



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: 3-1700-N  
Luminaire: 92.70.065.00+92.70.089.00  
Report No: NATA0100  
Test No: GC2018091115  
LampCAT: LUMINUS CXM-11-AC30  
Lamp flux(lm): 2557.0  
Number of Lamps: 1  
Length(mm): 77  
Phm Type: C

Voltage(V): 34.7000  
Current(A): 0.5000  
Power (W): 17.3500  
PF: 0.0000  
Ballast type: DC  
Width(mm): 77  
Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 2010.67  
Efficiency(%): 78.63%  
Lumens(lm)/Power(W): 117.24  
Central intensity(cd): 4242.797  
Maximum intensity(cd): 4242.797  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=37.0  
                                  [C90/270]Total=37.0  
Field angle(10%Imax): [C0/180]Total=65.4  
                                  [C90/270]Total=65.4  
Maximum s/h(1/2): C0\_180=0.62 C90\_270=0.62  
Maximum s/h(1/4): C0\_180=0.59 C90\_270=0.59  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 79.55%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.765%

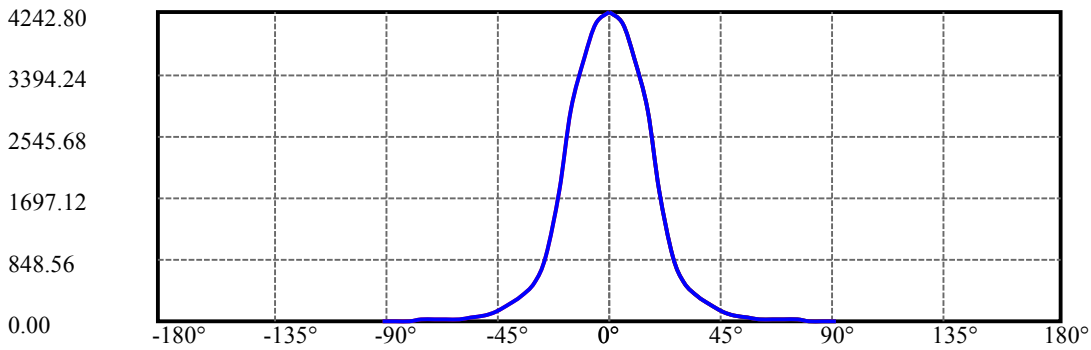
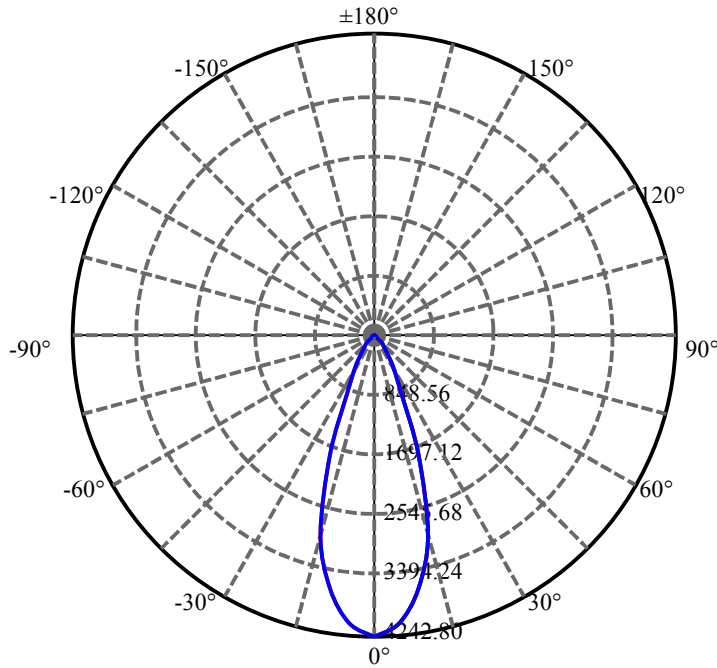
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4242.797	25.373	25.373	.992%	1.262%
5.0	4071.938	194.530	219.903	7.608%	10.937%
10.0	3609.211	343.536	563.438	13.435%	28.022%
15.0	2896.594	410.935	974.374	16.071%	48.460%
20.0	1794.509	336.424	1310.797	13.157%	65.192%
25.0	882.949	204.538	1515.335	7.999%	75.365%
30.0	526.507	144.299	1659.634	5.643%	82.541%
35.0	335.988	105.634	1765.268	4.131%	87.795%
40.0	229.268	80.779	1846.048	3.159%	91.813%
45.0	136.519	52.914	1898.961	2.069%	94.444%
50.0	82.069	34.460	1933.422	1.348%	96.158%
55.0	47.440	21.301	1954.723	.833%	97.217%
60.0	28.645	13.598	1968.321	.532%	97.894%
65.0	21.431	10.647	1978.967	.416%	98.423%
70.0	17.761	9.148	1988.116	.358%	98.878%
75.0	14.864	7.870	1995.985	.308%	99.270%
80.0	12.473	6.733	2002.719	.263%	99.605%
85.0	10.195	5.567	2008.286	.218%	99.881%
90.0	8.698	2.384	2010.67	.093%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1659.63	64.91%	82.54%
0-40	1846.05	72.20%	91.81%
0-60	1968.32	76.98%	97.89%
0-90	2008.29	78.54%	99.88%
0-120	2008.29	78.54%	99.88%
0-180	2010.67	78.63%	100.00%
60-90	53.56	2.09%	2.66%
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%
0-28.23	1608.54	62.91%	80.00%

