



NATA LIGHTING CO.,LTD
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 3-2044-M	
Luminaire: 92.70.131.00	
Report No: GC2017061908	Voltage(V): 220.1000
Test No: NT-0010	Current(A): 0.1300
LampCAT: BMTC MA-1919 20W	Power (W): 27.0000
Lamp flux(lm): 2561.0	PF: 0.9410
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2407.62
Efficiency(%): 94.01%
Lumens(lm)/Power(W): 89.17
Central intensity(cd): 8308.836
Maximum intensity(cd): 8308.836
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.2
 [C90/270]Total=26.2
Field angle(10%Imax): [C0/180]Total=56.3
 [C90/270]Total=56.3
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 94.01%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.819%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/18
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

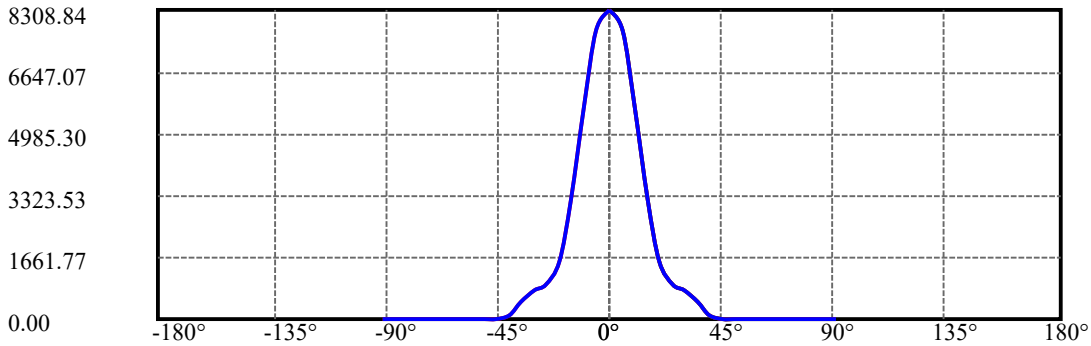
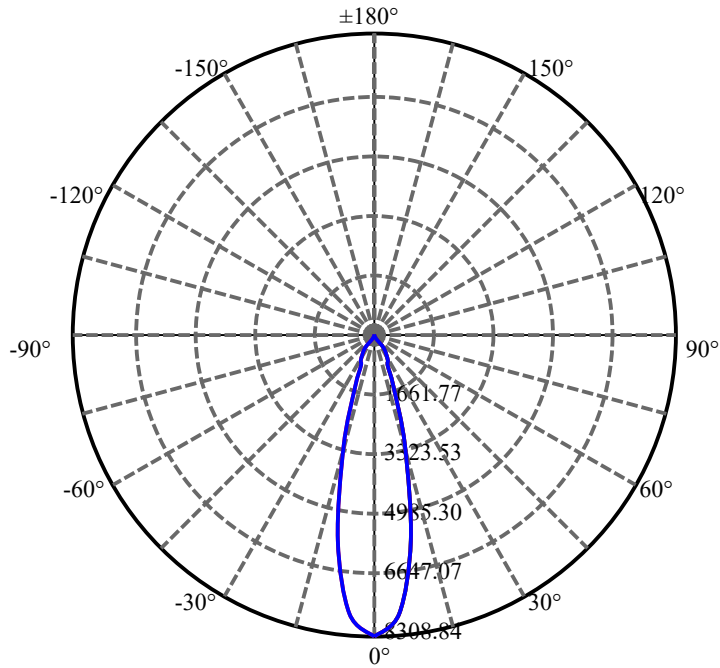
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8308.837	0.000	0	.000%	.000%
5.0	7724.069	191.669	191.669	7.484%	7.961%
10.0	5758.899	482.328	673.997	18.834%	27.994%
15.0	3182.191	530.379	1204.377	20.710%	50.023%
20.0	1530.534	388.395	1592.771	15.166%	66.155%
25.0	916.049	256.601	1849.373	10.020%	76.813%
30.0	780.149	214.655	2064.028	8.382%	85.729%
35.0	463.238	183.097	2247.125	7.149%	93.334%
40.0	112.115	95.993	2343.119	3.748%	97.321%
45.0	12.057	22.992	2366.11	.898%	98.276%
50.0	10.007	4.458	2370.569	.174%	98.461%
55.0	9.573	4.257	2374.826	.166%	98.638%
60.0	9.339	4.371	2379.197	.171%	98.819%
65.0	9.167	4.499	2383.696	.176%	99.006%
70.0	9.064	4.616	2388.312	.180%	99.198%
75.0	9.015	4.726	2393.038	.185%	99.394%
80.0	8.974	4.814	2397.851	.188%	99.594%
85.0	8.960	4.873	2402.725	.190%	99.797%
90.0	8.933	4.899	2407.624	.191%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2064.03	80.59%	85.73%
0-40	2343.12	91.49%	97.32%
0-60	2379.20	92.90%	98.82%
0-90	2402.72	93.82%	99.80%
0-120	2402.72	93.82%	99.80%
0-180	2407.62	94.01%	100.00%
60-90	27.90	1.09%	1.16%
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%
0-26.79	1926.10	75.21%	80.00%

