



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: 2-1702-A  
Luminaire: 99.02.73.173+92.76.365.00  
Report No: NATA0100                      Voltage(V): 34.8000  
Test No: GC2018101118                  Current(A): 0.6000  
LampCAT: CREE CXA3050                Power (W): 20.8800  
Lamp flux(lm): 2641.0                    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): 2384.99  
Efficiency(%): 90.31%  
Lumens(lm)/Power(W): 115.58  
Central intensity(cd): 5123.531  
Maximum intensity(cd): 5123.531  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=35.9  
  [C90/270]Total=35.9  
Field angle(10%Imax): [C0/180]Total=72.1  
  [C90/270]Total=72.1  
Maximum s/h(1/2): C0\_180=0.60 C90\_270=0.60  
Maximum s/h(1/4): C0\_180=0.58 C90\_270=0.58  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 91.38%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.507%

---

Equipment:  
Temperature(°C): 25.0

Date: 2018/10/11  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.50

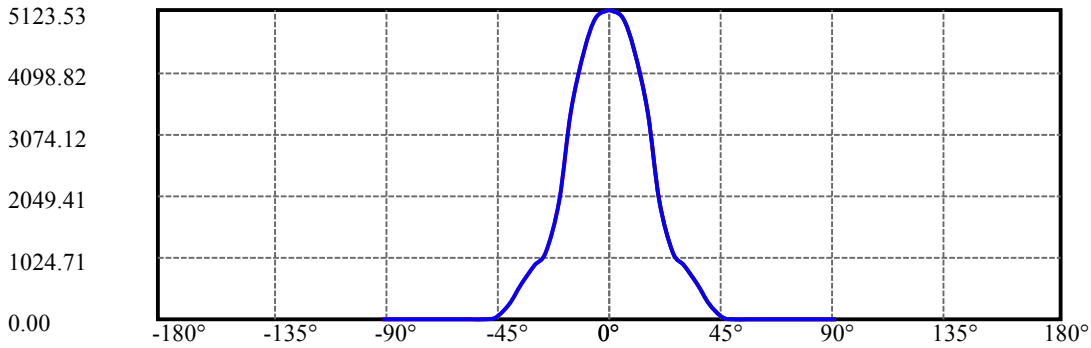
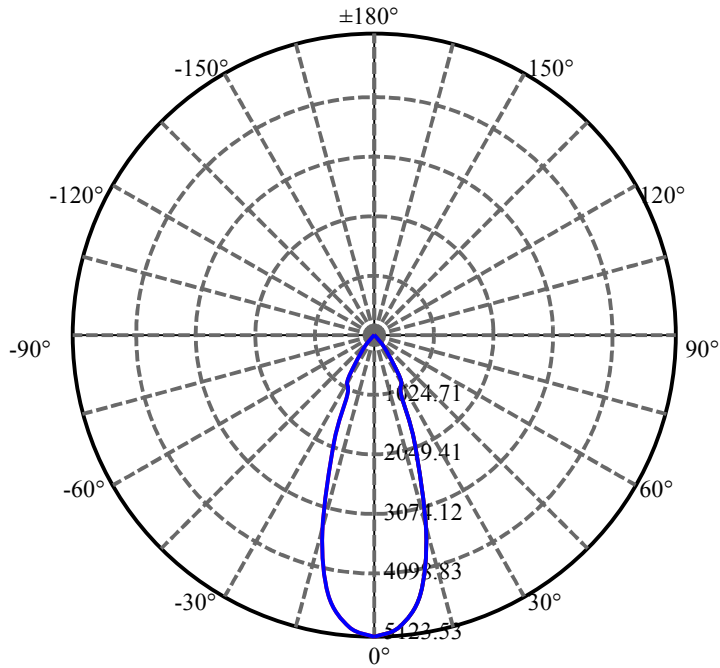
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5123.531	30.640	30.64	1.160%	1.285%
5.0	4990.711	238.423	269.063	9.028%	11.282%
10.0	4457.180	424.248	693.311	16.064%	29.070%
15.0	3435.961	487.454	1180.765	18.457%	49.508%
20.0	1958.836	367.231	1547.996	13.905%	64.906%
25.0	1114.383	258.150	1806.146	9.775%	75.730%
30.0	896.020	245.571	2051.717	9.298%	86.026%
35.0	577.716	181.633	2233.35	6.877%	93.642%
40.0	262.765	92.581	2325.931	3.506%	97.524%
45.0	30.445	11.800	2337.732	.447%	98.019%
50.0	12.284	5.158	2342.89	.195%	98.235%
55.0	11.405	5.121	2348.01	.194%	98.450%
60.0	10.913	5.180	2353.19	.196%	98.667%
65.0	11.123	5.526	2358.716	.209%	98.899%
70.0	11.433	5.889	2364.605	.223%	99.145%
75.0	11.341	6.005	2370.61	.227%	99.397%
80.0	11.074	5.978	2376.588	.226%	99.648%
85.0	10.561	5.767	2382.355	.218%	99.890%
90.0	9.598	2.630	2384.985	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2051.72	77.69%	86.03%
0-40	2325.93	88.07%	97.52%
0-60	2353.19	89.10%	98.67%
0-90	2382.35	90.21%	99.89%
0-120	2382.35	90.21%	99.89%
0-180	2384.99	90.31%	100.00%
60-90	34.34	1.30%	1.44%
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%
0-27.07	1907.99	72.24%	80.00%

