



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: 1-0788-M	
Luminaire: 92.70.125.00	
Report No: NATA0100	Voltage(V): 38.4000
Test No: GC2018070608	Current(A): 0.2000
LampCAT: NTCWT012B-V3	Power (W): 7.6800
Lamp flux(lm): 741.0	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 678.38
Efficiency(%): 91.55%
Lumens(lm)/Power(W): 89.21
Central intensity(cd): 1240.558
Maximum intensity(cd): 1240.558
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.2
[C90/270]Total=34.2
Field angle(10%Imax): [C0/180]Total=84.9
[C90/270]Total=84.9
Maximum s/h(1/2): C0_180=0.55 C90_270=0.55
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.46%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.836%

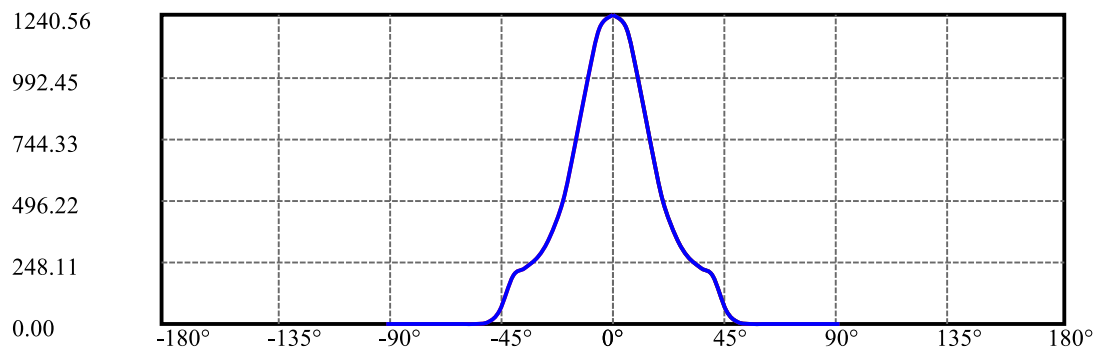
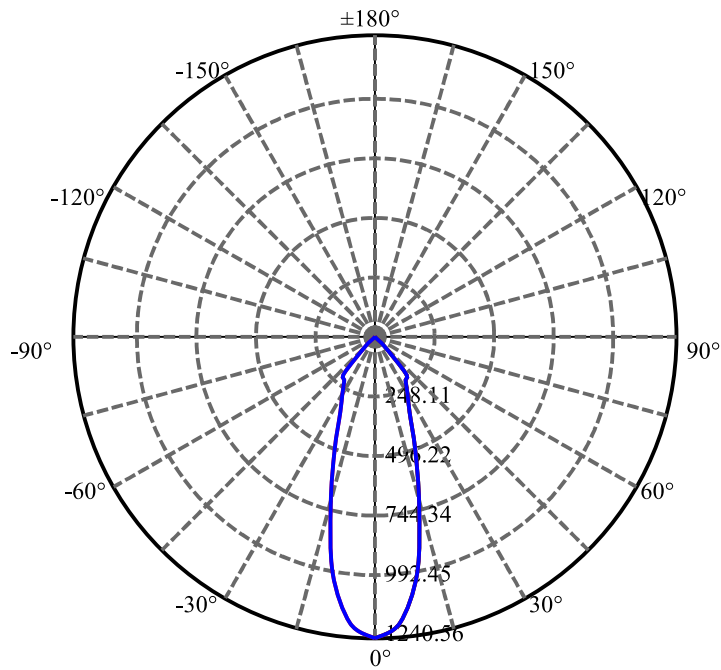
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1240.558	7.419	7.419	1.001%	1.094%
5.0	1183.602	56.545	63.963	7.631%	9.429%
10.0	988.579	94.096	158.059	12.699%	23.300%
15.0	709.326	100.631	258.69	13.580%	38.134%
20.0	496.395	93.061	351.752	12.559%	51.852%
25.0	343.153	79.492	431.244	10.728%	63.570%
30.0	269.233	73.788	505.032	9.958%	74.447%
35.0	226.185	71.112	576.145	9.597%	84.930%
40.0	193.275	68.098	644.242	9.190%	94.968%
45.0	51.595	19.998	664.24	2.699%	97.916%
50.0	7.109	2.985	667.225	.403%	98.356%
55.0	3.572	1.604	668.829	.216%	98.592%
60.0	3.152	1.496	670.325	.202%	98.813%
65.0	2.939	1.460	671.785	.197%	99.028%
70.0	2.829	1.457	673.242	.197%	99.243%
75.0	2.767	1.465	674.707	.198%	99.459%
80.0	2.712	1.464	676.171	.198%	99.674%
85.0	2.705	1.477	677.647	.199%	99.892%
90.0	2.670	0.732	678.379	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	505.03	68.16%	74.45%
0-40	644.24	86.94%	94.97%
0-60	670.33	90.46%	98.81%
0-90	677.65	91.45%	99.89%
0-120	677.65	91.45%	99.89%
0-180	678.38	91.55%	100.00%
60-90	8.82	1.19%	1.30%
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%
0-32.65	542.70	73.24%	80.00%

