



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: 2-1672-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 36.1000
Test No: GC2018111212	Current(A): 0.5500
LampCAT: OSRAM SOLERIQ S15	Power (W): 19.8550
Lamp flux(lm): 2582.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2343.70
Efficiency(%): 90.77%
Lumens(lm)/Power(W): 120.34
Central intensity(cd): 8002.125
Maximum intensity(cd): 8002.125
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.3
[C90/270]Total=26.3
Field angle(10%Imax): [C0/180]Total=60.0
[C90/270]Total=60.0
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.54%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.913%

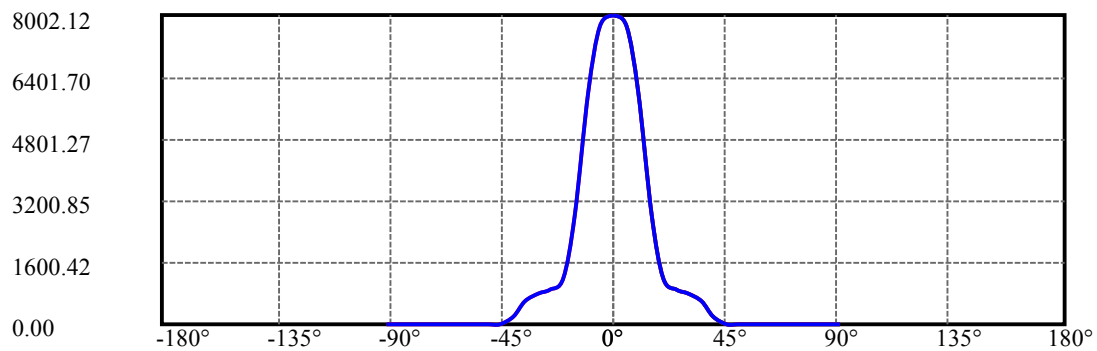
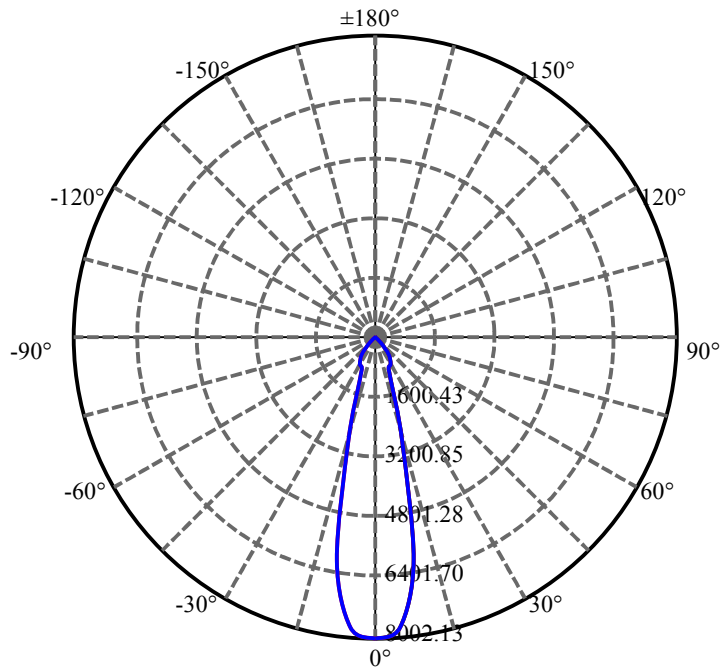
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8002.125	47.854	47.854	1.853%	2.042%
5.0	7713.352	368.492	416.347	14.272%	17.765%
10.0	5990.555	570.199	986.546	22.084%	42.094%
15.0	2840.203	402.935	1389.481	15.606%	59.286%
20.0	1173.495	220.000	1609.481	8.521%	68.673%
25.0	890.325	206.246	1815.727	7.988%	77.473%
30.0	799.777	219.194	2034.921	8.489%	86.825%
35.0	582.715	183.205	2218.126	7.095%	94.642%
40.0	212.752	74.960	2293.086	2.903%	97.841%
45.0	19.090	7.399	2300.485	.287%	98.156%
50.0	12.115	5.087	2305.572	.197%	98.373%
55.0	11.138	5.001	2310.573	.194%	98.587%
60.0	10.498	4.983	2315.556	.193%	98.799%
65.0	10.104	5.019	2320.575	.194%	99.014%
70.0	9.851	5.074	2325.649	.197%	99.230%
75.0	9.668	5.119	2330.768	.198%	99.448%
80.0	9.570	5.166	2335.934	.200%	99.669%
85.0	9.492	5.183	2341.117	.201%	99.890%
90.0	9.408	2.578	2343.695	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2034.92	78.81%	86.83%
0-40	2293.09	88.81%	97.84%
0-60	2315.56	89.68%	98.80%
0-90	2341.12	90.67%	99.89%
0-120	2341.12	90.67%	99.89%
0-180	2343.70	90.77%	100.00%
60-90	30.54	1.18%	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%
0-26.35	1874.96	72.62%	80.00%