ZONAL LUMEN SUMMARY

0-10	693.31
10-20	854.69
20-30	503.72
30-40	274.21
40-50	16.96
50-60	10.30
60-70	11.41
70-80	11.98
80-90	5.77
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



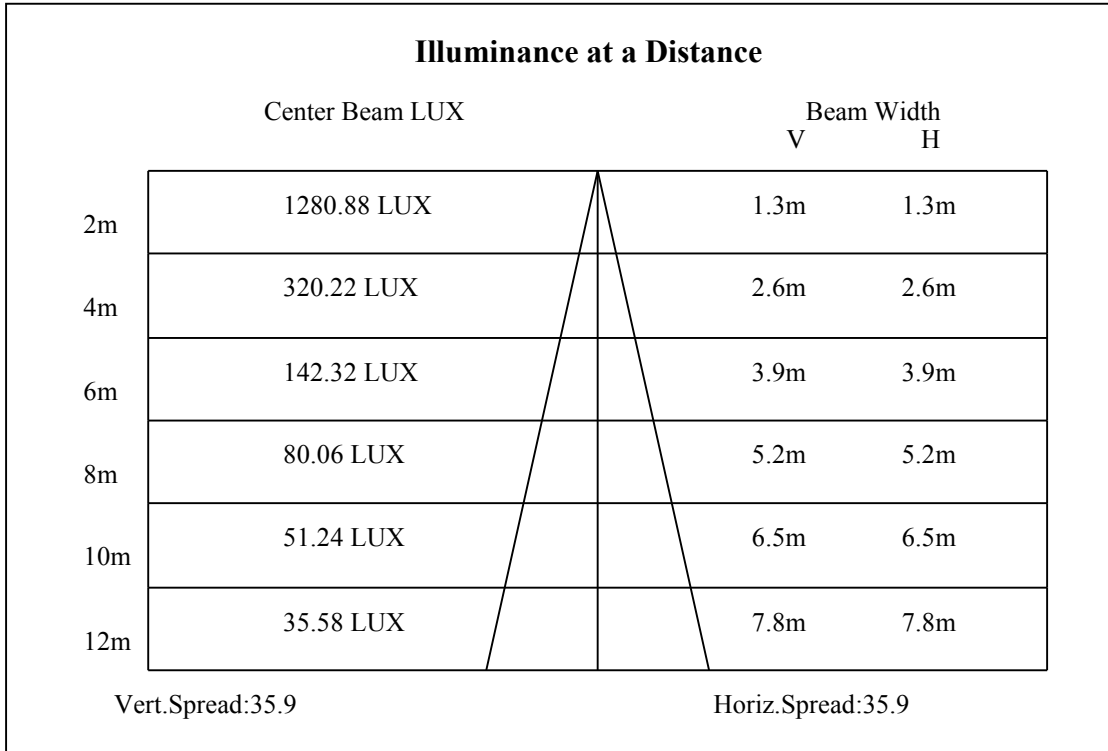
C0(Max): —————

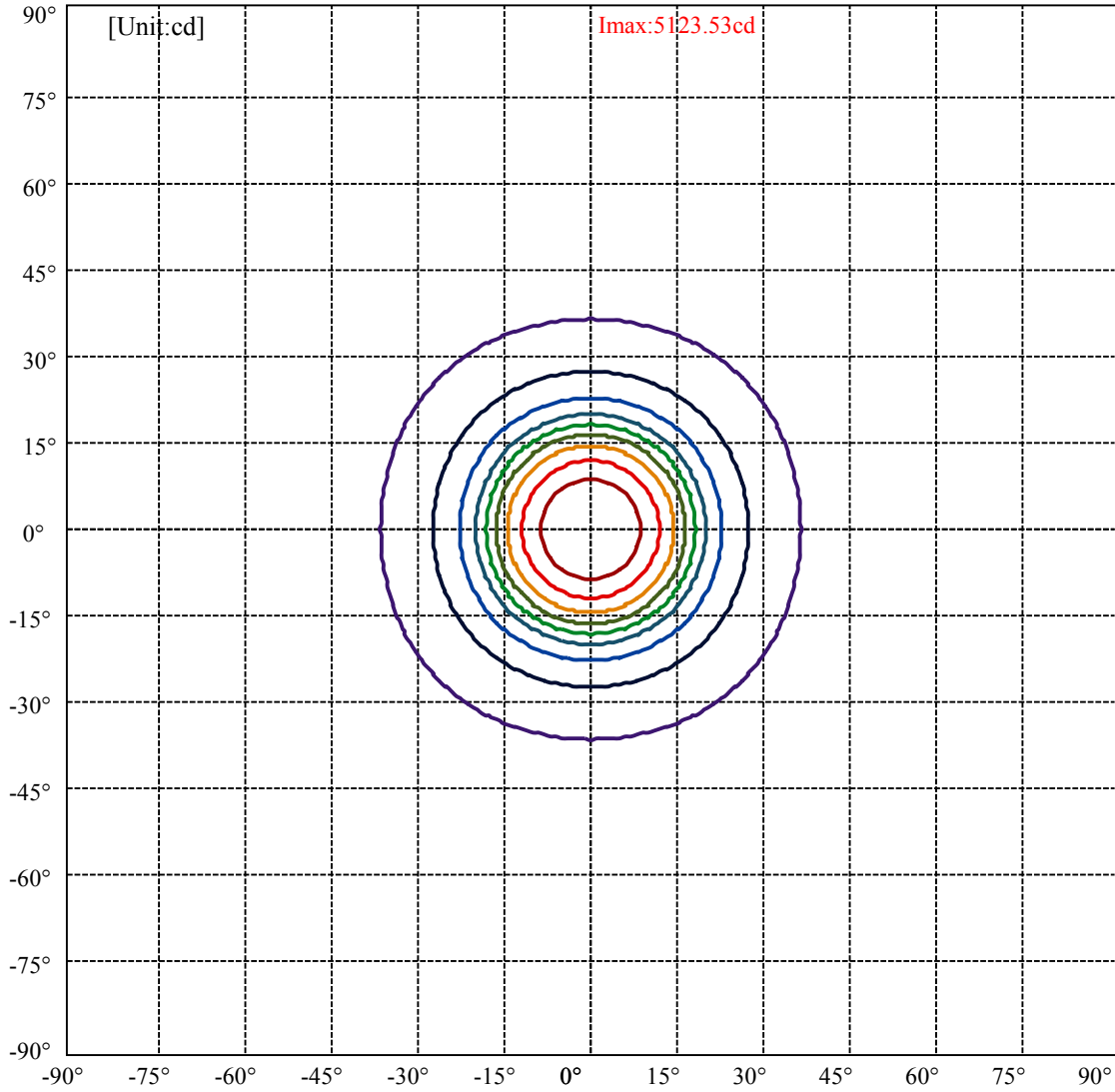
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:36.0 Right:36.0  
:C90/270Left:36.0 Right:36.0

Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0  
:C90/270Left:18.0 Right:18.0