ZONAL LUMEN SUMMARY

0-10	158.06
10-20	193.69
20-30	153.28
30-40	139.21
40-50	22.98
50-60	3.10
60-70	2.92
70-80	2.93
80-90	1.48
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:

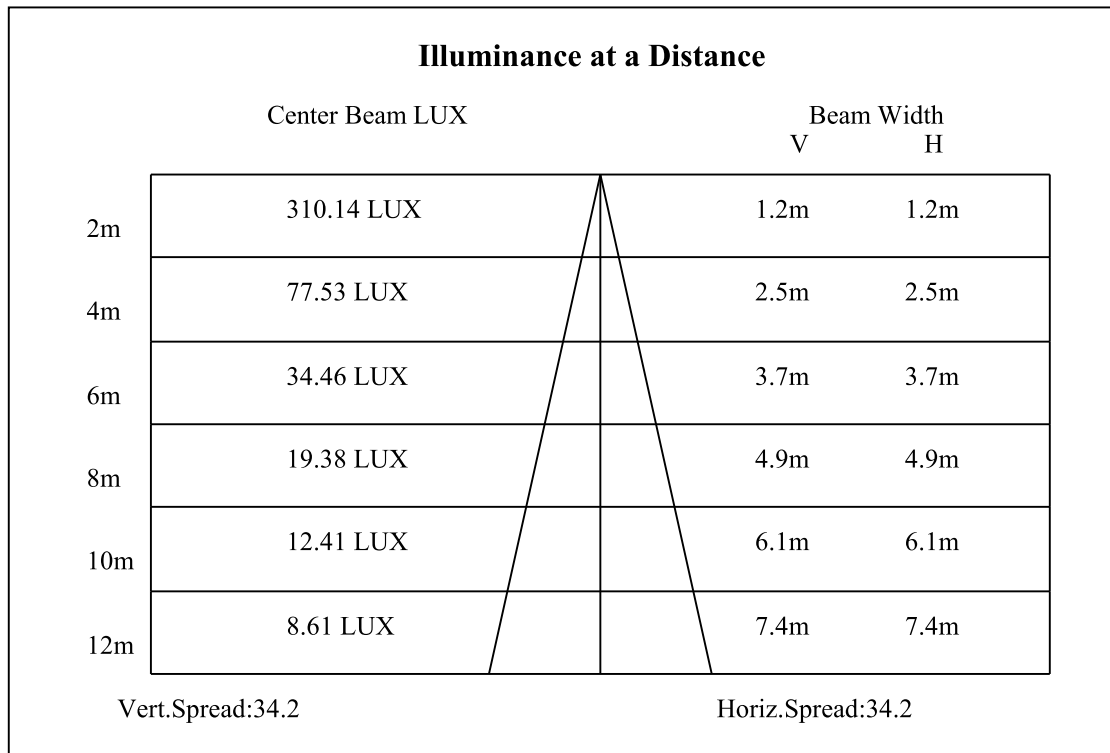
C90/C270:

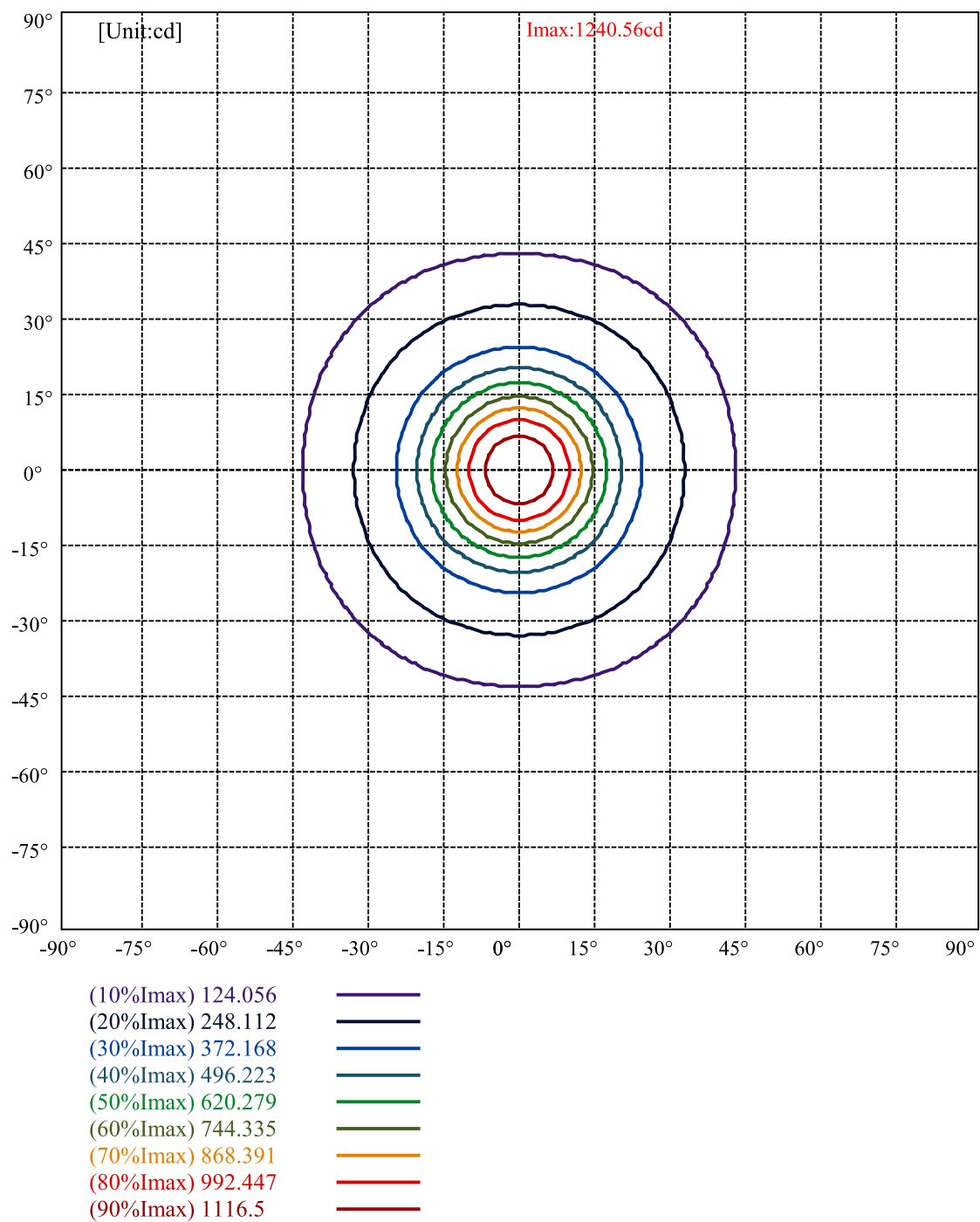
Field angle(10%Imax):C0/180Left:42.4 Right:42.4

