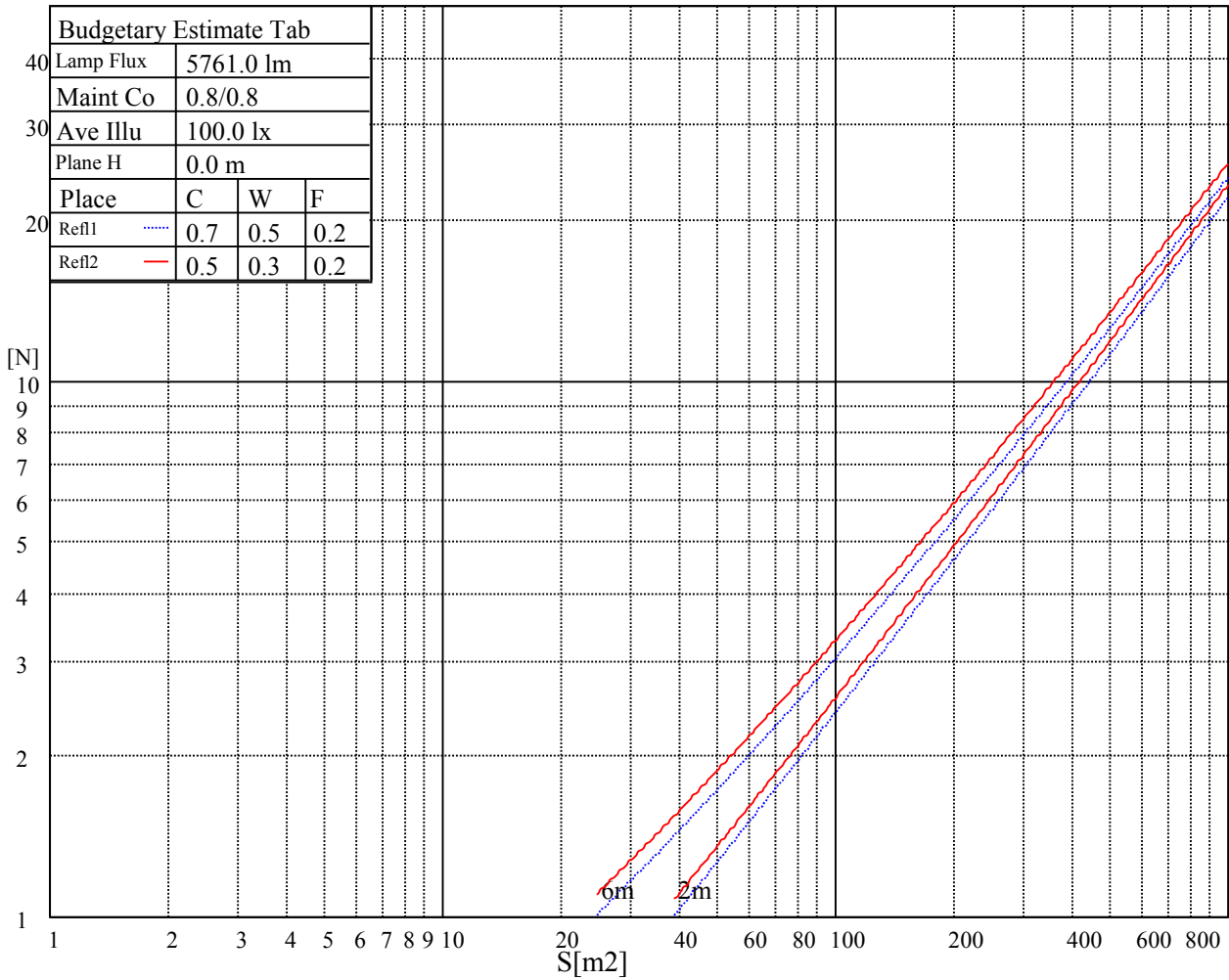
Glare Table

Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
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

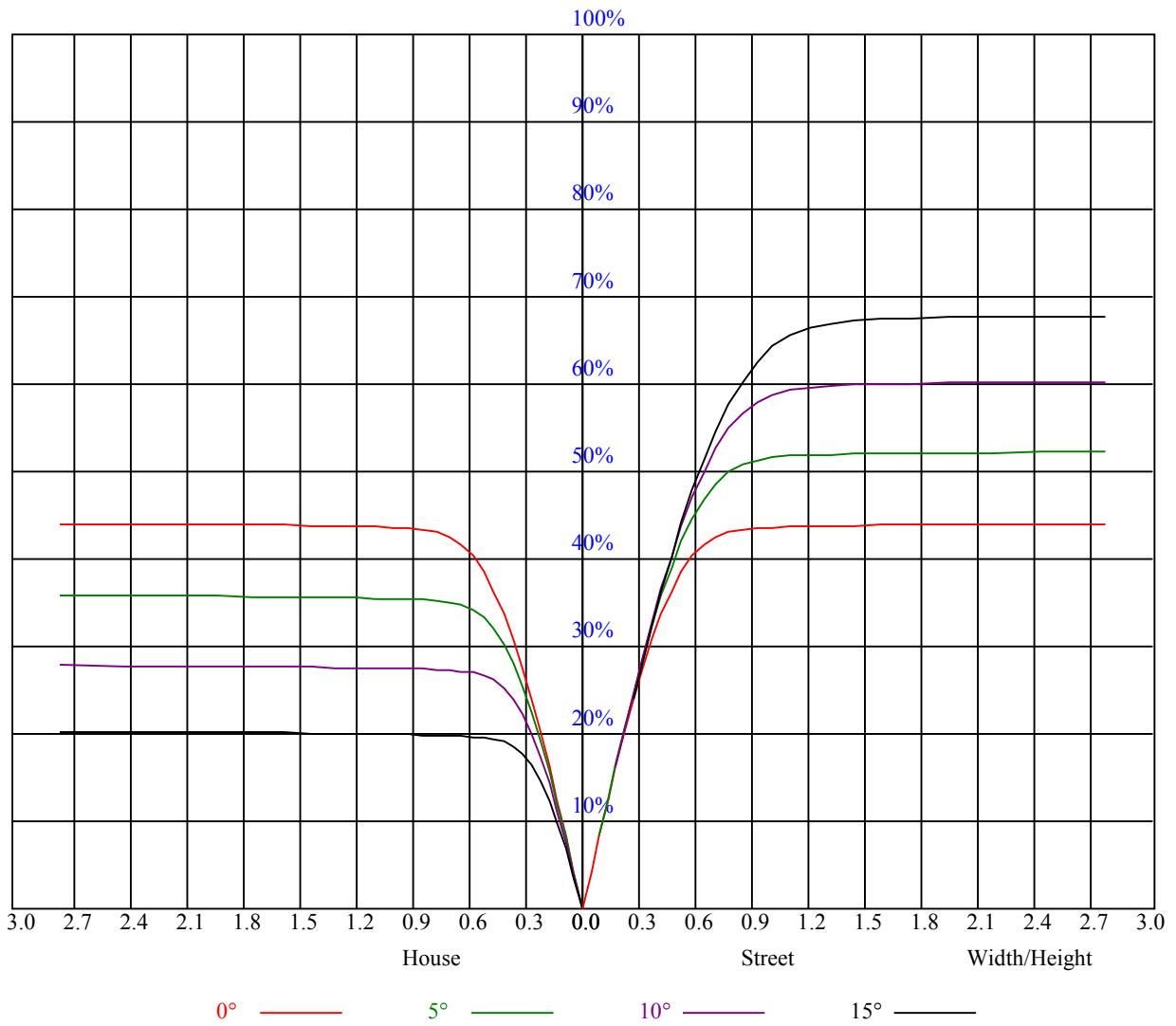
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	-1.31	-0.38	-0.94	-0.07	0.25	-1.14	-0.21	-0.78	0.10	0.42
	3H	0.76	1.58	1.14	1.91	2.28	0.89	1.71	1.27	2.05	2.42
	4H	1.94	2.70	2.34	3.05	3.44	2.07	2.83	2.48	3.19	3.58
	6H	3.22	3.92	3.64	4.29	4.69	3.33	4.03	3.75	4.40	4.80
	8H	3.87	4.52	4.31	4.92	5.33	3.97	4.62	4.40	5.01	5.42
	12H	4.88	5.50	5.32	5.89	6.32	4.96	5.58	5.40	5.97	6.40
4H	2H	-0.89	-0.12	-0.48	0.23	0.62	-0.75	0.01	-0.34	0.37	0.76
	3H	1.50	2.13	1.92	2.54	2.94	1.61	2.23	2.02	2.64	3.05
	4H	2.87	3.42	3.30	3.85	4.30	2.97	3.53	3.41	3.95	4.40
	6H	4.27	4.74	4.74	5.20	5.67	4.35	4.83	4.82	5.28	5.76
	8H	5.03	5.48	5.51	5.93	6.40	5.10	5.55	5.58	6.00	6.48
	12H	6.04	6.42	6.53	6.91	7.39	6.10	6.48	6.59	6.97	7.45
8H	4H	3.30	3.74	3.77	4.19	4.67	3.39	3.83	3.86	4.28	4.76
	6H	4.94	5.29	5.45	5.79	6.28	5.00	5.35	5.51	5.86	6.35
	8H	5.86	6.17	6.39	6.69	7.19	5.91	6.22	6.45	6.75	7.24
	12H	7.00	7.27	7.52	7.77	8.35	7.04	7.31	7.57	7.81	8.39
12H	4H	3.39	3.77	3.88	4.26	4.74	3.47	3.85	3.96	4.34	4.82
	6H	5.33	5.42	5.65	5.90	6.44	5.39	5.48	5.71	5.96	6.51