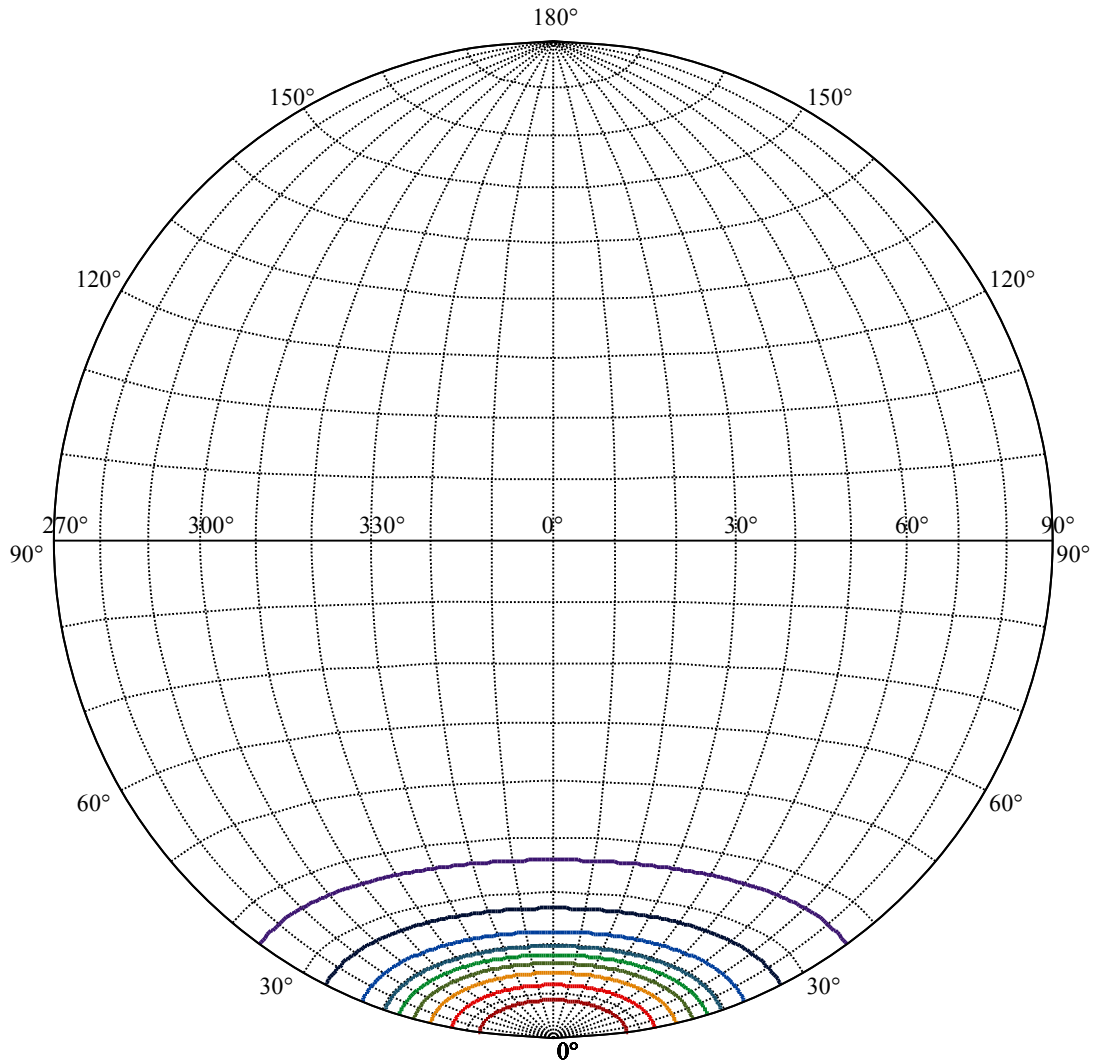


(10%Imax) 512.353	—
(20%Imax) 1024.71	—
(30%Imax) 1537.06	—
(40%Imax) 2049.41	—
(50%Imax) 2561.77	—
(60%Imax) 3074.12	—
(70%Imax) 3586.47	—
(80%Imax) 4098.82	—
(90%Imax) 4611.18	—