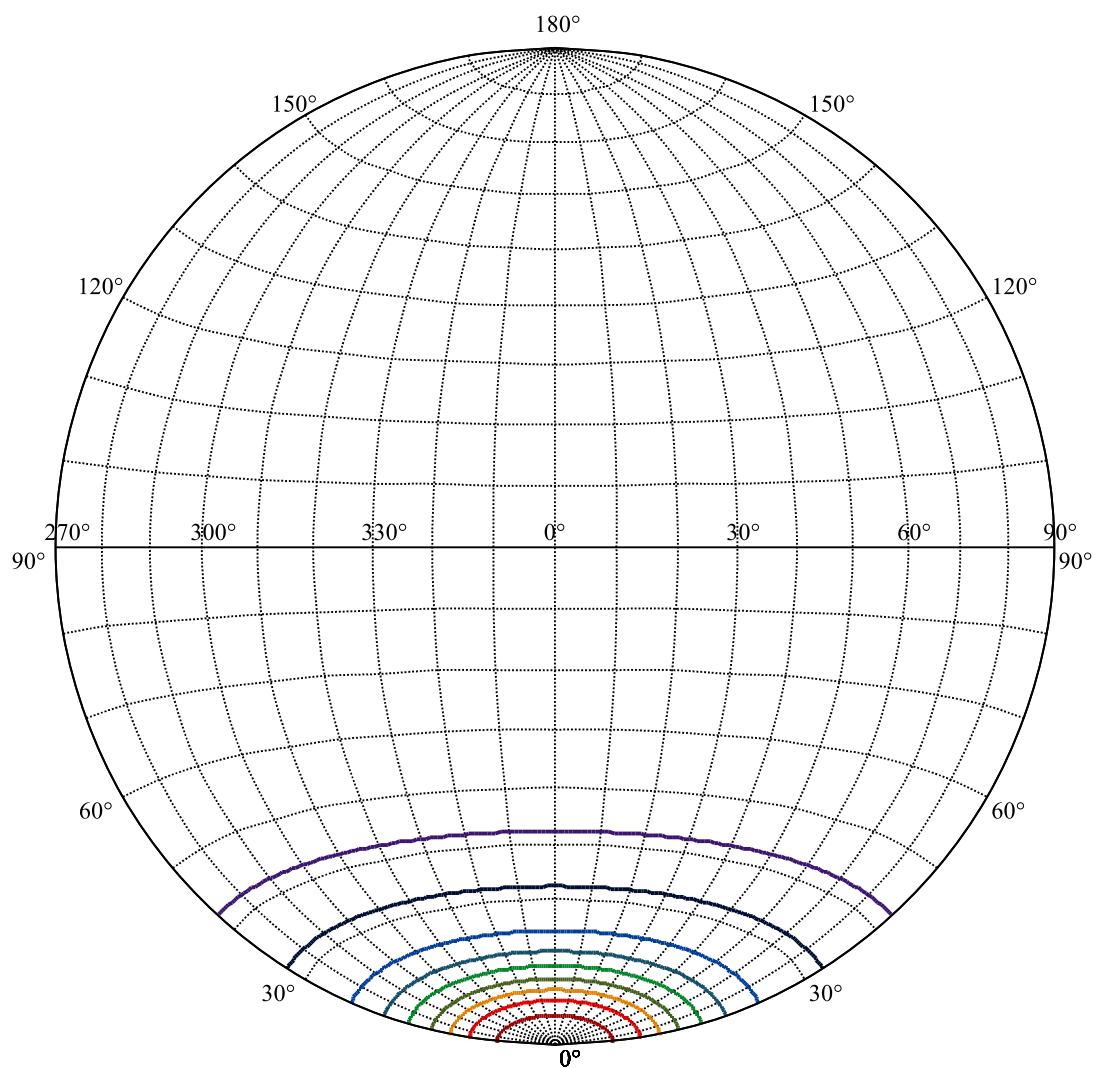
:C90/270Left:42.4 Right:42.4

Beam Angle(50%Imax):C0/180Left:17.1 Right:17.1