ZONAL LUMEN SUMMARY

0-10	563.44
10-20	747.36
20-30	348.84
30-40	186.41
40-50	87.37
50-60	34.90
60-70	19.79
70-80	14.60
80-90	5.57
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



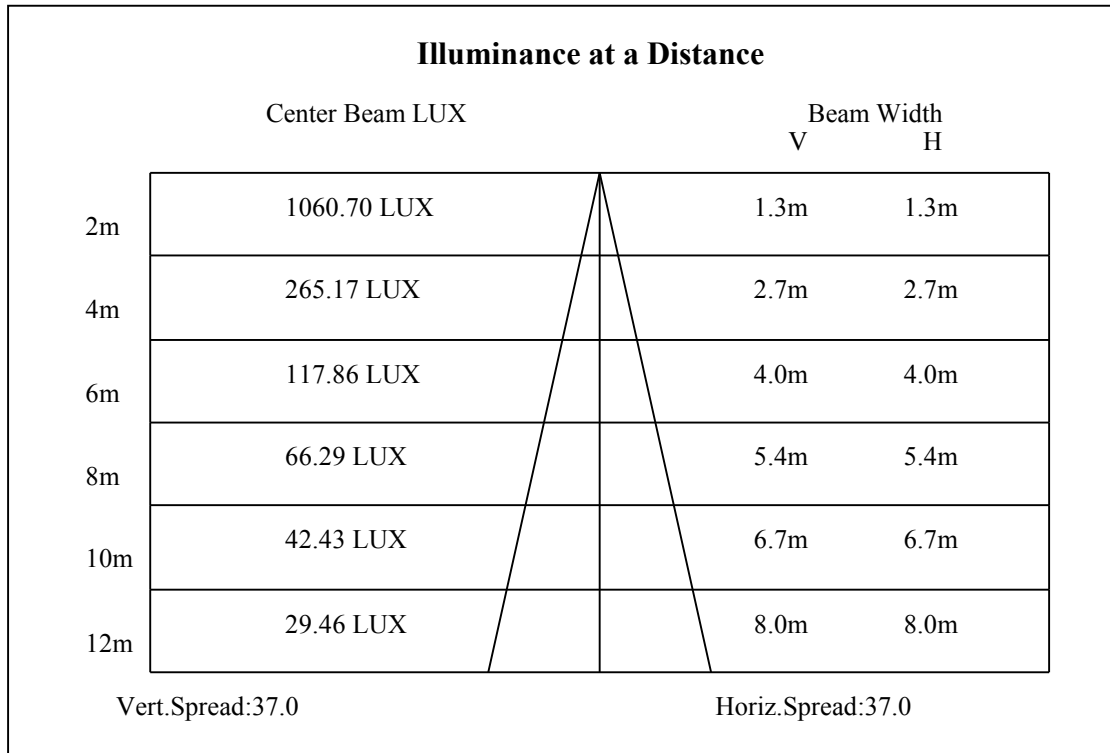