Equipment:  
Temperature(°C): 25.0

Date: 2018/10/11  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.50



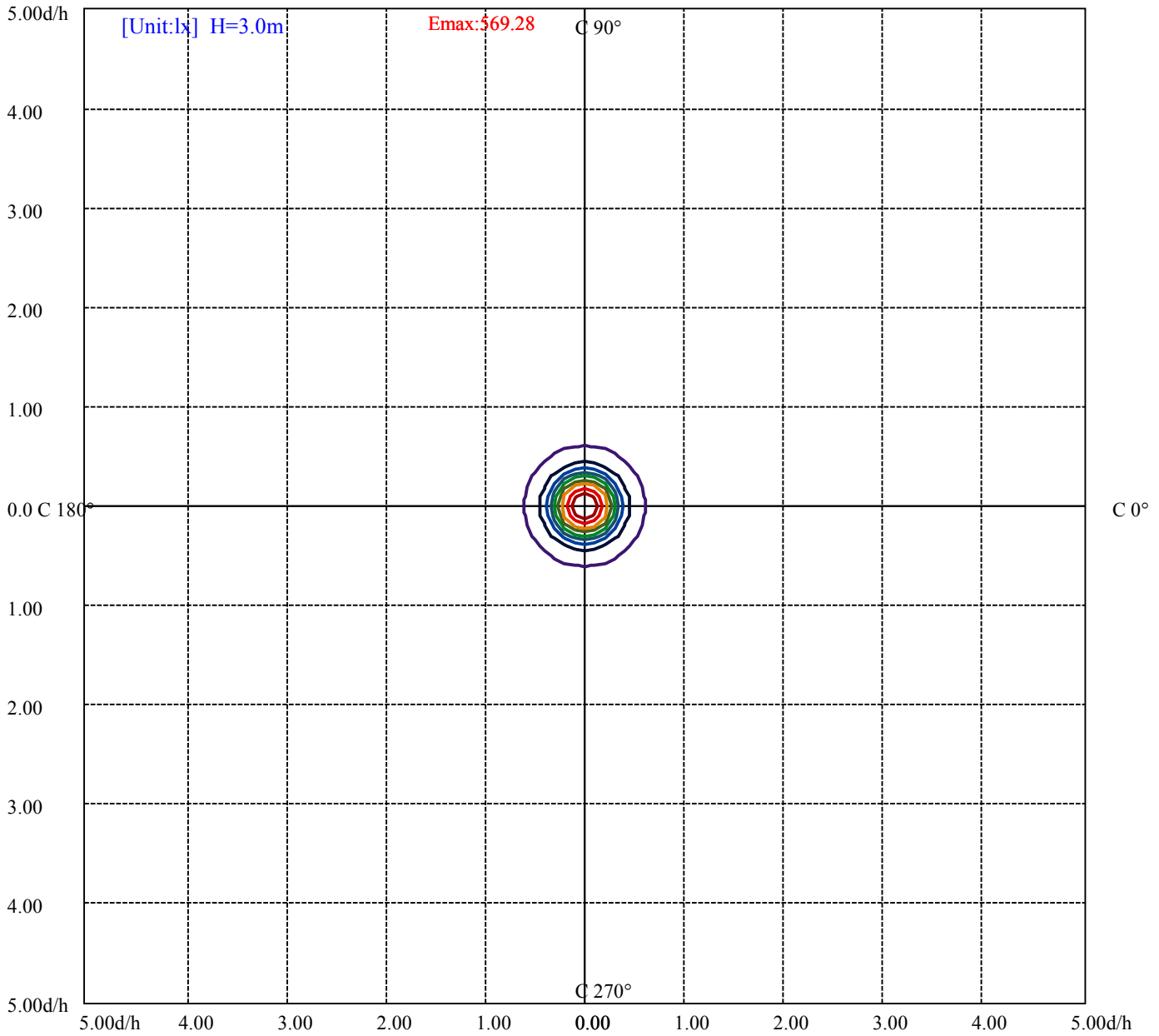
House

[Unit:cd]