:C90/270Left:17.1 Right:17.1







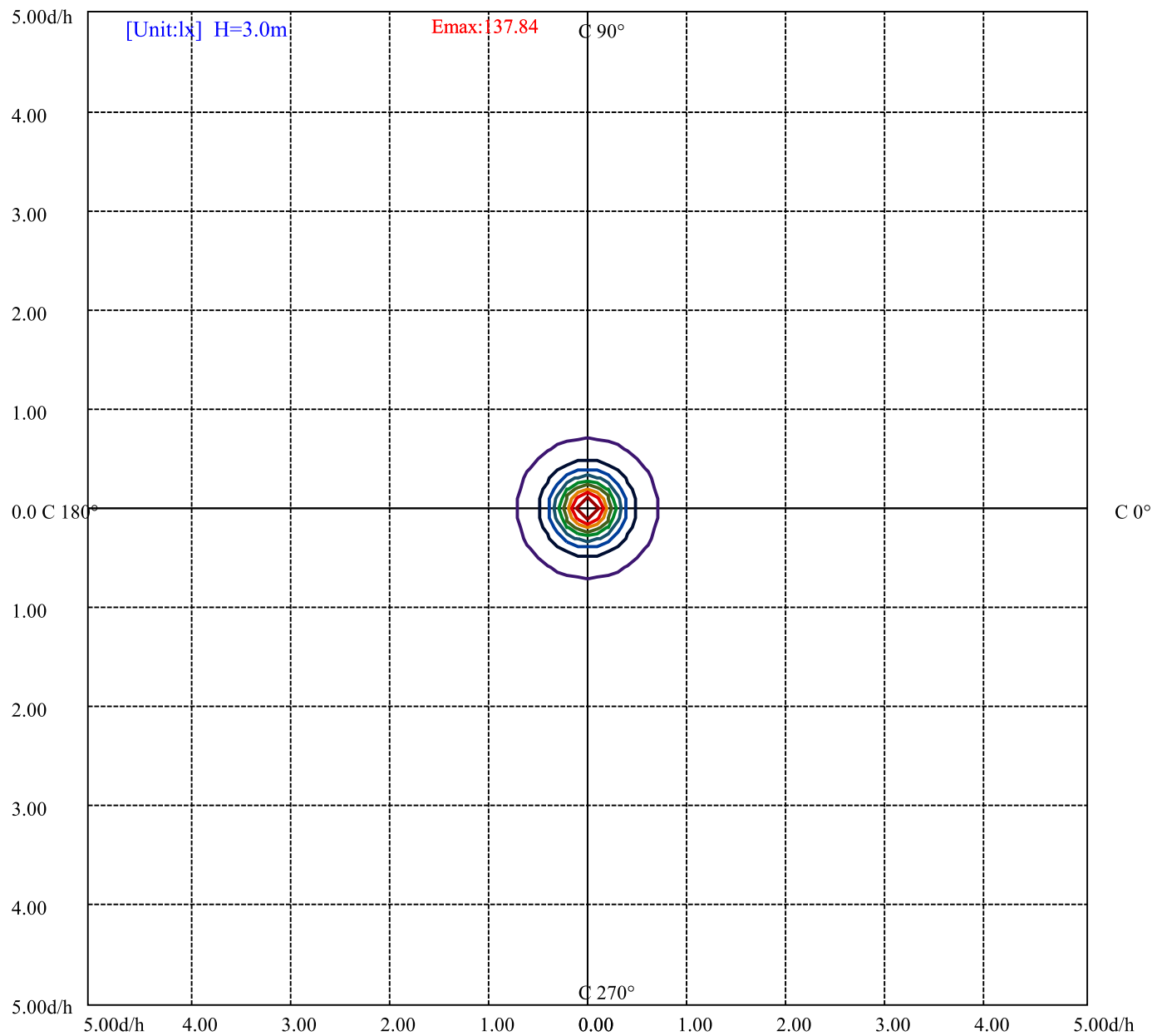
House

[Unit:cd]