ZONAL LUMEN SUMMARY

0-10	986.55
10-20	622.93
20-30	425.44
30-40	258.16
40-50	12.49
50-60	9.98
60-70	10.09
70-80	10.28
80-90	5.18
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

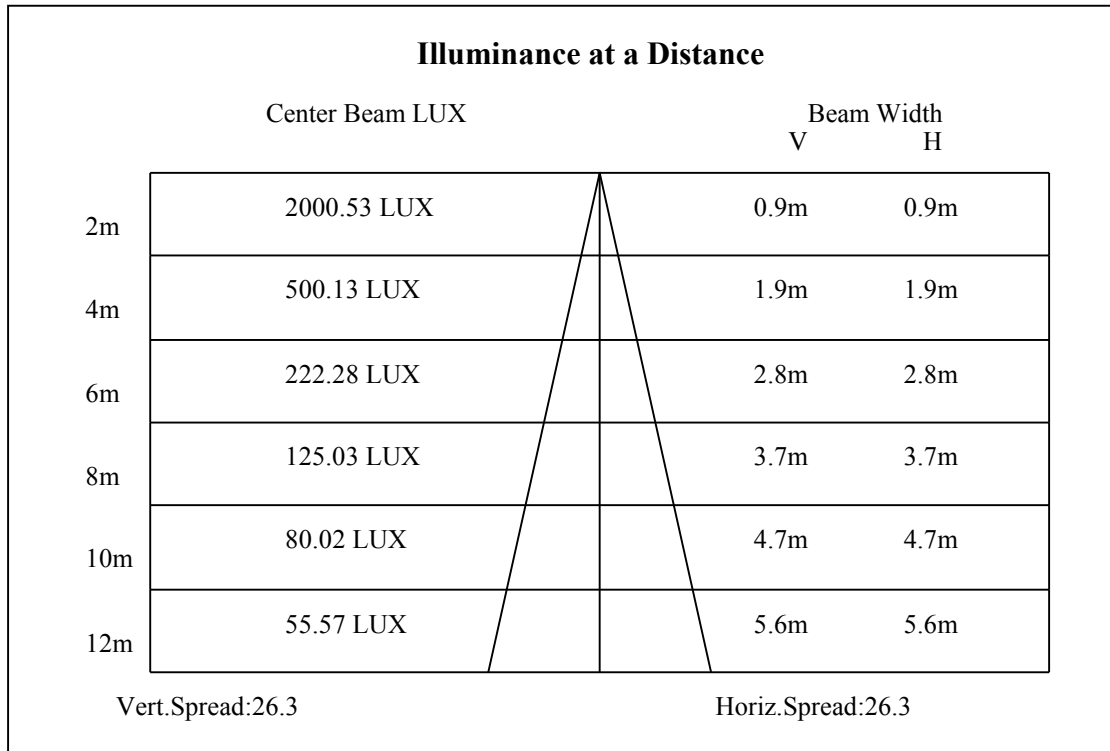
C0(Max): —————C0/C180: —————C90/C270: —————