Road

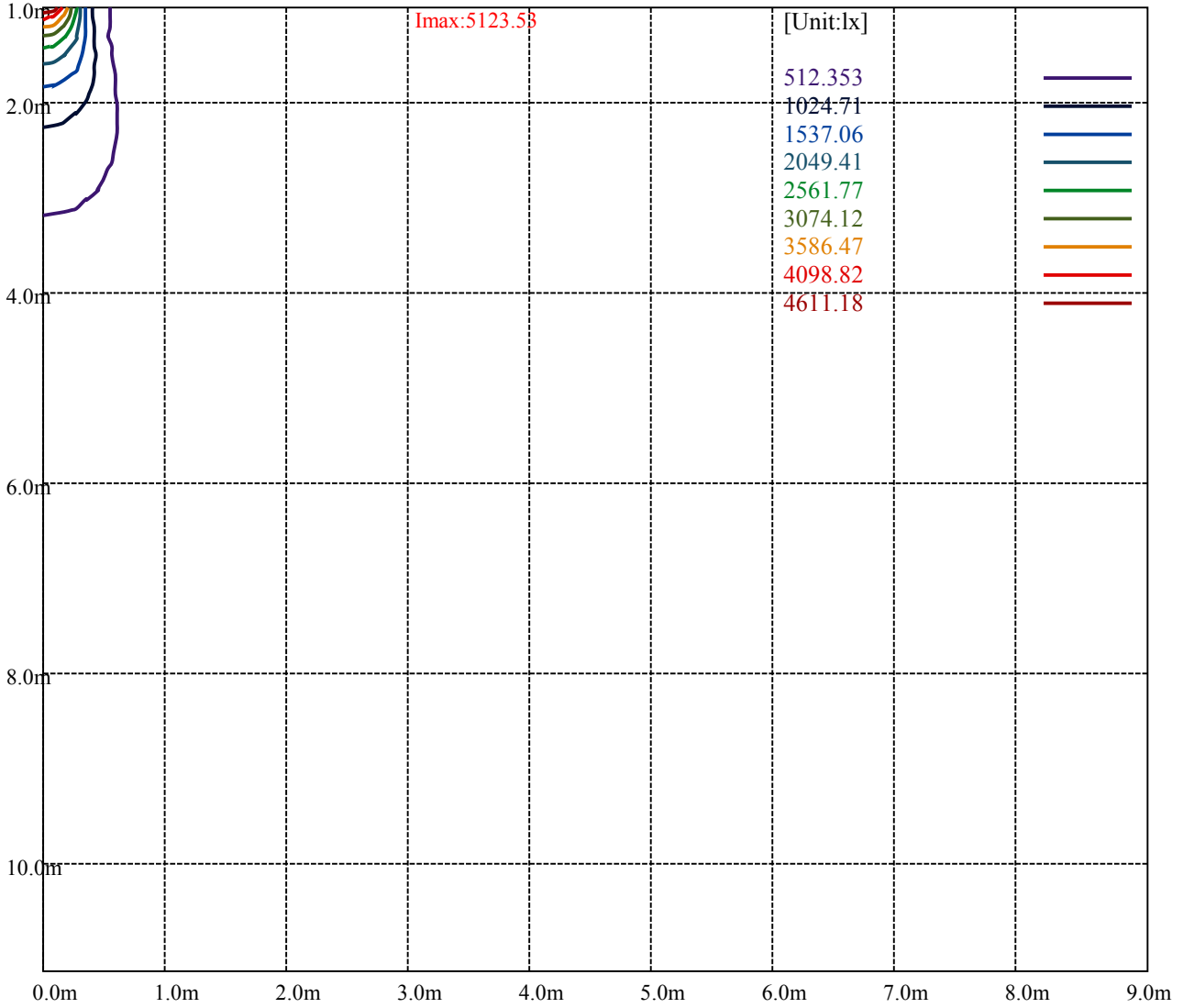
**Imax:5123.53**

(10%Imax) 512.353	—
(20%Imax) 1024.71	—
(30%Imax) 1537.06	—
(40%Imax) 2049.41	—
(50%Imax) 2561.77	—
(60%Imax) 3074.12	—
(70%Imax) 3586.47	—
(80%Imax) 4098.82	—
(90%Imax) 4611.18	—



(10%Emax) 56.92812	—
(20%Emax) 113.8567	—
(30%Emax) 170.7845	—
(40%Emax) 227.7122	—
