



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: 3-2046-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.7000
Test No: GC2018091103	Current(A): 0.5000
LampCAT: LUMINUS CXM-11-AC30	Power (W): 17.3500
Lamp flux(lm): 2527.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 2260.85  
Efficiency(%): 89.47%  
Lumens(lm)/Power(W): 130.31  
Central intensity(cd): 6328.688  
Maximum intensity(cd): 6328.688  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=29.2  
                                  [C90/270]Total=29.2  
Field angle(10%Imax): [C0/180]Total=65.7  
                                  [C90/270]Total=65.7  
Maximum s/h(1/2): C0\_180=0.48 C90\_270=0.48  
Maximum s/h(1/4): C0\_180=0.54 C90\_270=0.54  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 90.88%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.124%

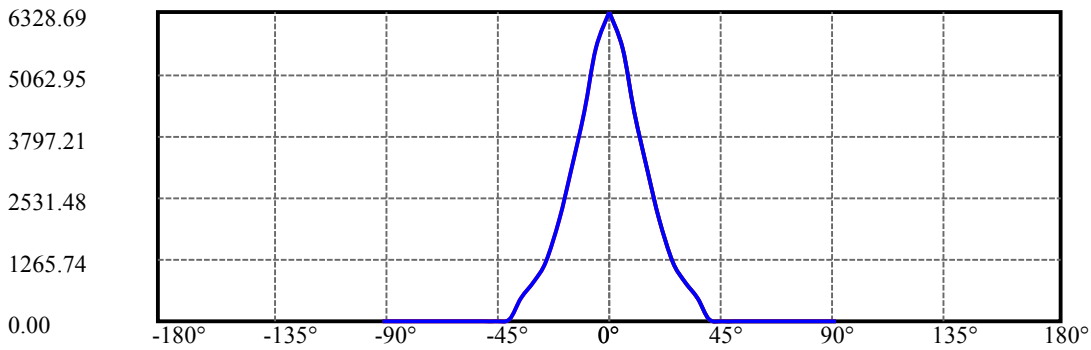
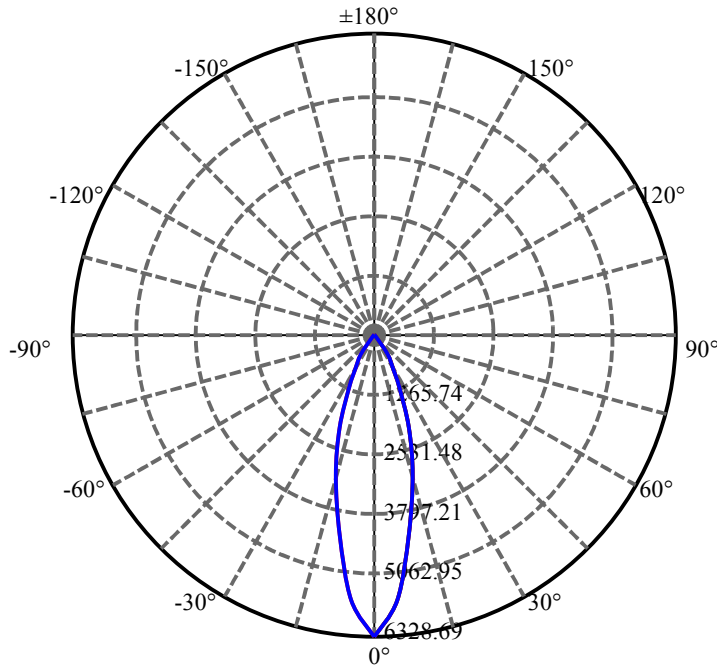
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6328.688	37.847	37.847	1.498%	1.674%
5.0	5592.797	267.186	305.033	10.573%	13.492%
10.0	4265.930	406.044	711.078	16.068%	31.452%
15.0	3067.102	435.125	1146.202	17.219%	50.698%
20.0	2069.578	387.992	1534.194	15.354%	67.859%
25.0	1211.112	280.558	1814.752	11.102%	80.269%
30.0	834.792	228.790	2043.542	9.054%	90.388%
35.0	481.219	151.295	2194.837	5.987%	97.080%
40.0	40.788	14.371	2209.208	.569%	97.716%
45.0	13.873	5.377	2214.585	.213%	97.954%
50.0	12.544	5.267	2219.852	.208%	98.187%
55.0	11.784	5.291	2225.143	.209%	98.421%
60.0	11.292	5.360	2230.504	.212%	98.658%
65.0	10.891	5.411	2235.914	.214%	98.897%
70.0	10.631	5.476	2241.39	.217%	99.139%
75.0	10.441	5.528	2246.919	.219%	99.384%
80.0	10.315	5.568	2252.487	.220%	99.630%
85.0	10.230	5.586	2258.073	.221%	99.877%
90.0	10.139	2.779	2260.852	.110%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2043.54	80.87%	90.39%
0-40	2209.21	87.42%	97.72%
0-60	2230.50	88.27%	98.66%
0-90	2258.07	89.36%	99.88%
0-120	2258.07	89.36%	99.88%
0-180	2260.85	89.47%	100.00%
60-90	32.93	1.30%	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%
0-24.89	1808.68	71.57%	80.00%