C0(Max): —————

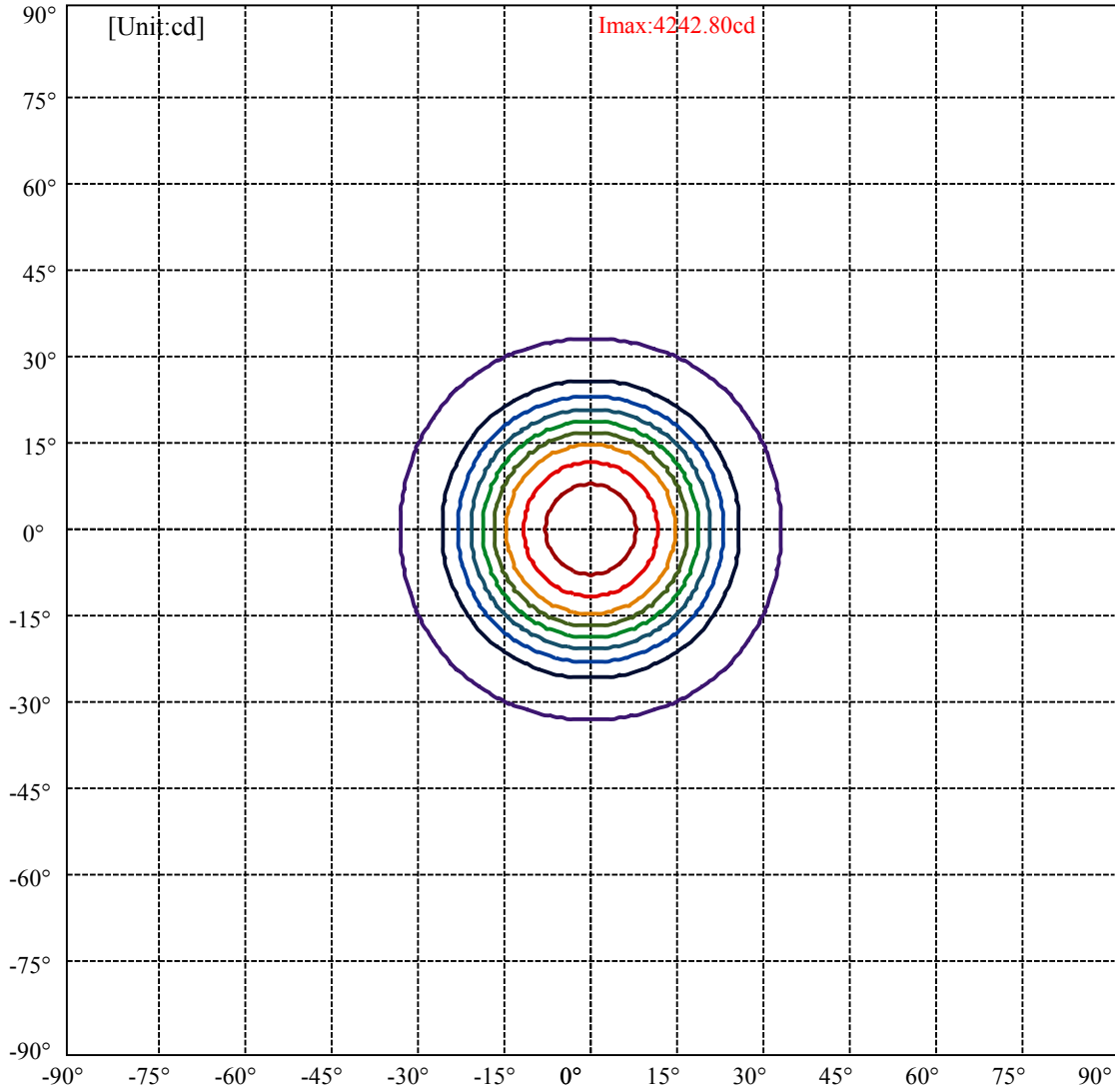
C0/C180: —————

C90/C270: —————

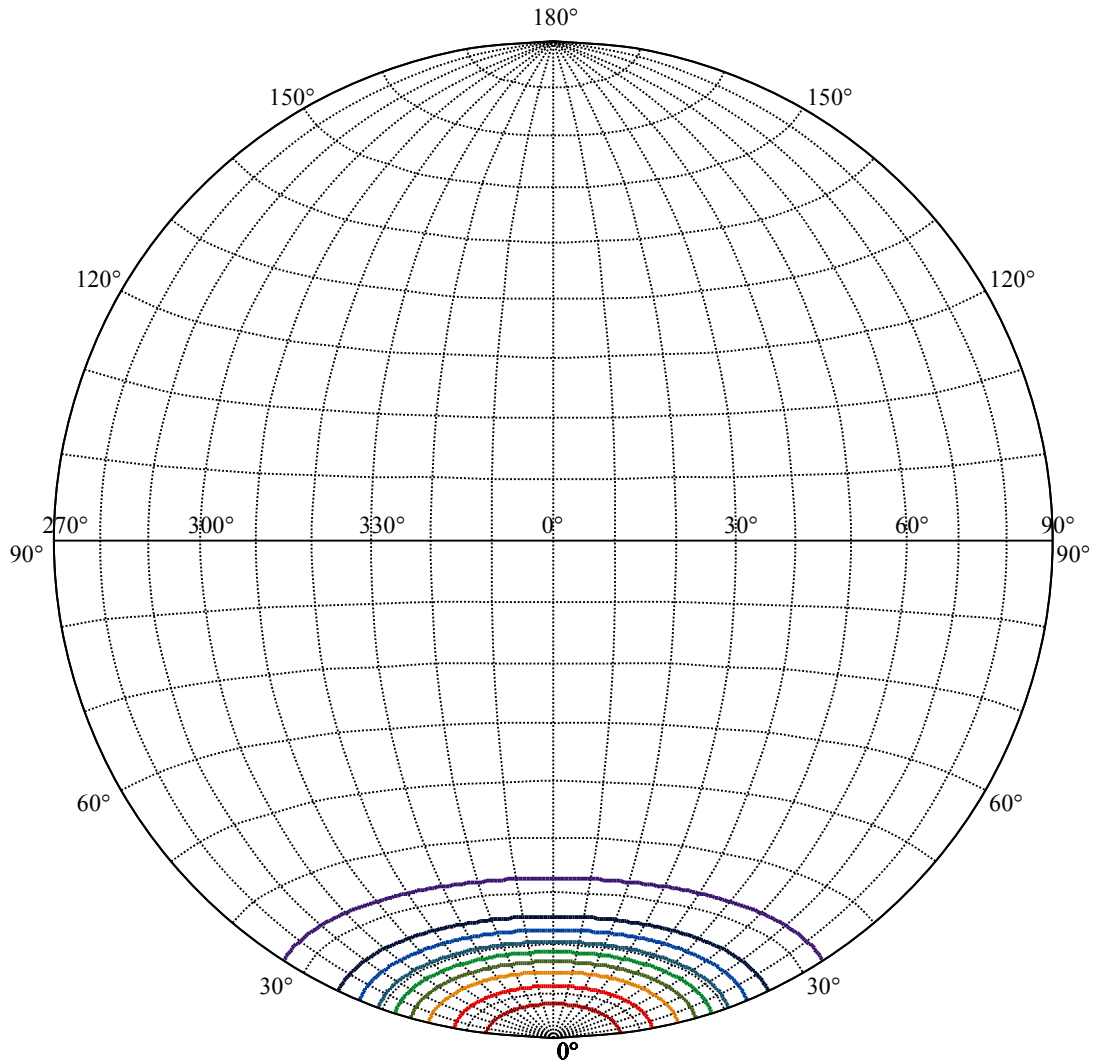
Field angle(10%Imax):C0/180Left:32.7 Right:32.7  
:C90/270Left:32.7 Right:32.7