(50%Emax) 284.64	—
(60%Emax) 341.5689	—
(70%Emax) 398.4967	—
(80%Emax) 455.4244	—
(90%Emax) 512.3522	—





Luminance Table

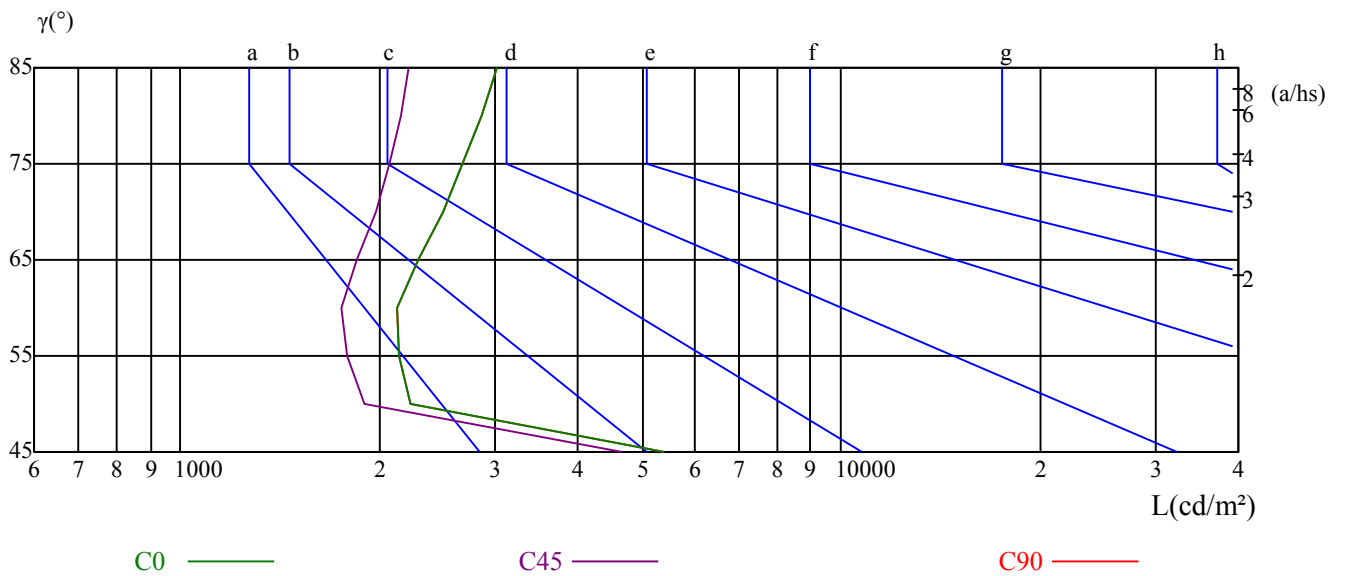
$\gamma$	45	50	55	60	65	70	75	80	85
C0	5396	2230	2138	2132	2288	2502	2673	2851	3021
C45	4652	1894	1788	1754	1848	1982	2071	2154	2216
C90	5396	2230	2138	2132	2288	2502	2673	2851	3021