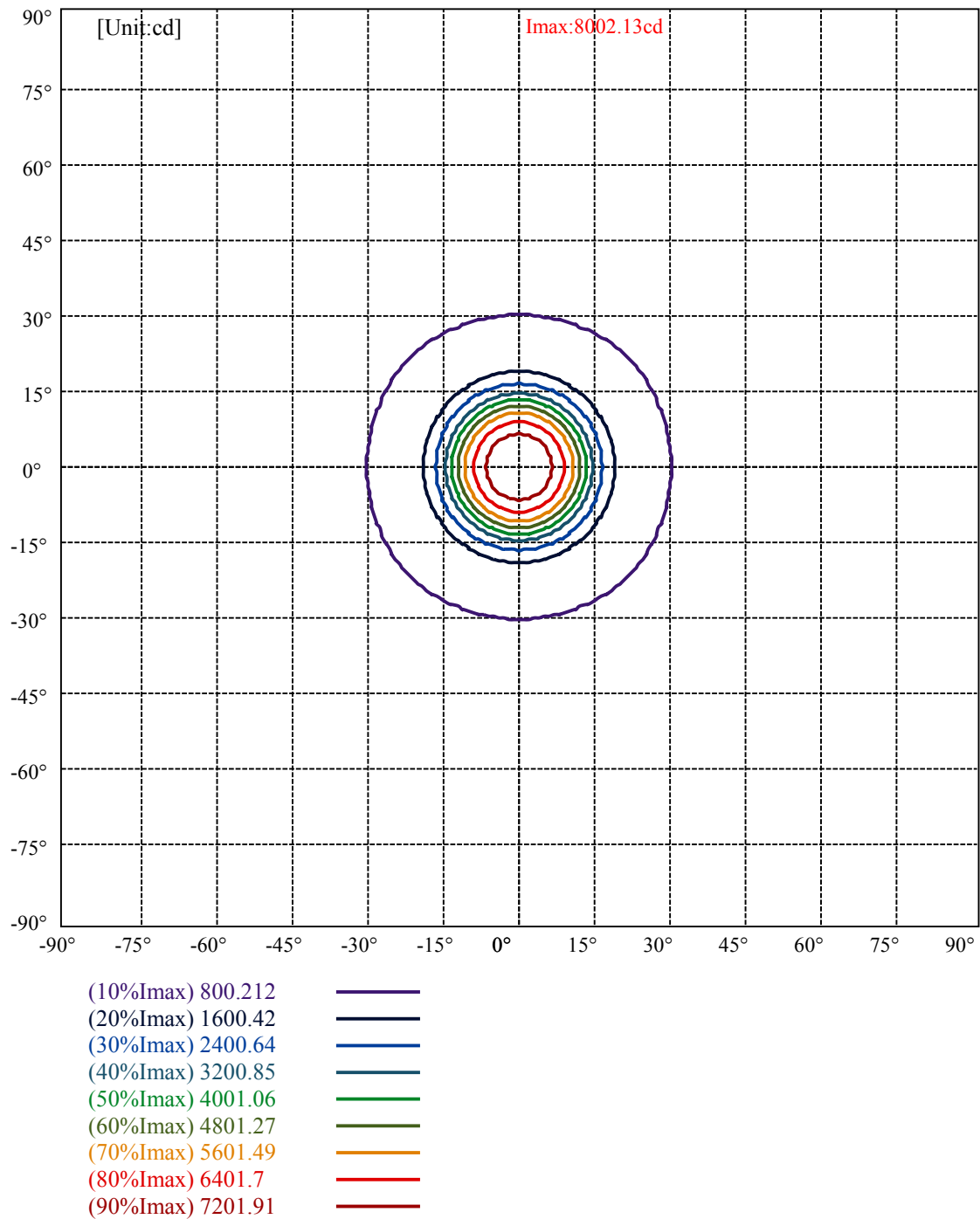
Field angle(10%Imax):C0/180Left:30.0 Right:30.0