## ZONAL LUMEN SUMMARY

0-10	711.08
10-20	823.12
20-30	509.35
30-40	165.67
40-50	10.64
50-60	10.65
60-70	10.89
70-80	11.10
80-90	5.59
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

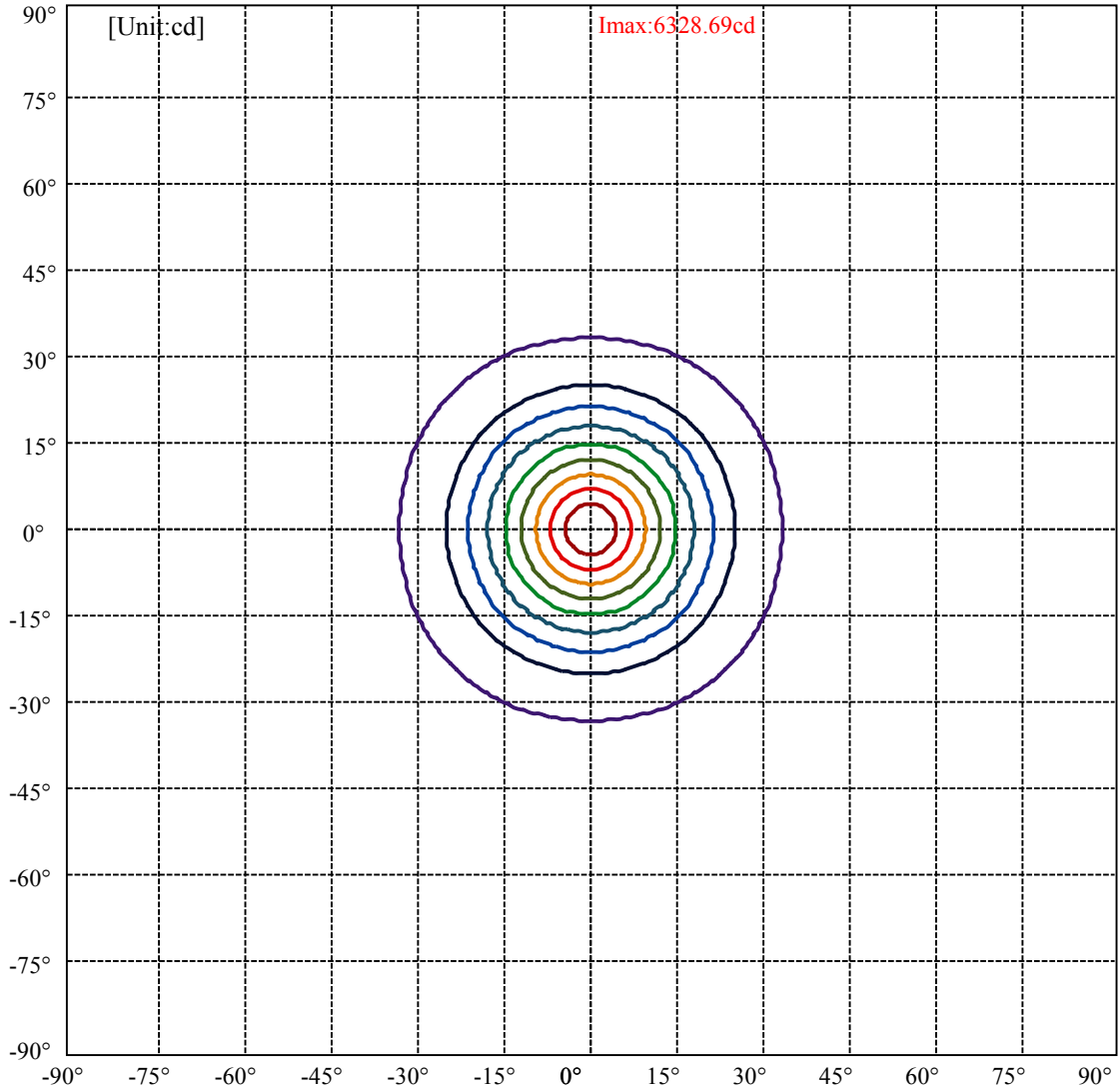


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

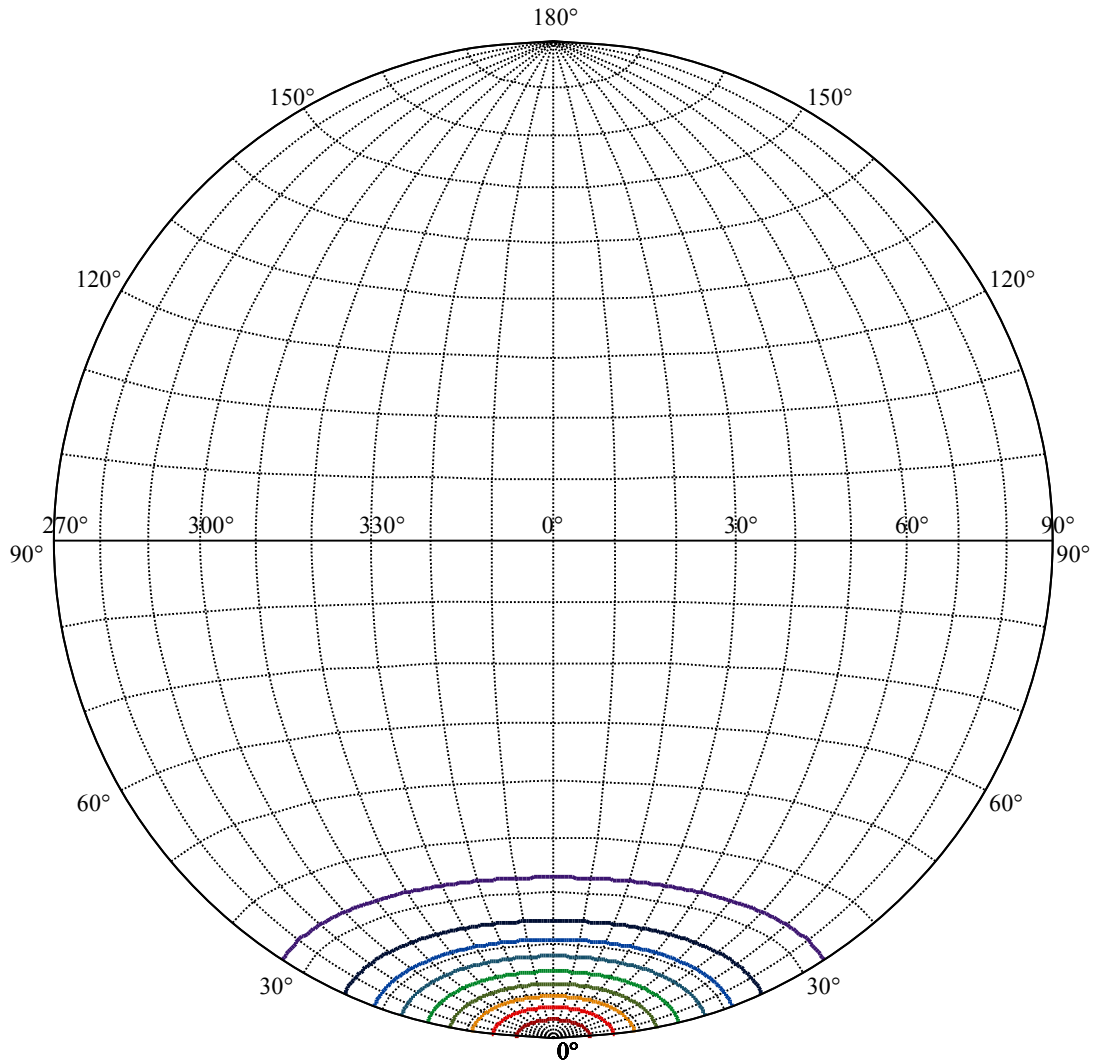
Field angle(10%Imax):C0/180Left:32.9 Right:32.9  
:C90/270Left:32.9 Right:32.9

Beam Angle(50%Imax):C0/180Left:14.6 Right:14.6  
:C90/270Left:14.6 Right:14.6





(10%Imax) 632.869	—
(20%Imax) 1265.74	—
(30%Imax) 1898.61	—
(40%Imax) 2531.48	—
(50%Imax) 3164.34	—
(60%Imax) 3797.21	—
(70%Imax) 4430.08	—
(80%Imax) 5062.95	—
(90%Imax) 5695.82	—