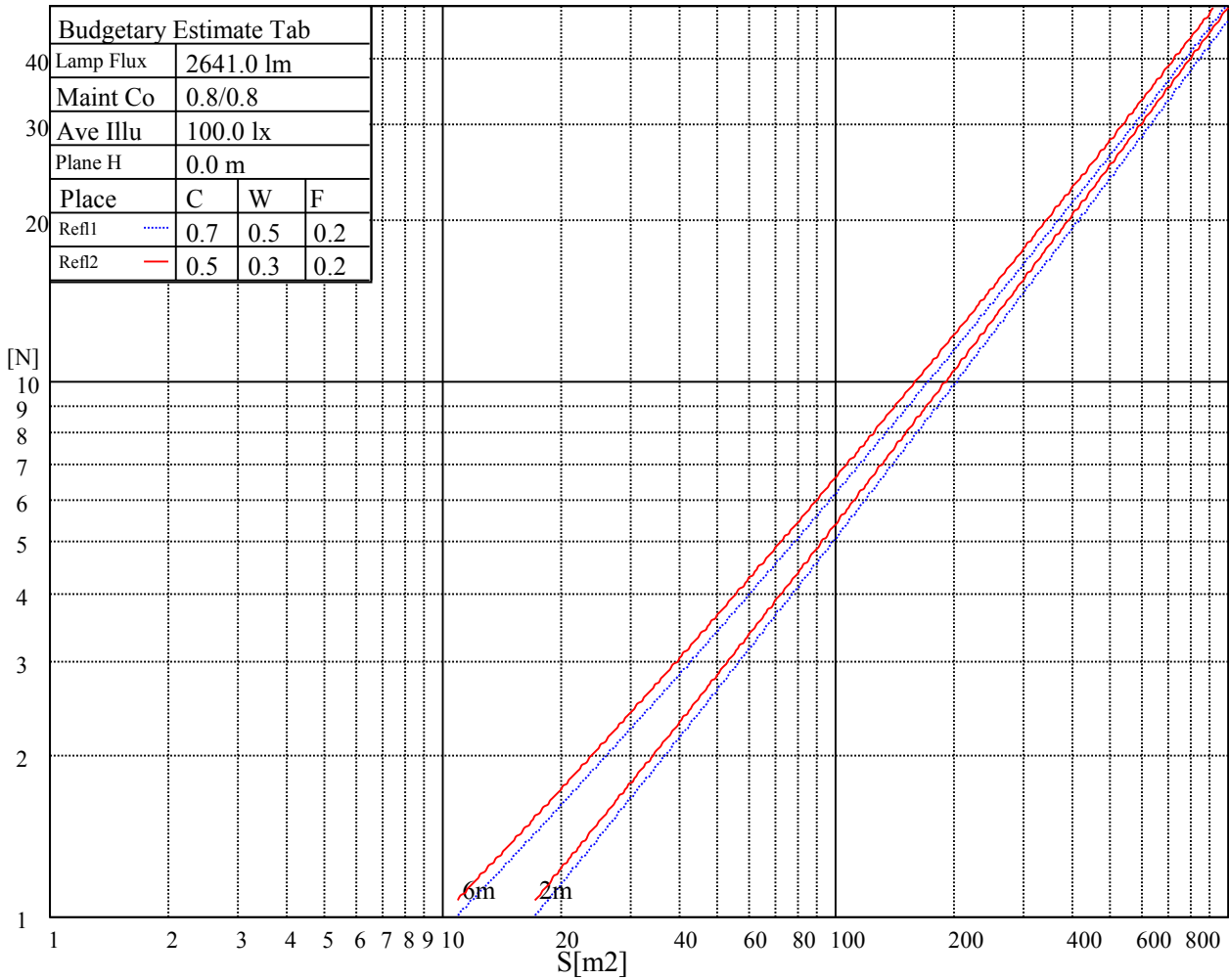
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5371	5371	5371	8943	8943	8943	24729	24729	24729