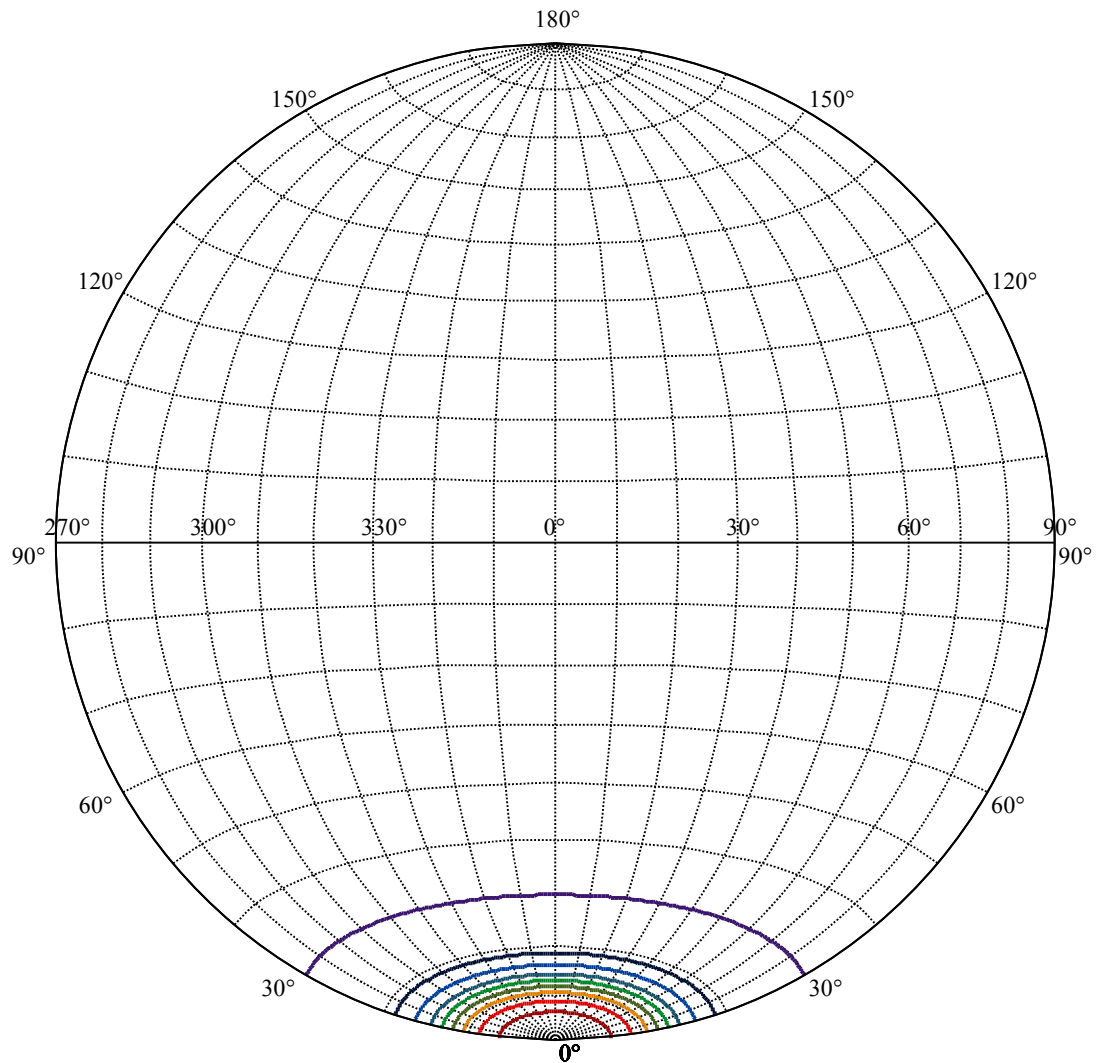
:C90/270Left:30.0 Right:30.0

Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2