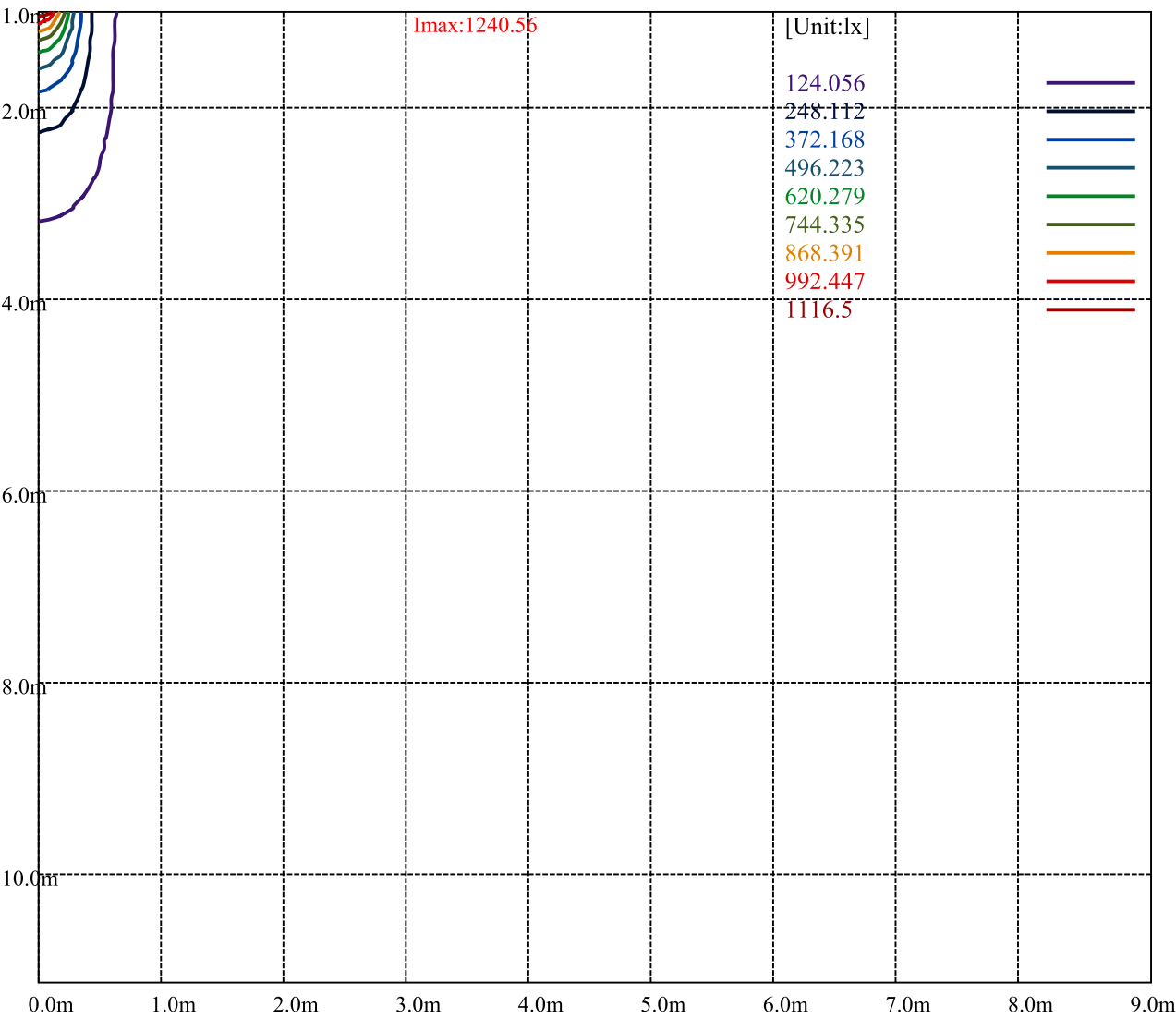
Road

Imax:1240.56

(10%Imax)	124.056	
(20%Imax)	248.112	
(30%Imax)	372.168	
(40%Imax)	496.223	
(50%Imax)	620.279	
(60%Imax)	744.335	
(70%Imax)	868.391	
(80%Imax)	992.447	
(90%Imax)	1116.5	



(10%Emax)	13.784	
(20%Emax)	27.56789	
(30%Emax)	41.35189	
(40%Emax)	55.13589	
(50%Emax)	68.91978	
(60%Emax)	82.70377	
(70%Emax)	96.48778	
(80%Emax)	110.2717	
(90%Emax)	124.0556	



Luminance Table

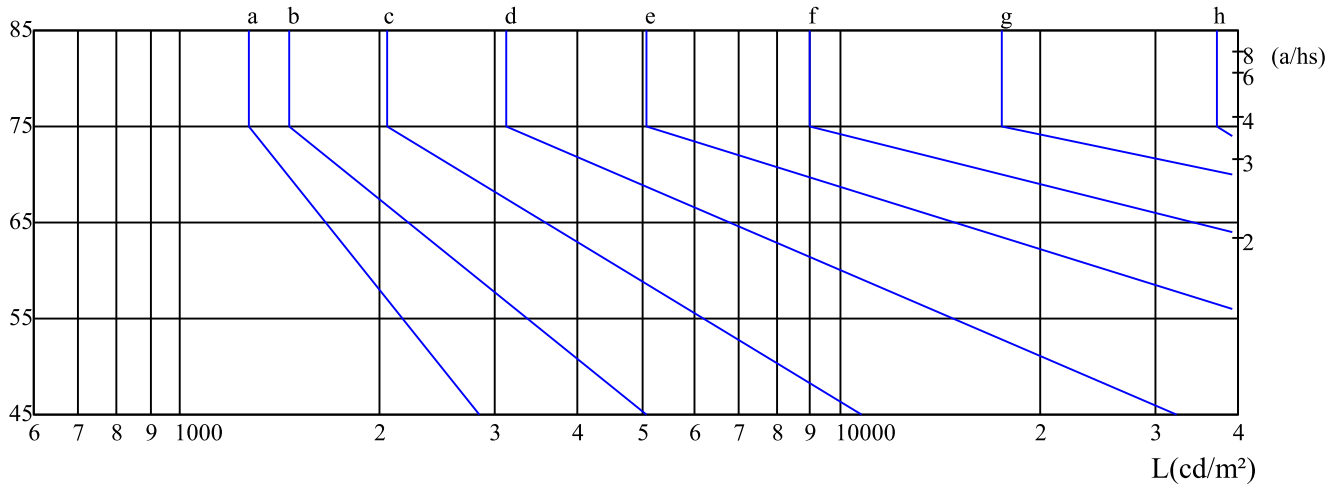
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