Beam Angle(50%Imax):C0/180Left:18.5 Right:18.5  
:C90/270Left:18.5 Right:18.5





(10%Imax) 424.28	—
(20%Imax) 848.559	—
(30%Imax) 1272.84	—
(40%Imax) 1697.12	—
(50%Imax) 2121.4	—
(60%Imax) 2545.68	—
(70%Imax) 2969.96	—
(80%Imax) 3394.24	—
(90%Imax) 3818.52	—



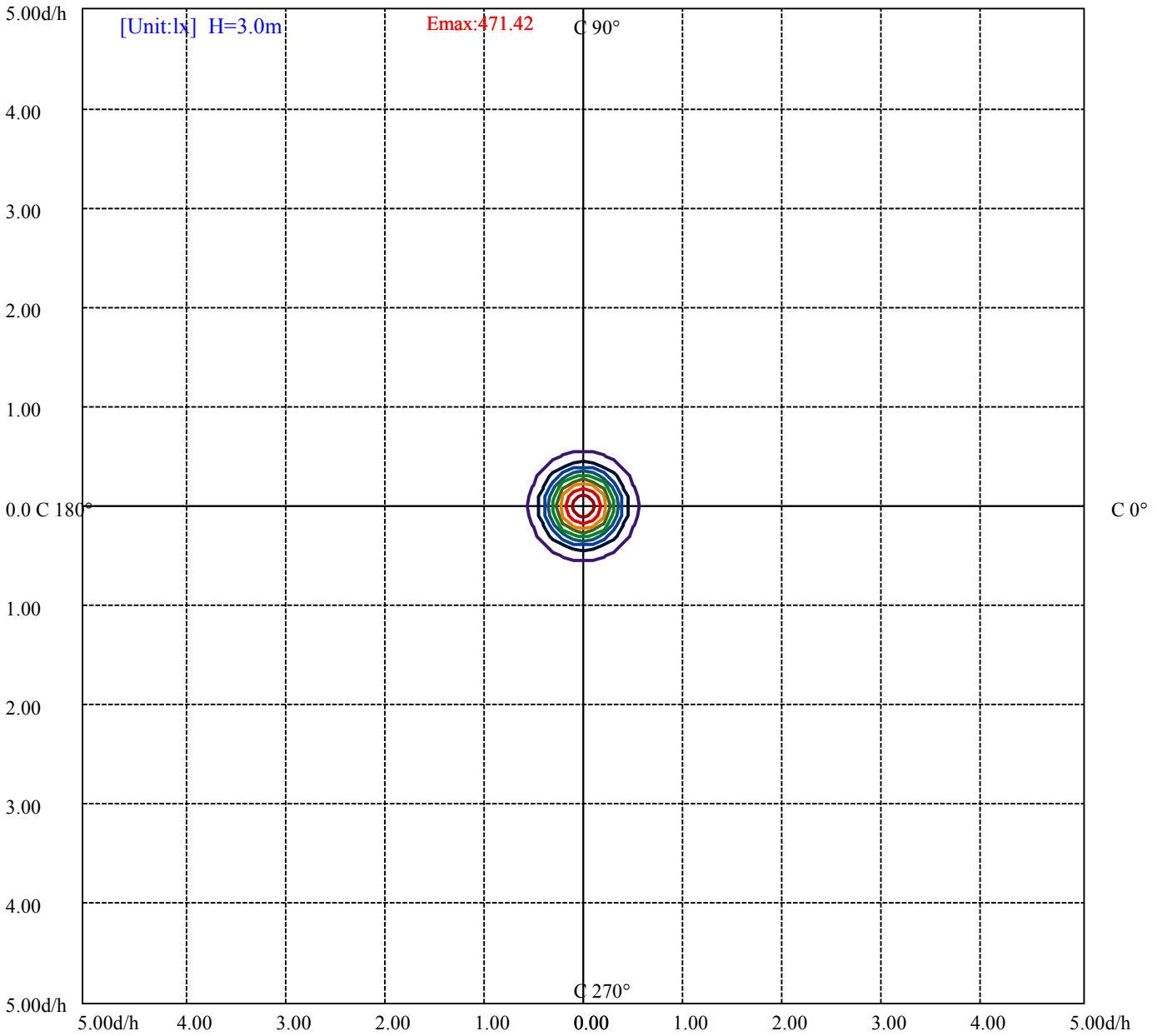
House

[Unit:cd]