Glare Table

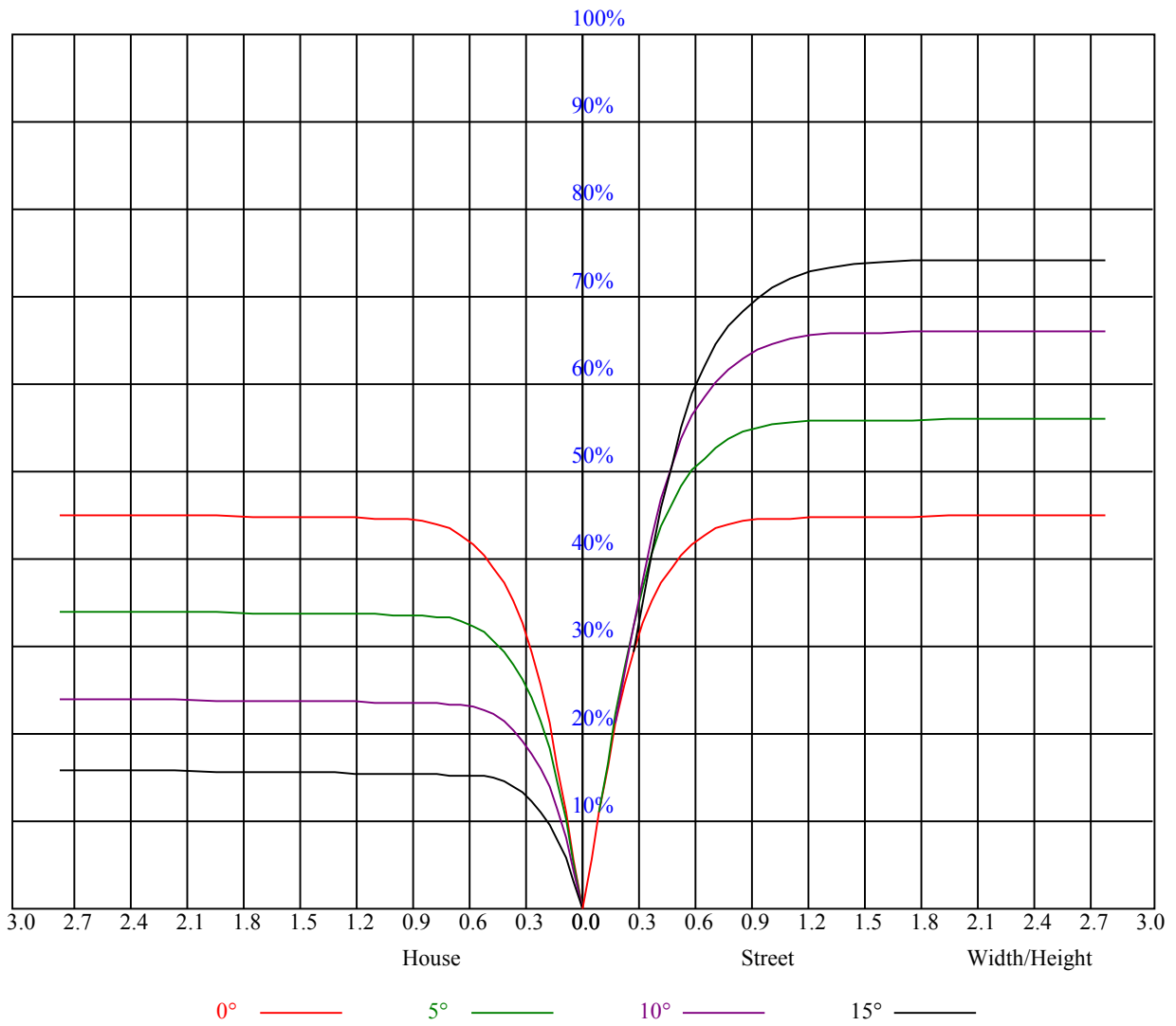
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.98	0.96	0.99	0.97	0.95	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.85
2	0.95	0.92	0.89	0.94	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.77
4	0.86	0.82	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	0.77	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	0.78	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
8	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
9	0.70	0.65	0.62	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59



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	5115.94	5086.13	4665.38	3746.81	2259.00	1220.06	967.50	664.31	352.69
45.0	5118.75	5097.94	4643.44	3687.19	2239.31	1176.75	932.06	616.50	303.75
90.0	5127.75	4976.44	4371.19	3205.69	1755.56	1060.88	833.91	524.59	206.83
135.0	5131.69	4943.81	4385.81	3374.44	1845.56	1082.25	889.88	563.63	290.25
180.0	5115.94	4859.44	4204.13	3076.31	1612.13	1024.99	847.29	503.16	175.22
225.0	5118.75	4897.69	4287.38	3225.38	1736.44	1058.12	862.71	523.69	193.61
270.0	5127.75	5037.75	4573.13	3661.88	2232.56	1176.19	925.88	637.31	304.88
315.0	5131.69	5026.50	4527.00	3510.00	1990.13	1115.83	908.94	588.54	274.89
360.0	5115.94	5086.13	4665.38	3746.81	2259.00	1220.06	967.50	664.31	352.69

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	49.73	12.43	11.53	11.08	10.63	10.58	10.80	10.86	10.52
45.0	38.31	12.43	11.53	10.97	10.74	11.48	11.48	11.19	10.63
90.0	19.58	12.43	11.59	11.03	12.09	12.26	11.76	11.36	10.86
135.0	24.81	12.21	11.48	10.97	12.32	12.38	11.93	11.42	10.74
180.0	18.39	12.32	11.31	10.80	11.08	11.70	11.59	11.19	10.41
225.0	17.49	11.53	10.97	10.74	10.69	10.86	11.08	10.86	10.29
270.0	43.14	12.43	11.59	10.91	10.69	11.14	11.03	10.86	10.52
315.0	32.12	12.49	11.25	10.80	10.74	11.08	11.08	10.86	10.52
360.0	49.73	12.43	11.53	11.08	10.63	10.58	10.80	10.86	10.52

C/γ(°)	90.0
0.0	9.68
45.0	9.56
90.0	9.62
135.0	9.62
180.0	9.62
225.0	9.51
270.0	9.56
315.0	9.62
360.0	9.68