:C90/270Left:13.2 Right:13.2







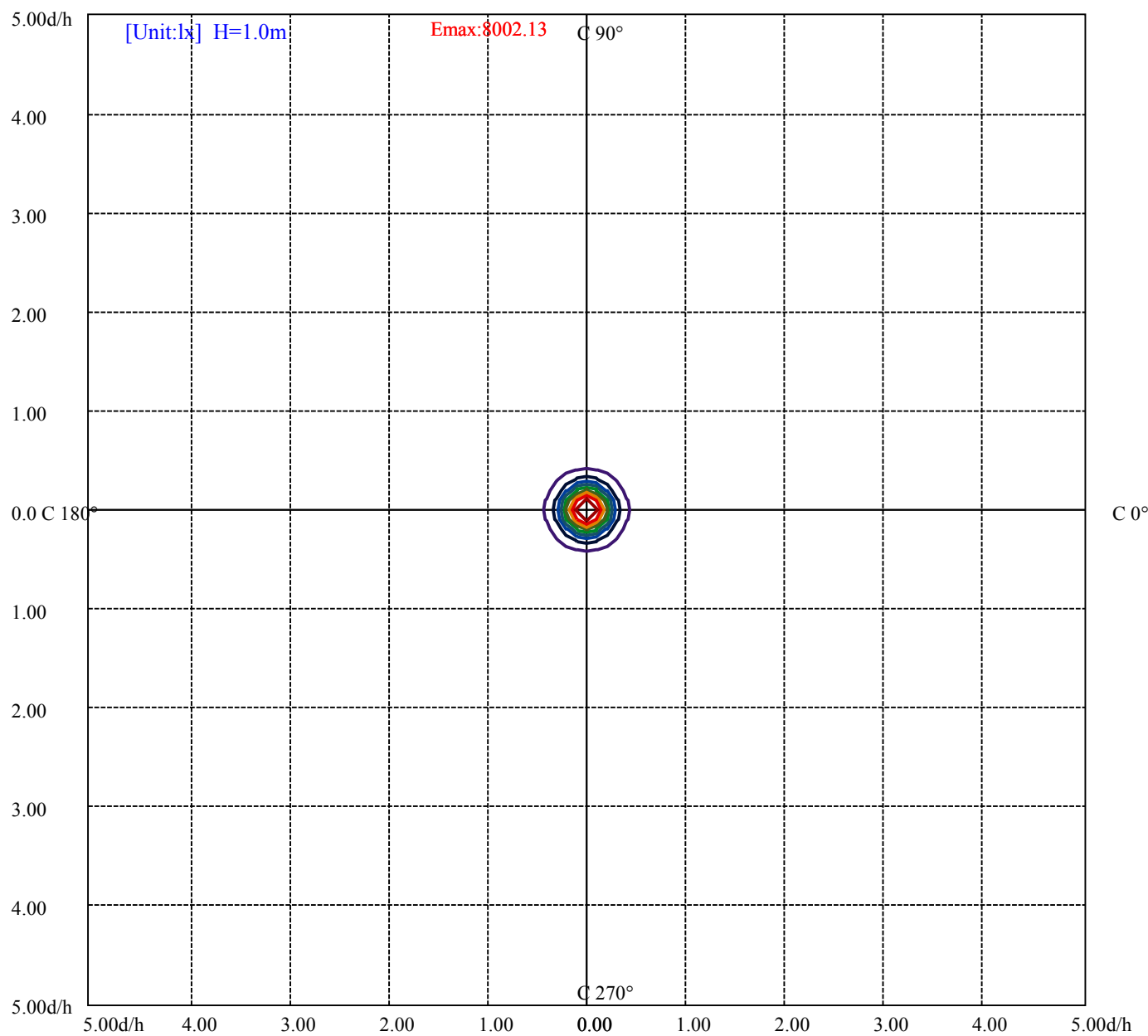
House

[Unit:cd]