Road

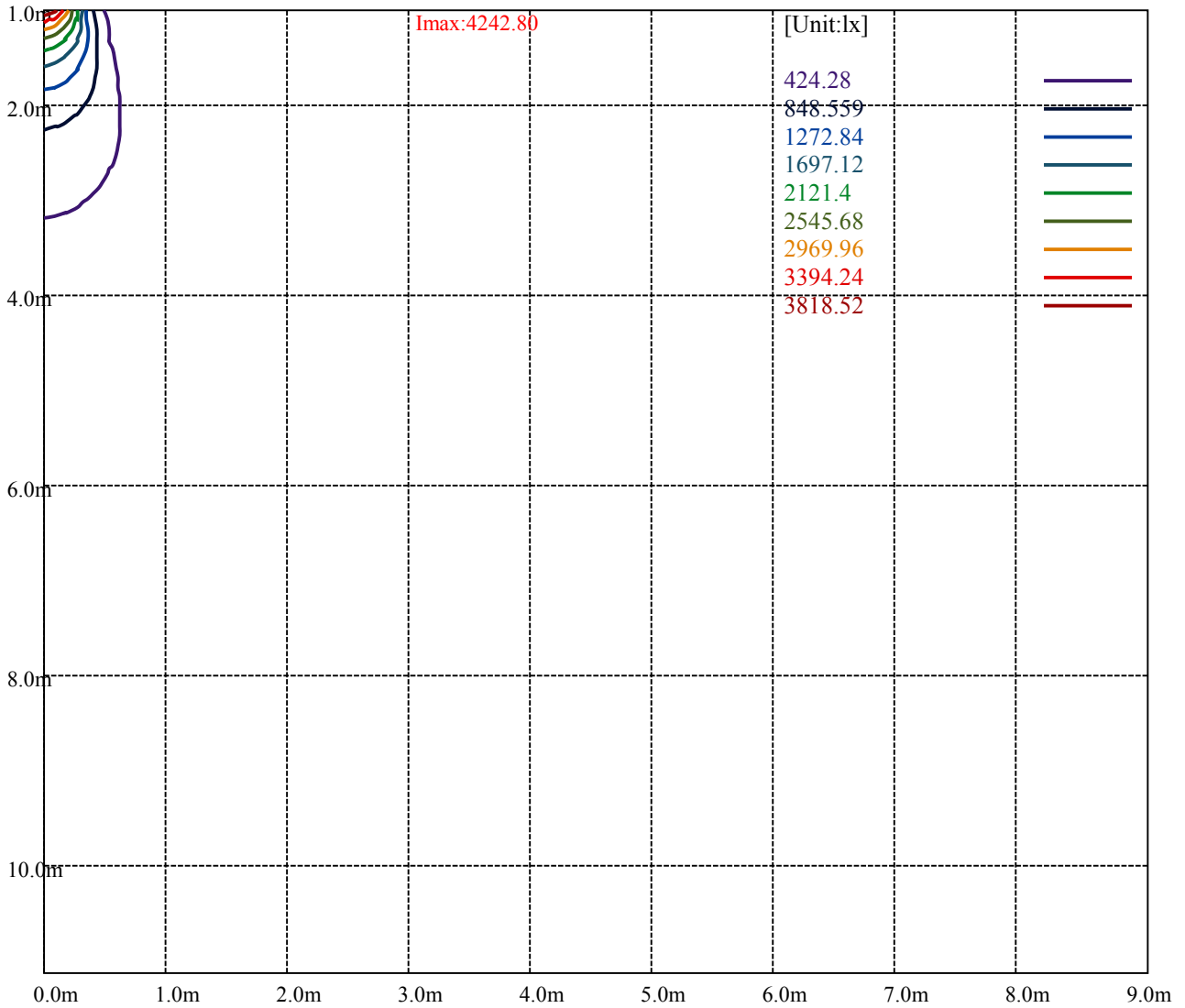
Imax:4242.80

(10%Imax) 424.28	—
(20%Imax) 848.559	—
(30%Imax) 1272.84	—
(40%Imax) 1697.12	—
(50%Imax) 2121.4	—
(60%Imax) 2545.68	—
(70%Imax) 2969.96	—
(80%Imax) 3394.24	—
(90%Imax) 3818.52	—



- (10%Emax) 47.14211
- (20%Emax) 94.28422
- (30%Emax) 141.4267
- (40%Emax) 188.5689
- (50%Emax) 235.7111
- (60%Emax) 282.8533
- (70%Emax) 329.9944
- (80%Emax) 377.1367
- (90%Emax) 424.2789