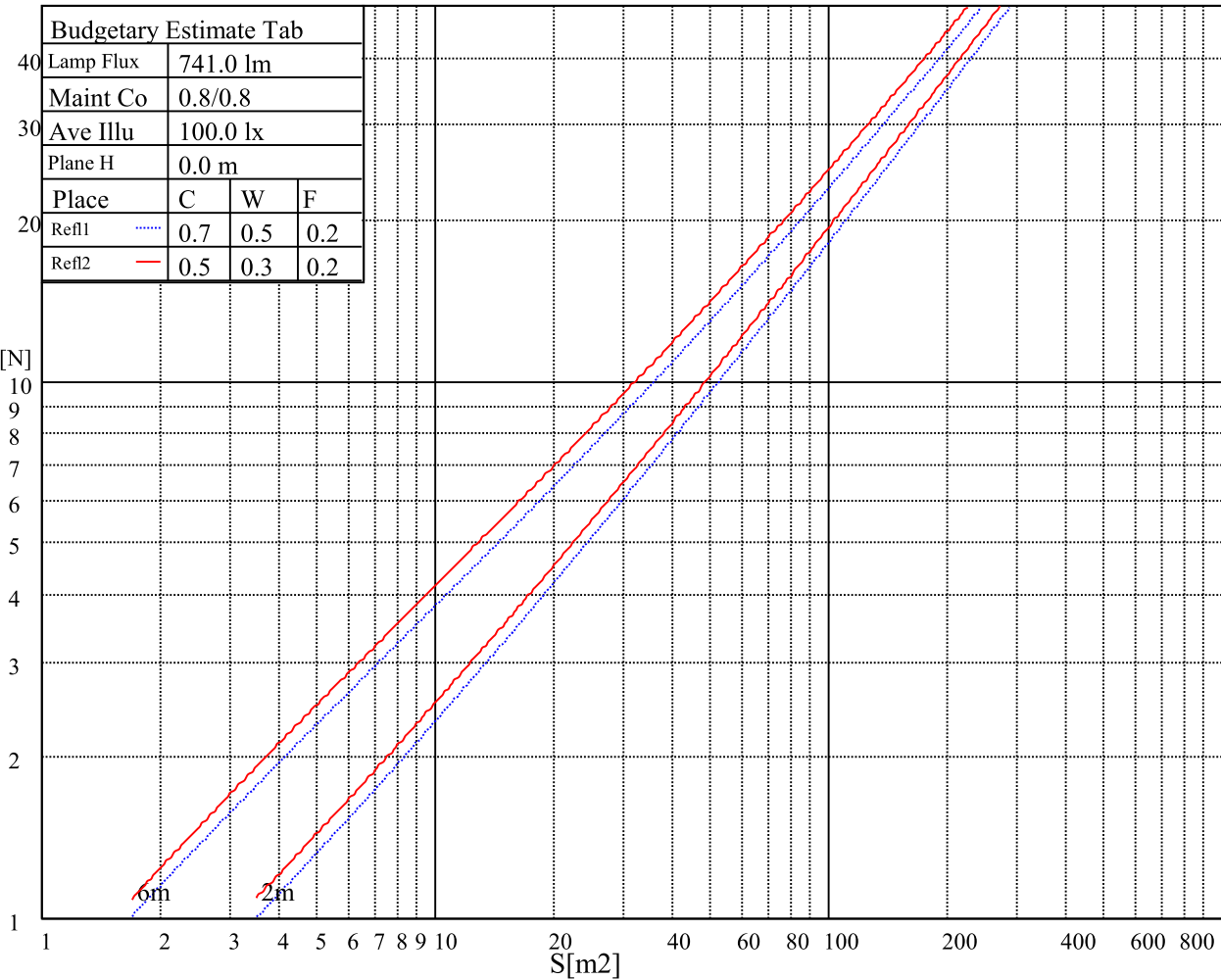
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