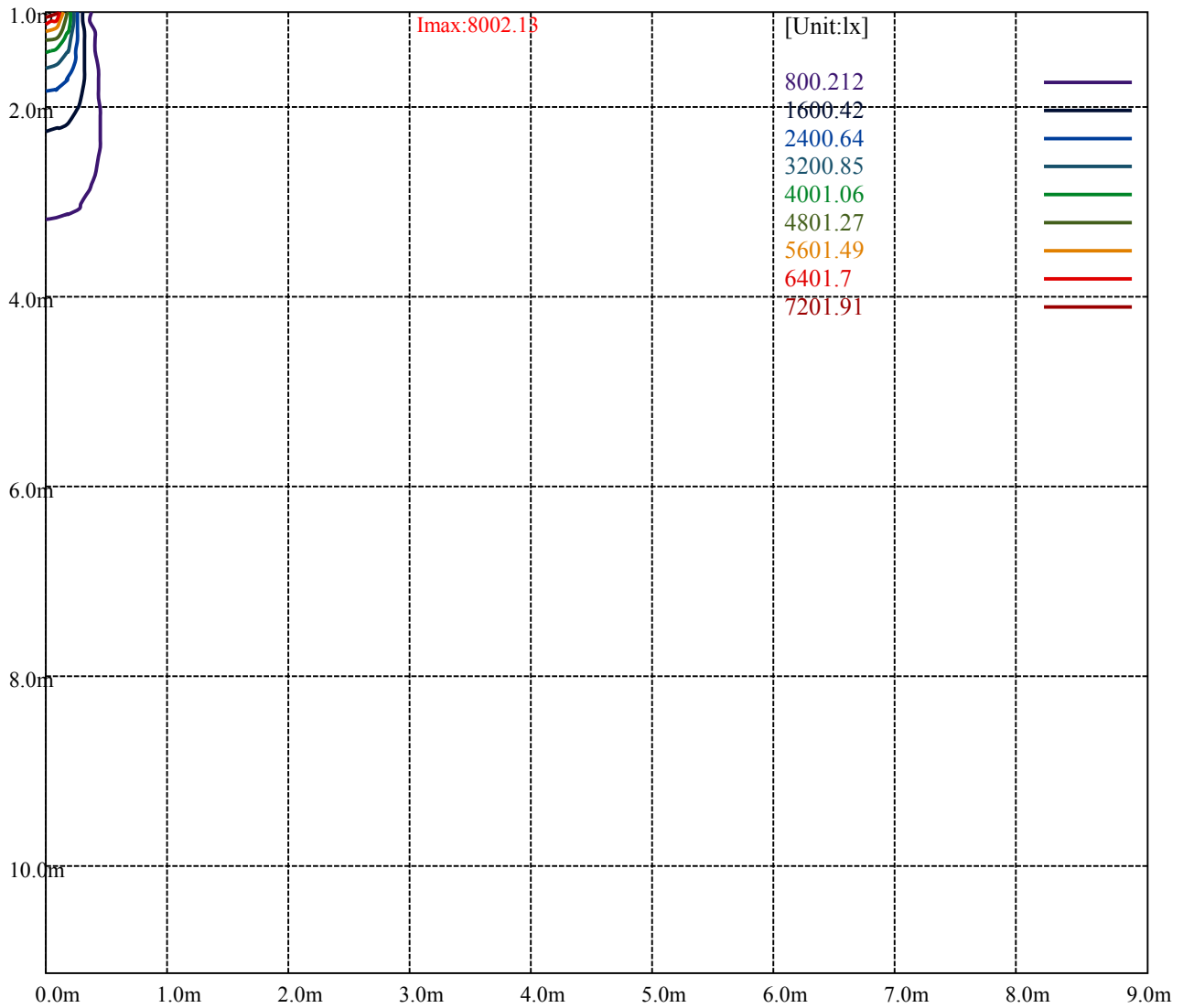
Road

Imax:8002.13

(10%Imax)	800.212	—
(20%Imax)	1600.42	—
(30%Imax)	2400.64	—
(40%Imax)	3200.85	—
(50%Imax)	4001.06	—
(60%Imax)	4801.27	—
(70%Imax)	5601.49	—
(80%Imax)	6401.7	—
(90%Imax)	7201.91	—



(10%Emax) 800.212	—
(20%Emax) 1600.42	—
(30%Emax) 2400.63	—
(40%Emax) 3200.85	—
(50%Emax) 4001.06	—
(60%Emax) 4801.27	—
(70%Emax) 5601.48	—
(80%Emax) 6401.69	—
(90%Emax) 7201.9	—



Luminance Table

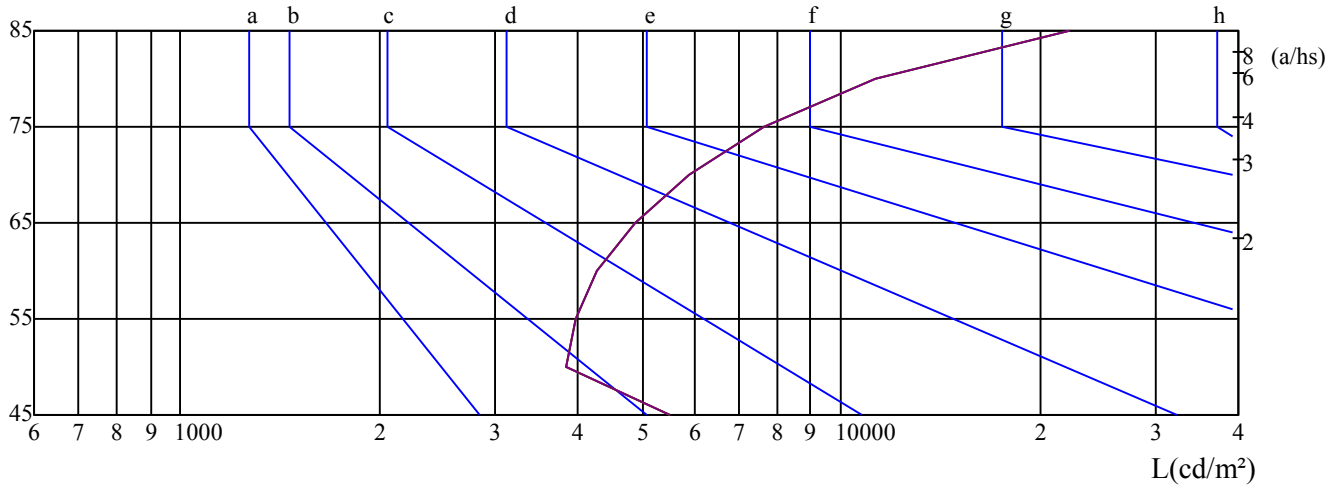
γ	45	50	55	60	65	70	75	80	85
C0	5510	3846	3963	4285	4879	5878	7623	11247	22227
C45	5510	3846	3963	4285	4879	5878	7623	11247	22227
C90	5510	3846	3963	4285	4879	5878	7623	11247	22227

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4879	4879	4879	7623	7623	7623	22227	22227	22227