Luminance Table

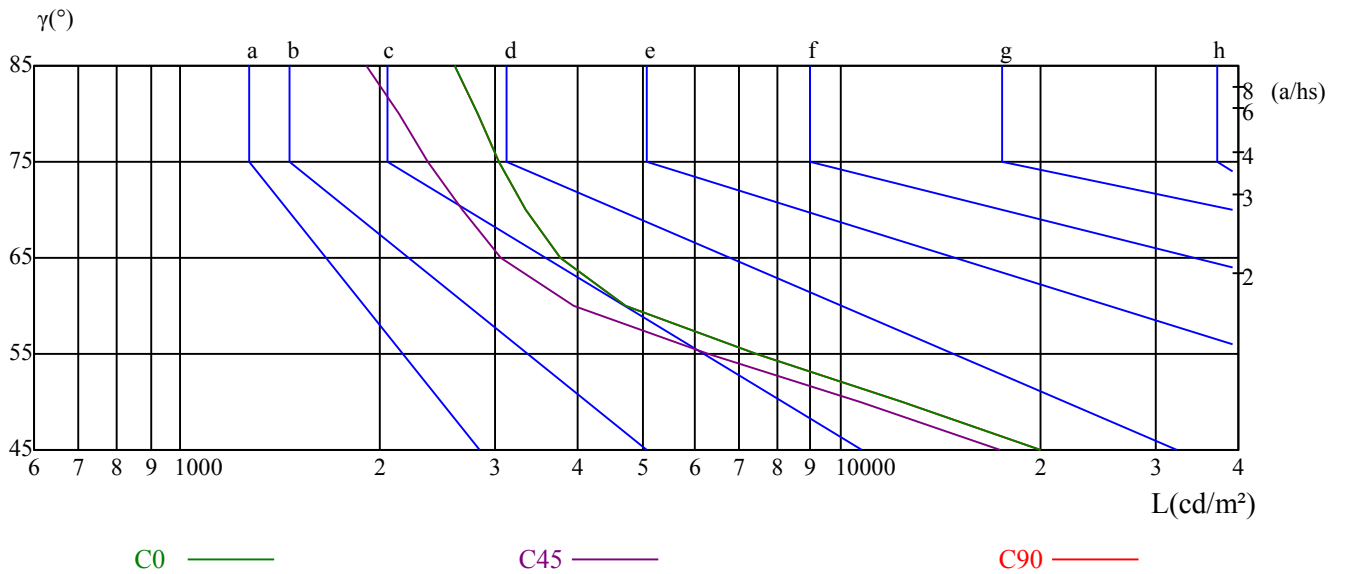
$\gamma$	45	50	55	60	65	70	75	80	85
C0	20032	12409	7456	4725	3749	3334	3036	2816	2596
C45	17480	10670	6313	3934	3065	2671	2376	2145	1913
C90	20032	12409	7456	4725	3749	3334	3036	2816	2596

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8125	8125	8125	9202	9202	9202	18743	18743	18743