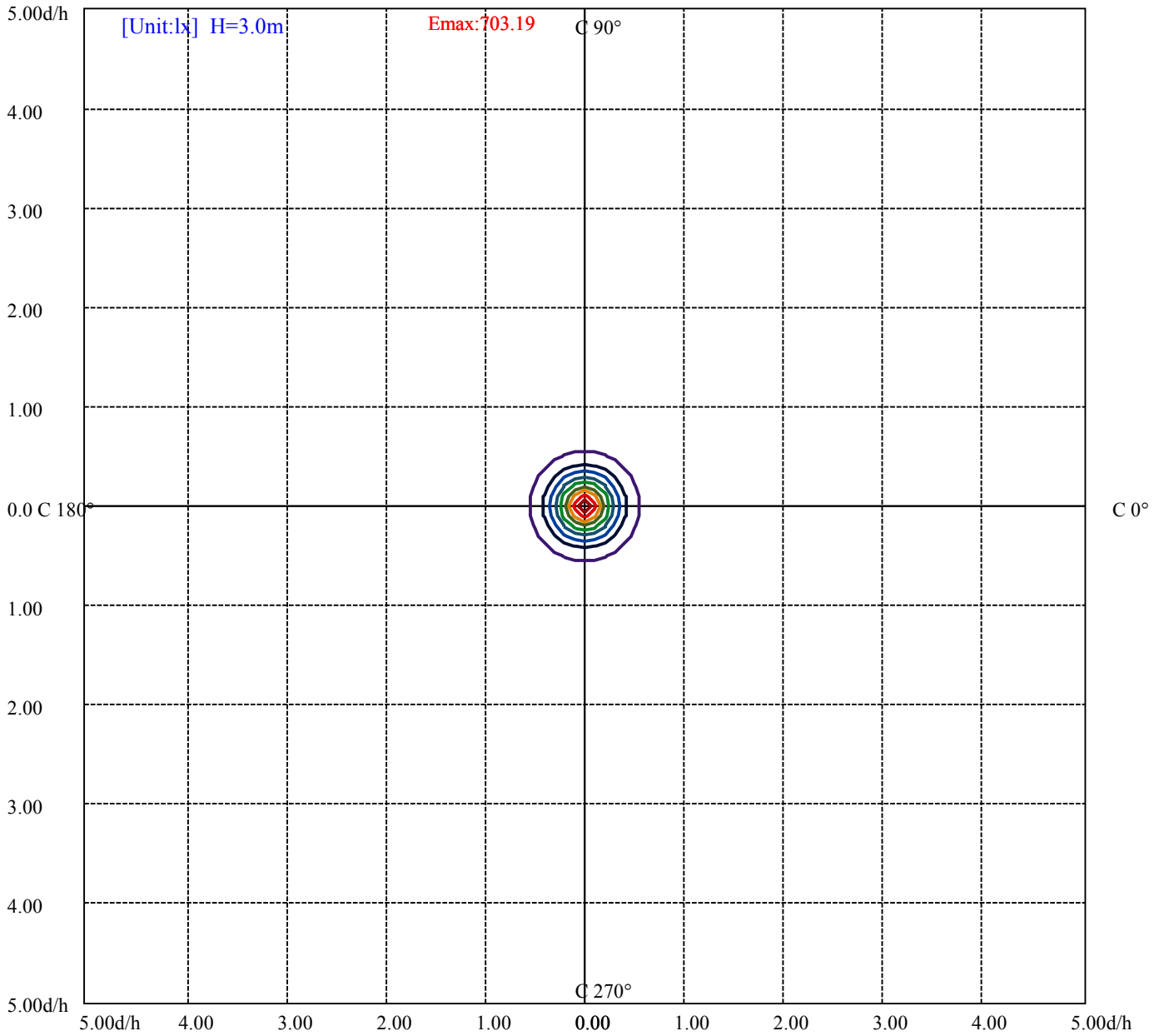
House

[Unit:cd]