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

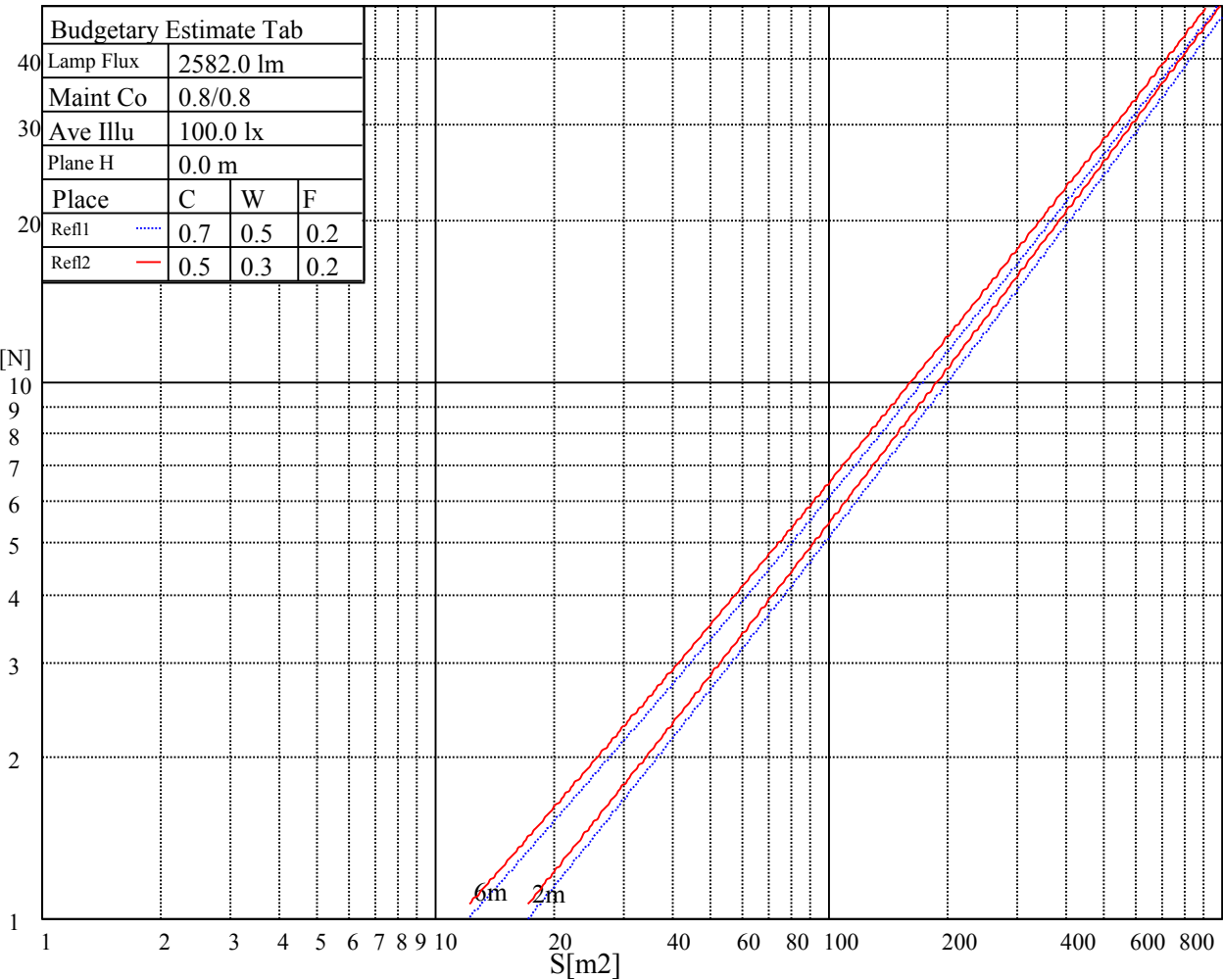
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