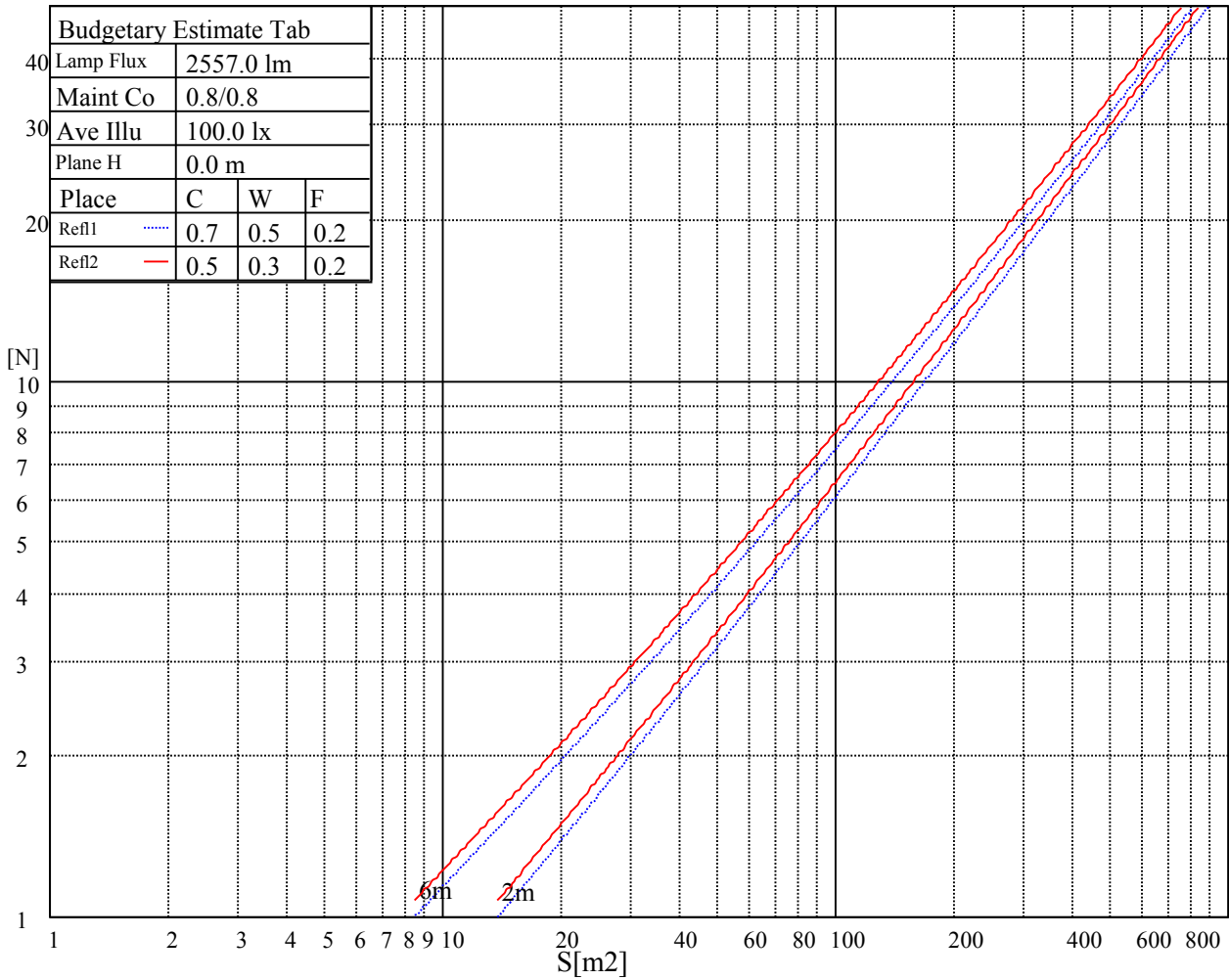
Glare Table

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

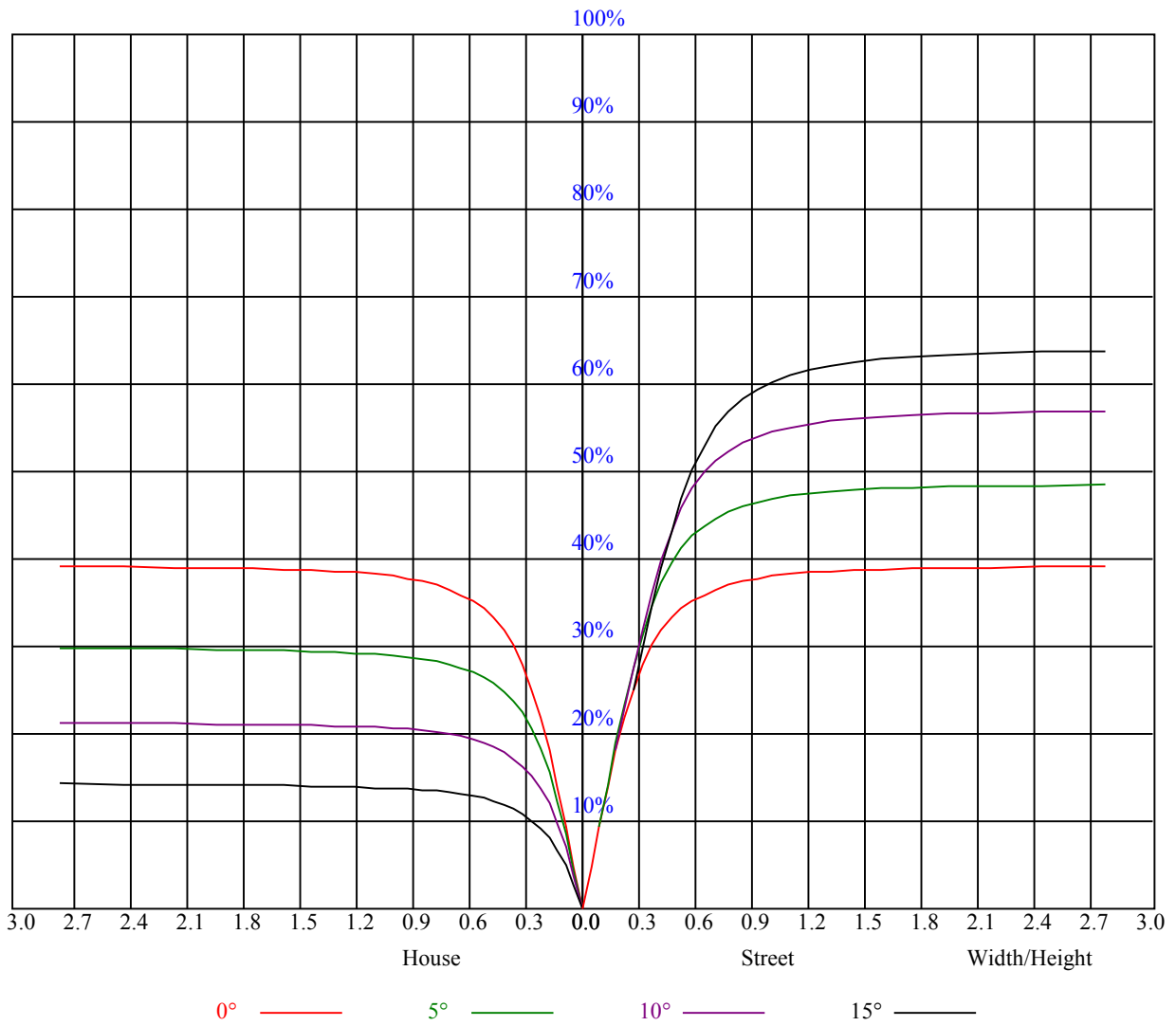
Luminance Limiting Curve



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	9.57	10.59	9.93	10.90	11.22	9.50	10.52	9.87	10.84	11.15
	3H	10.32	11.22	10.70	11.55	11.92	10.25	11.15	10.63	11.48	11.85
	4H	10.71	11.55	11.12	11.90	12.29	10.64	11.47	11.05	11.83	12.22
	6H	11.12	11.88	11.54	12.26	12.66	11.05	11.81	11.47	12.19	12.58
	8H	11.31	12.03	11.75	12.42	12.83	11.24	11.96	11.68	12.36	12.76
	12H	11.63	12.32	12.07	12.70	13.13	11.57	12.26	12.00	12.64	13.07
4H	2H	9.60	10.44	10.01	10.79	11.18	9.55	10.38	9.95	10.73	11.12
	3H	10.57	11.26	10.99	11.67	12.07	10.51	11.19	10.93	11.60	12.01
	4H	11.11	11.72	11.55	12.14	12.59	11.04	11.65	11.48	12.08	12.52
	6H	11.59	12.11	12.06	12.56	13.03	11.52	12.05	11.99	12.50	12.97
	8H	11.86	12.35	12.34	12.80	13.28	11.81	12.29	12.28	12.75	13.22
	12H	12.25	12.67	12.74	13.16	13.64	12.20	12.62	12.69	13.11	13.58
8H	4H	11.22	11.71	11.70	12.16	12.63	11.16	11.65	11.64	12.10	12.57
	6H	11.86	12.25	12.37	12.75	13.24	11.81	12.20	12.32	12.70	13.18
	8H	12.25	12.60	12.78	13.12	13.61	12.20	12.55	12.73	13.07	13.57
	12H	12.82	13.12	13.34	13.62	14.20	12.78	13.08	13.30	13.58	14.16
12H	4H	11.22	11.64	11.71	12.13	12.61	11.16	11.58	11.65	12.07	12.55
	6H	12.21	12.25	12.44	12.72	13.27	12.16	12.20	12.39	12.67	13.22
	8H	12.36	12.66	12.88	13.16	13.74	12.31	12.61	12.83	13.11	13.69
Variation with the observer position at spacings:											
S = 1.0H	2.3/-3.0					2.3/-3.0					
S = 1.5H	4.1/-3.5					4.1/-3.5					
S = 2.0H	5.8/-3.3					5.8/-3.3					
Standard tables:	BK2					BK2					
Uncorrected UGR	-1.3					-1.3					



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	0.95	0.95	0.95	0.93	0.93	0.93	0.88	0.88	0.88	0.85	0.85	0.85	0.81	0.81	0.81	0.80
1	0.87	0.85	0.83	0.86	0.84	0.82	0.82	0.81	0.79	0.79	0.78	0.77	0.77	0.76	0.75	0.73
2	0.82	0.79	0.76	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.71	0.70