Road

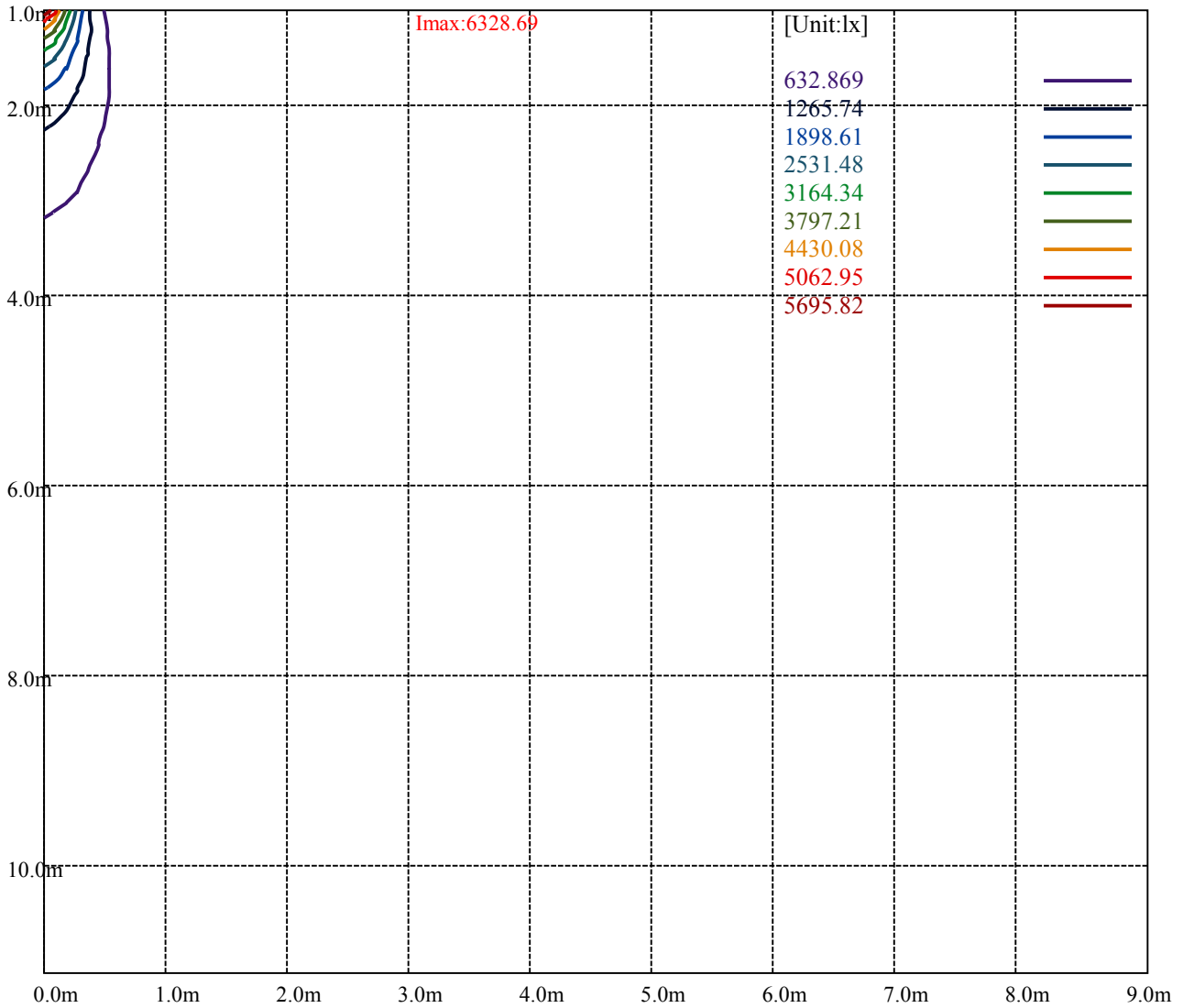
**Imax:6328.69**

(10%Imax) 632.869	—
(20%Imax) 1265.74	—
(30%Imax) 1898.61	—
(40%Imax) 2531.48	—
(50%Imax) 3164.34	—
(60%Imax) 3797.21	—
(70%Imax) 4430.08	—
(80%Imax) 5062.95	—
(90%Imax) 5695.82	—



- (10%Emax) 70.31856
- (20%Emax) 140.6367
- (30%Emax) 210.9556
- (40%Emax) 281.2744
- (50%Emax) 351.5922
- (60%Emax) 421.9111
- (70%Emax) 492.23
- (80%Emax) 562.5478
- (90%Emax) 632.8666