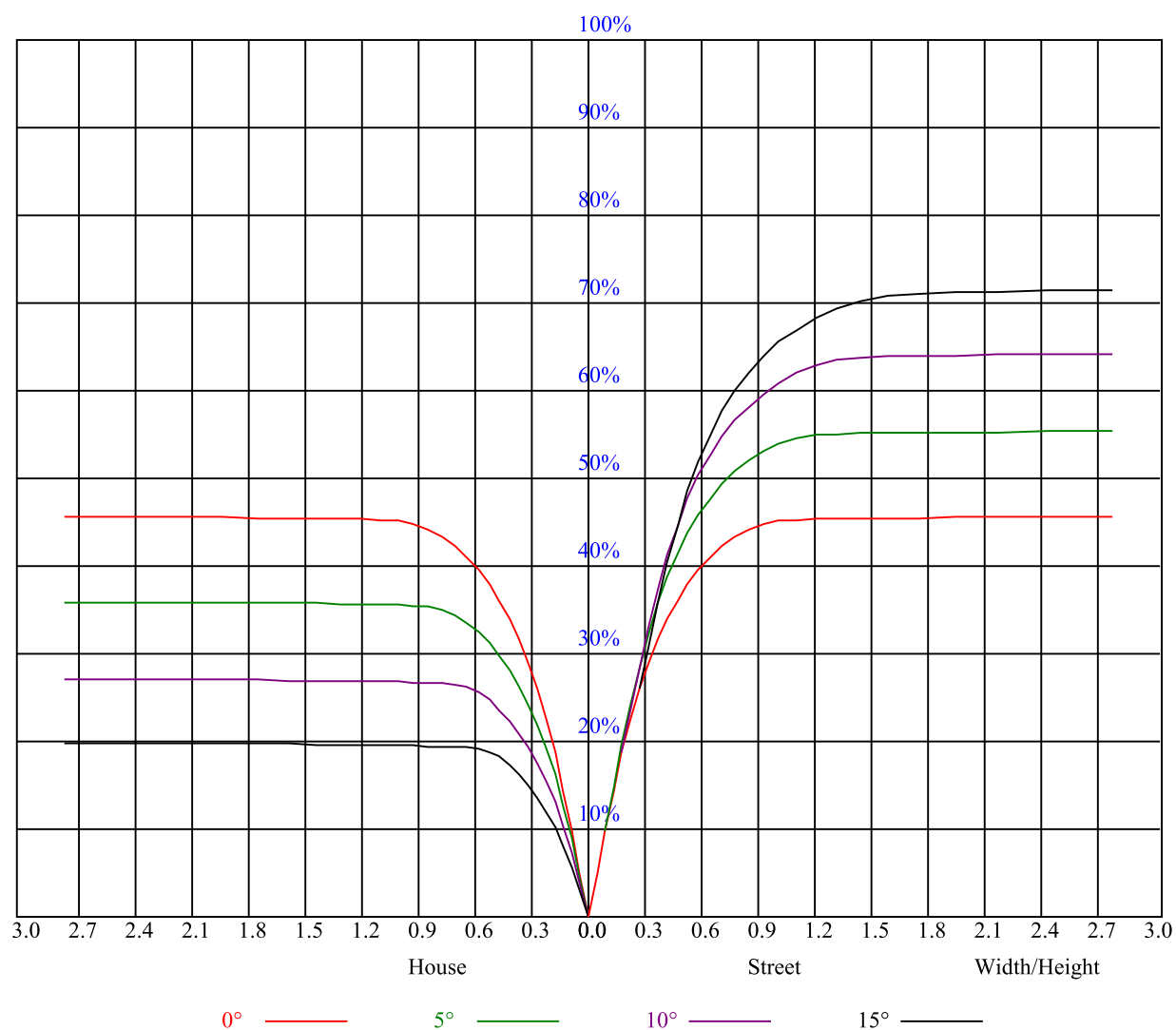
C0 ———

C45 ———

C90 ———



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	1.08	1.08	1.08	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	0.99	0.97	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.85
2	0.95	0.91	0.88	0.94	0.90	0.87	0.91	0.88	0.85	0.88	0.86	0.84	0.85	0.83	0.82	0.80
3	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.82	0.80	0.84	0.81	0.78	0.82	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.75	0.81	0.78	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.71
5	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.65	0.64
7	0.72	0.67	0.63	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
8	0.69	0.63	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
9	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.63	0.59	0.56	0.55
10	0.63	0.58	0.55	0.62	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.53



Nata 1-0781-M

Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1236.57	1144.62	931.00	654.62	458.62	324.83	264.55	222.10	183.61		
45.0	1249.23	1182.61	984.96	708.58	504.32	350.16	279.69	227.60	200.24		
90.0	1243.17	1195.83	989.64	707.20	502.33	347.24	262.73	221.60	197.76		
135.0	1233.26	1229.96	1103.33	790.61	550.56	379.34	281.34	234.26	205.64		
180.0	1236.57	1225.56	1017.22	760.49	525.90	359.96	273.52	230.96	203.43		
225.0	1249.23	1201.33	984.35	704.45	493.47	334.91	259.10	224.85	192.31		
270.0	1243.17	1190.87	988.81	718.49	498.81	342.45	280.79	229.14	199.19		
315.0	1233.26	1098.04	909.31	630.18	437.15	306.33	252.16	218.96	164.01		
360.0	1236.57	1144.62	931.00	654.62	458.62	324.83	264.55	222.10	183.61		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	27.53	6.06	3.41	3.08	2.92	2.81	2.75	2.70	2.70		
45.0	52.47	7.43	3.58	3.19	2.97	2.92	2.86	2.75	2.75		
90.0	51.15	7.05	3.80	3.19	2.97	2.86	2.75	2.70	2.70		
135.0	102.63	8.75	3.69	3.25	2.97	2.86	2.75	2.70	2.70		
180.0	77.35	8.53	3.80	3.19	2.92	2.81	2.75	2.70	2.70		
225.0	41.07	7.10	3.52	3.14	2.92	2.81	2.81	2.75	2.75		
270.0	45.75	6.83	3.47	3.14	2.92	2.81	2.75	2.70	2.70		
315.0	14.81	5.12	3.30	3.03	2.92	2.75	2.70	2.70	2.64		
360.0	27.53	6.06	3.41	3.08	2.92	2.81	2.75	2.70	2.70		
C/γ(°)	90.0										
0.0	2.64										
45.0	2.70										
90.0	2.70										
135.0	2.70										
180.0	2.64										
225.0	2.70										
270.0	2.64										
315.0	2.64										
360.0	2.64										