3	0.78	0.74	0.71	0.77	0.73	0.71	0.75	0.72	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.66
4	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.70	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
6	0.67	0.63	0.60	0.67	0.63	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
7	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.55
8	0.62	0.58	0.55	0.61	0.57	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.59	0.56	0.54	0.53
9	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.50	0.55	0.52	0.50	0.50



Nata 3-1700-N

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	4245.75	4035.38	3584.25	3000.38	1917.00	905.06	550.69	353.81	227.98
45.0	4251.94	4096.69	3753.56	3184.31	2336.63	1171.13	652.50	411.75	288.56
90.0	4248.56	4064.06	3605.06	3006.56	2033.44	976.61	574.93	365.40	239.23
135.0	4224.94	4167.56	3758.06	3101.63	2194.88	1038.38	584.44	371.81	288.56
180.0	4245.75	4118.63	3661.31	2880.56	1735.31	815.57	490.78	310.22	209.42
225.0	4251.94	4041.56	3477.94	2571.19	1118.19	662.23	425.48	270.51	180.73
270.0	4248.56	4079.81	3563.44	2761.88	1661.06	760.50	470.81	302.63	201.99
315.0	4224.94	3971.81	3470.06	2666.25	1359.56	734.12	462.43	301.78	197.66
360.0	4245.75	4035.38	3584.25	3000.38	1917.00	905.06	550.69	353.81	227.98

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	147.38	84.66	48.21	28.07	21.49	17.78	14.79	12.60	10.18
45.0	167.57	100.41	56.42	33.81	23.01	18.73	15.86	13.16	10.74
90.0	151.37	91.18	51.98	29.53	22.16	18.23	15.19	12.71	10.29
135.0	148.84	91.69	53.10	31.50	22.44	18.28	15.24	12.71	10.41
180.0	128.25	77.40	46.35	28.07	21.09	17.49	14.74	12.38	10.18
225.0	108.17	65.19	38.08	25.31	20.03	16.82	14.12	11.81	9.79
270.0	122.46	73.80	44.27	27.28	21.04	17.72	14.74	12.43	10.07
315.0	118.13	72.23	41.12	25.59	20.19	17.04	14.23	11.98	9.90
360.0	147.38	84.66	48.21	28.07	21.49	17.78	14.79	12.60	10.18

C/γ(°)	90.0
0.0	8.66
45.0	8.78
90.0	8.72
135.0	8.72
180.0	8.66
225.0	8.72
270.0	8.66
315.0	8.66
360.0	8.66