Luminance Table

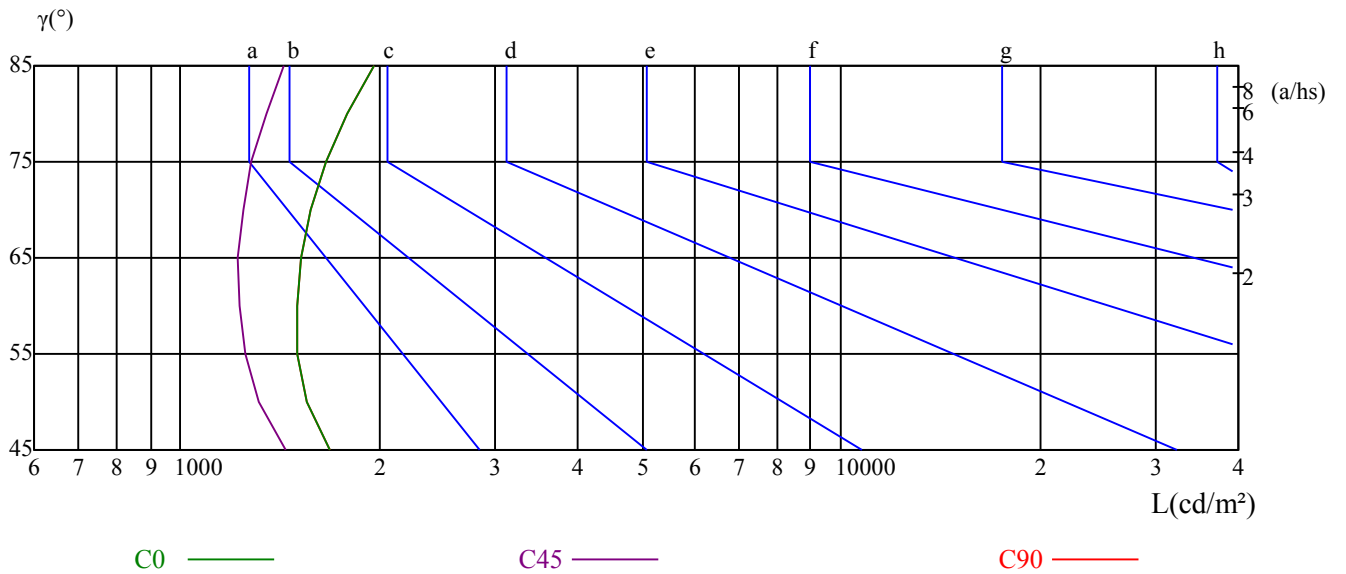
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1680	1553	1505	1500	1519	1574	1660	1786	1961
C45	1444	1315	1254	1229	1223	1243	1283	1347	1436
C90	1680	1553	1505	1500	1519	1574	1660	1786	1961

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3652	3652	3652	5717	5717	5717	16636	16636	16636