	8H	6.13	6.39	6.65	6.89	7.48	6.17	6.44	6.70	6.94	7.52
Variation with the observer position at spacings:											
S = 1.0H	6.0/-10.1					6.0/-10.1					
S = 1.5H	8.6/-8.3					8.6/-8.3					
S = 2.0H	10.4/-7.2					10.4/-7.2					
Standard tables:	BK1					BK1					
Uncorrected UGR	0.3					0.3					



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	1.03	1.03	1.03	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	0.92	0.89	0.86	0.91	0.87	0.85	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.78
3	0.87	0.83	0.79	0.85	0.82	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
5	0.77	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.66
6	0.73	0.68	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.62
7	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
8	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.56
9	0.63	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.53
10	0.60	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.51



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	5331.11	5420.30	5438.47	5295.88	5035.46	4365.42	3258.79	1656.10	457.52
45.0	5328.36	5419.75	5442.88	5285.96	4998.57	4347.80	3448.73	1640.13	458.62
90.0	5323.95	5431.86	5414.25	5238.62	4889.56	4141.34	3030.30	1050.26	319.27
135.0	5329.46	5396.63	5447.83	5301.93	4977.10	4361.02	3369.45	1649.49	471.83
180.0	5331.11	5403.79	5421.95	5239.17	4935.81	4276.78	3175.65	1078.39	360.73
225.0	5328.36	5371.85	5388.37	5209.99	4851.02	4259.16	3165.19	1060.77	351.81
270.0	5323.95	5347.63	5404.34	5277.71	5017.84	4448.01	3463.05	1803.65	467.43
315.0	5329.46	5404.89	5419.20	5287.07	4953.97	4229.98	3132.16	1042.00	332.87
360.0	5331.11	5420.30	5438.47	5295.88	5035.46	4365.42	3258.79	1656.10	457.52
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	151.79	55.33	30.39	25.27	23.40	22.85	22.79	22.74	22.68
45.0	147.33	49.00	28.63	24.61	23.34	22.79	22.63	22.57	22.52
90.0	109.51	37.71	26.26	24.00	23.07	22.63	22.35	22.35	22.35
135.0	120.52	41.57	27.14	24.45	23.40	22.79	22.52	22.52	22.46
180.0	96.57	38.65	26.65	24.33	23.45	23.12	22.96	22.46	22.35
225.0	97.95	38.87	27.09	24.17	23.29	22.85	22.63	22.63	22.52
270.0	119.86	44.05	28.02	24.45	23.34	22.68	22.46	22.46	22.46
315.0	106.75	42.67	28.30	24.39	23.12	22.63	22.41	22.41	22.41
360.0	151.79	55.33	30.39	25.27	23.40	22.85	22.79	22.74	22.68
C/γ(°)	90.0								
0.0	22.30								
45.0	22.35								
90.0	22.30								
135.0	22.30								
180.0	22.30								
225.0	22.30								
270.0	22.35								
315.0	22.30								
360.0	22.30								