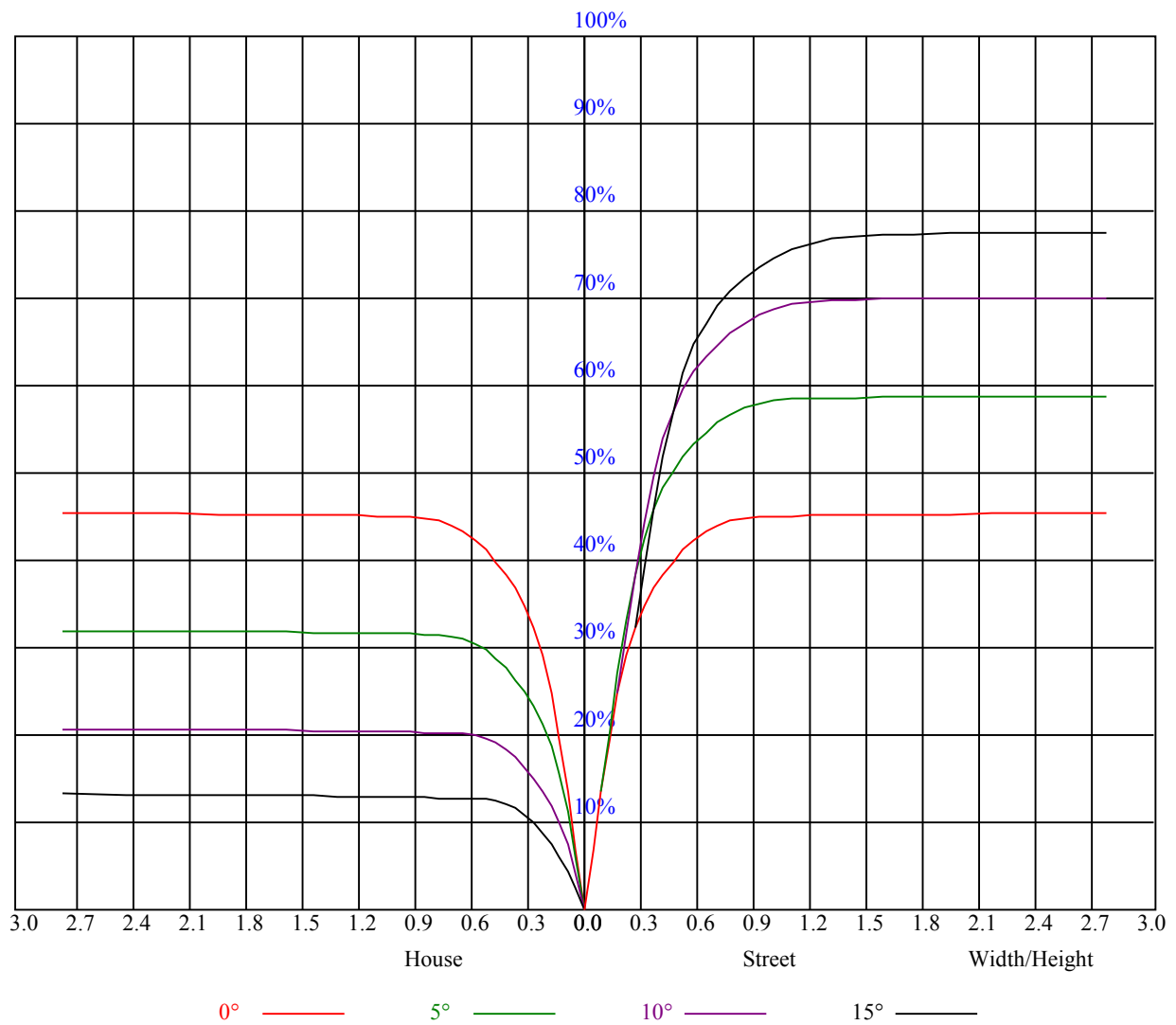
C0 ———

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	0.93
1	1.02	0.99	0.97	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.92	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.83	0.81	0.84	0.82	0.80	0.79
4	0.88	0.83	0.80	0.87	0.83	0.80	0.85	0.81	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
5	0.84	0.80	0.77	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	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	0.69
8	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.67
9	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65
10	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63



NATA 2-1672-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	7959.94	7932.38	6843.38	4126.50	1476.56	939.38	825.19	718.31	299.81		
45.0	8023.50	7825.50	6118.88	2814.19	1157.06	885.38	803.81	611.44	300.38		
90.0	8010.56	7661.81	5599.69	2256.75	1052.16	859.73	783.56	518.34	87.75		
135.0	8014.50	7683.75	5932.69	2616.75	1155.38	876.38	789.19	546.19	303.19		
180.0	7959.94	7389.56	5062.50	2006.44	1037.87	838.58	765.06	448.76	63.68		
225.0	8023.50	7666.31	5846.63	2637.00	1081.97	891.96	802.46	545.06	165.15		
270.0	8010.56	7778.25	6442.31	3267.56	1315.69	936.00	822.38	664.31	303.19		
315.0	8014.50	7769.25	6078.38	2996.44	1111.28	895.22	806.57	609.30	178.88		
360.0	7959.94	7932.38	6843.38	4126.50	1476.56	939.38	825.19	718.31	299.81		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	23.40	12.88	11.53	10.63	10.18	9.90	9.68	9.56	9.45		
45.0	21.88	12.15	11.14	10.52	10.13	9.84	9.68	9.56	9.45		
90.0	17.16	11.76	10.91	10.41	10.01	9.84	9.68	9.62	9.45		
135.0	17.61	11.98	11.08	10.46	10.07	9.79	9.62	9.51	9.45		
180.0	15.02	11.59	10.91	10.35	10.01	9.73	9.62	9.51	9.39		
225.0	19.01	12.04	11.14	10.52	10.13	9.84	9.68	9.56	9.51		
270.0	21.15	12.38	11.31	10.63	10.24	10.01	9.79	9.73	9.79		
315.0	17.49	12.15	11.08	10.46	10.07	9.84	9.62	9.51	9.45		
360.0	23.40	12.88	11.53	10.63	10.18	9.90	9.68	9.56	9.45		
C/γ(°)	90.0										
0.0	9.39										
45.0	9.39										
90.0	9.45										
135.0	9.39										
180.0	9.39										
225.0	9.45										
270.0	9.39										
315.0	9.39										
360.0	9.39										