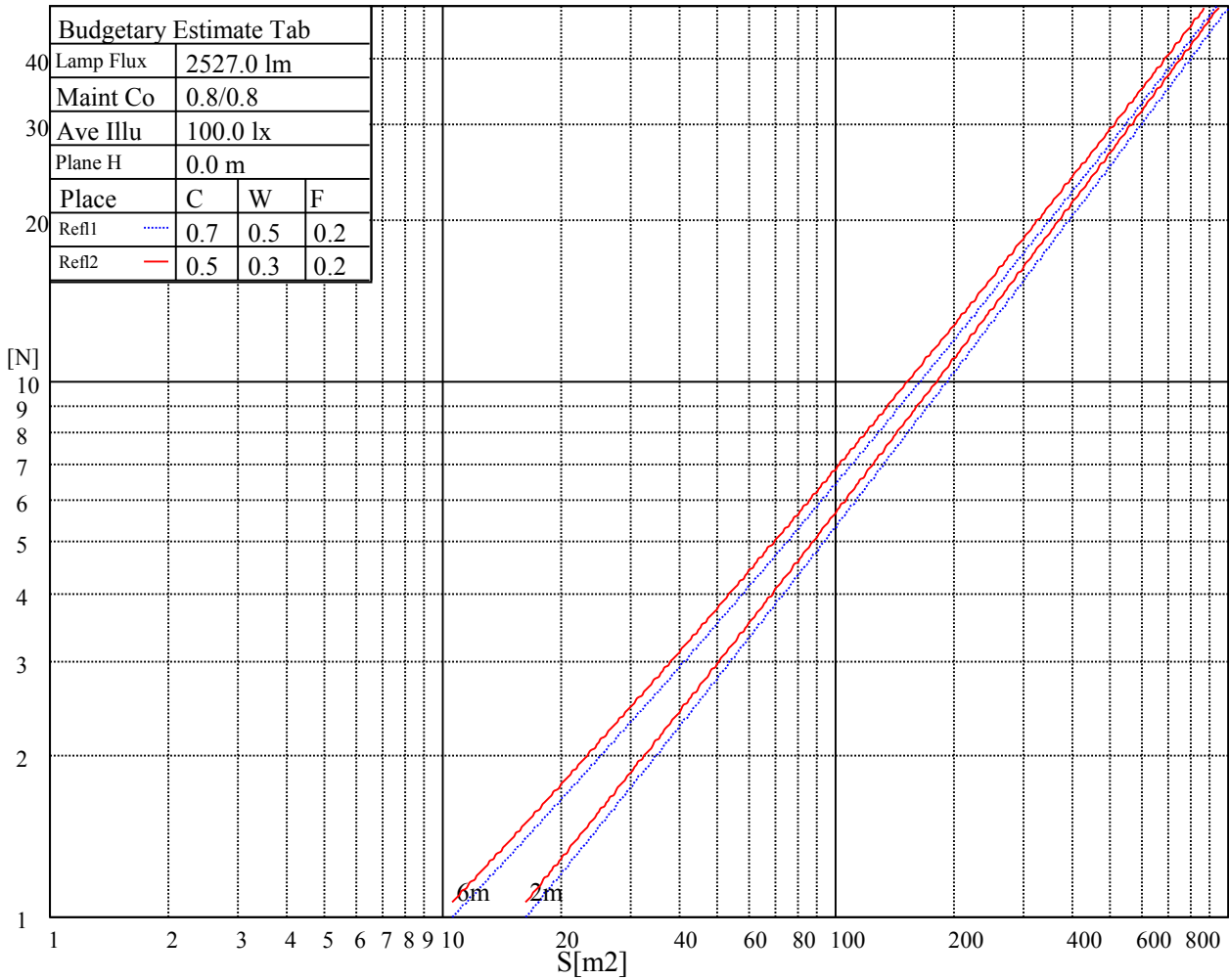
Glare Table

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

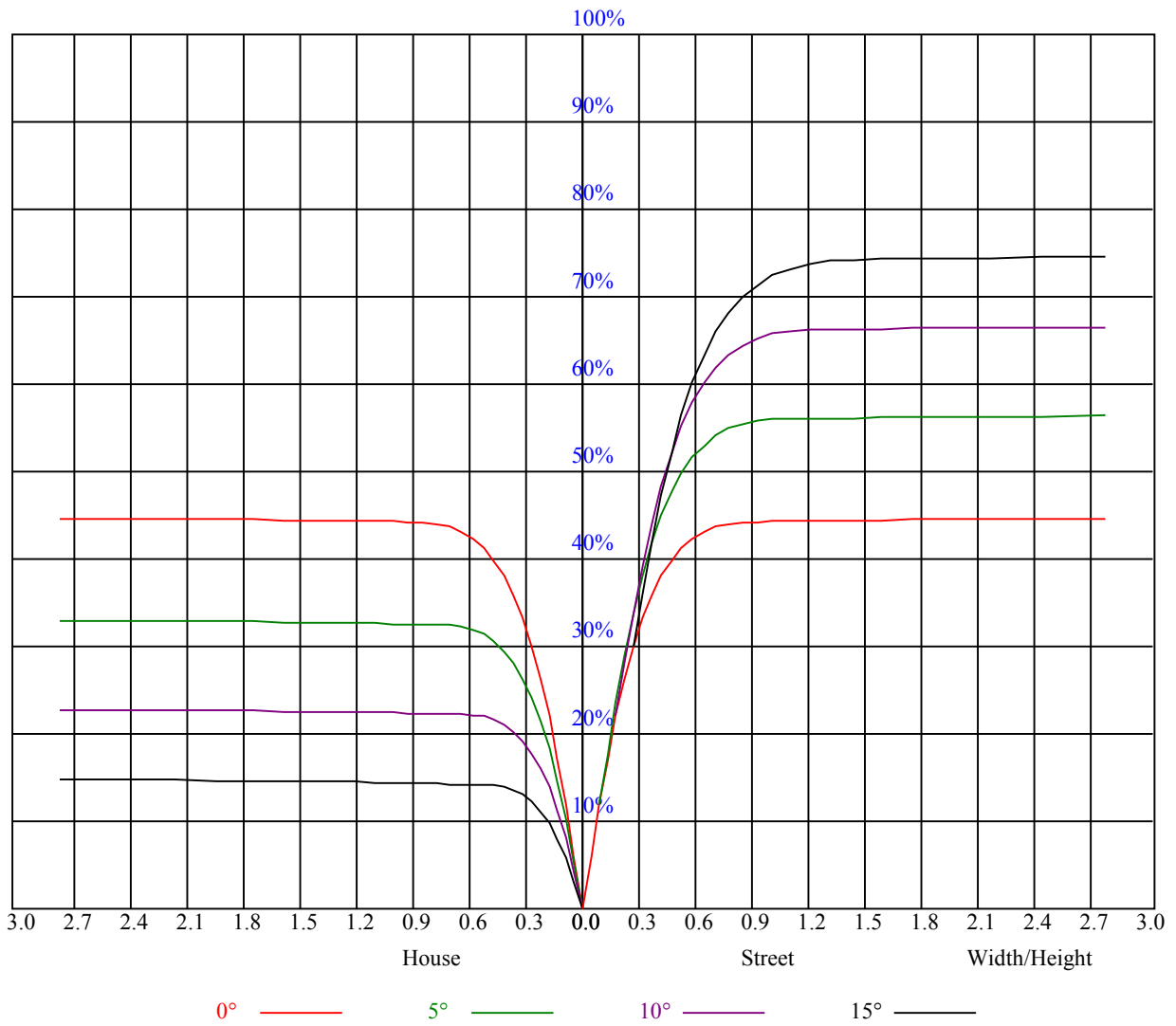
Luminance Limiting Curve



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	0.00	0.91	0.36	1.22	1.54	-0.03	0.88	0.33	1.19	1.51
	3H	2.22	3.02	2.60	3.36	3.73	2.19	3.00	2.57	3.33	3.70
	4H	3.43	4.17	3.83	4.53	4.92	3.40	4.15	3.81	4.50	4.90
	6H	4.71	5.39	5.13	5.77	6.16	4.69	5.37	5.11	5.75	6.15
	8H	5.35	5.99	5.78	6.38	6.79	5.33	5.97	5.77	6.37	6.78
	12H	6.33	6.94	6.77	7.33	7.76	6.33	6.94	6.77	7.33	7.76
4H	2H	0.47	1.22	0.88	1.57	1.96	0.45	1.19	0.86	1.55	1.94
	3H	2.98	3.60	3.40	4.01	4.41	2.96	3.58	3.38	3.99	4.39
	4H	4.37	4.92	4.81	5.34	5.79	4.35	4.90	4.79	5.33	5.78
	6H	5.75	6.22	6.22	6.67	7.15	5.74	6.21	6.21	6.66	7.14
	8H	6.50	6.94	6.98	7.39	7.87	6.50	6.94	6.98	7.39	7.86
8H	12H	7.49	7.86	7.98	8.35	8.83	7.49	7.87	7.98	8.36	8.83
	4H	4.80	5.24	5.28	5.69	6.16	4.78	5.22	5.26	5.67	6.15
	6H	6.42	6.77	6.93	7.27	7.76	6.41	6.76	6.93	7.26	7.75
	8H	7.33	7.63	7.86	8.15	8.65	7.32	7.63	7.86	8.15	8.65
12H	12H	8.44	8.70	8.97	9.20	9.79	8.45	8.71	8.97	9.21	9.79
	4H	4.89	5.26	5.38	5.75	6.23	4.87	5.25	5.37	5.74	6.22
	6H	6.79	6.89	7.13	7.37	7.92	6.79	6.89	7.12	7.36	7.91
	8H	7.59	7.85	8.12	8.35	8.93	7.59	7.85	8.11	8.35	8.93
Variation with the observer position at spacings:											
S = 1.0H	5.7/-7.5					5.7/-7.5					
S = 1.5H	8.0/-5.9					8.0/-5.9					
S = 2.0H	9.6/-4.7					9.6/-4.7					
Standard tables:	BK2					BK2					
Uncorrected UGR	-3.6					-3.6					



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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.87	0.86	0.84
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.80
3	0.90	0.86	0.83	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.79	0.82	0.80	0.78	0.77
4	0.86	0.81	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
5	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
6	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.68
7	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
8	0.73	0.69	0.66	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64
9	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
10	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.60



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	6334.88	5564.81	4226.63	3103.31	2098.69	1262.25	853.88	486.56	24.13
45.0	6311.25	5871.94	4512.38	3318.75	2262.38	1338.19	883.69	595.13	141.98
90.0	6347.81	5544.00	4212.56	3092.06	2028.94	1121.40	830.03	482.51	22.22
135.0	6320.81	5840.44	4512.94	3259.69	2229.75	1355.63	867.94	596.81	44.83
180.0	6334.88	5547.38	4345.31	3062.25	2034.00	1105.37	831.60	470.14	23.46
225.0	6311.25	5310.00	4052.81	2826.00	1877.63	1113.58	785.53	345.60	21.04
270.0	6347.81	5690.81	4261.50	3058.31	2090.25	1270.13	833.06	484.88	25.59
315.0	6320.81	5373.00	4003.31	2816.44	1935.00	1122.36	792.62	388.13	23.06
360.0	6334.88	5564.81	4226.63	3103.31	2098.69	1262.25	853.88	486.56	24.13

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.61	12.43	11.64	11.19	10.86	10.58	10.41	10.29	10.24
45.0	15.08	12.77	11.98	11.42	11.03	10.74	10.58	10.41	10.46
90.0	13.56	12.54	11.76	11.25	10.86	10.63	10.41	10.29	10.18
135.0	13.95	12.54	11.81	11.31	10.91	10.63	10.41	10.29	10.24
180.0	13.50	12.43	11.70	11.25	10.86	10.58	10.41	10.29	10.18
225.0	13.61	12.54	11.76	11.31	10.86	10.63	10.46	10.35	10.18
270.0	14.18	12.77	11.98	11.42	10.97	10.69	10.46	10.29	10.18
315.0	13.50	12.32	11.64	11.19	10.80	10.58	10.41	10.29	10.18
360.0	13.61	12.43	11.64	11.19	10.86	10.58	10.41	10.29	10.24

C/γ(°)	90.0
0.0	10.18
45.0	10.13
90.0	10.13
135.0	10.13
180.0	10.18
225.0	10.13
270.0	10.13
315.0	10.13
360.0	10.18