ZONAL LUMEN SUMMARY

0-10	674.00
10-20	918.77
20-30	471.26
30-40	279.09
40-50	27.45
50-60	8.63
60-70	9.11
70-80	9.54
80-90	4.87
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: ———

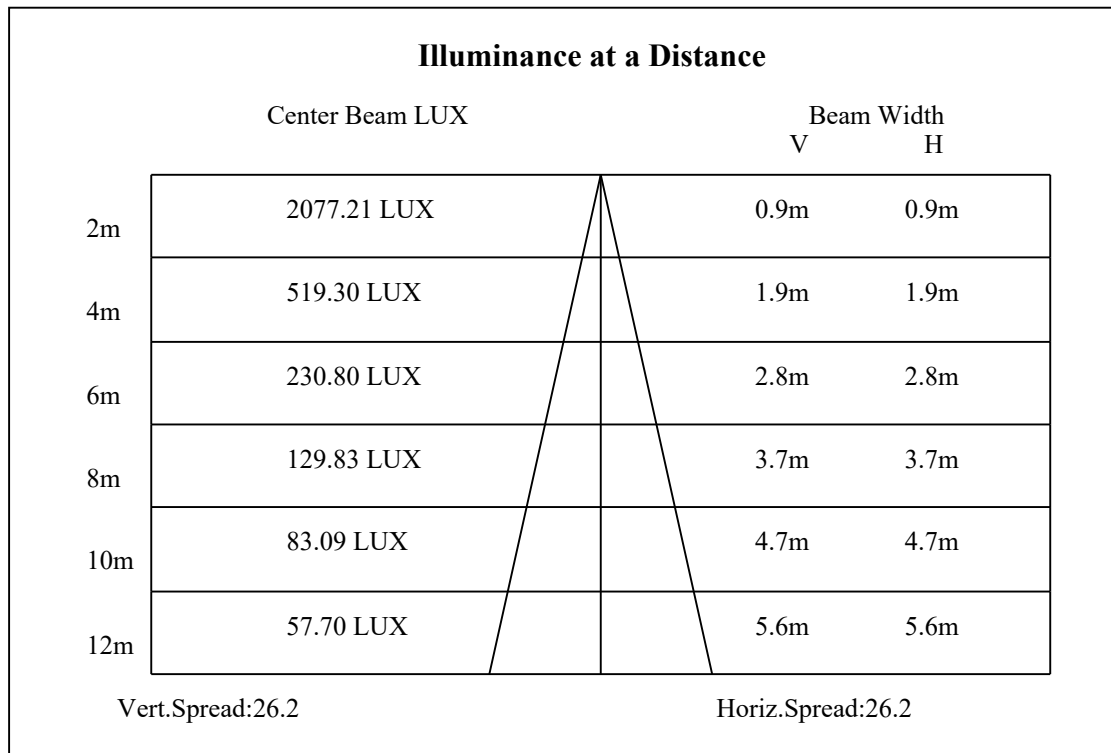
C90/C270: ———

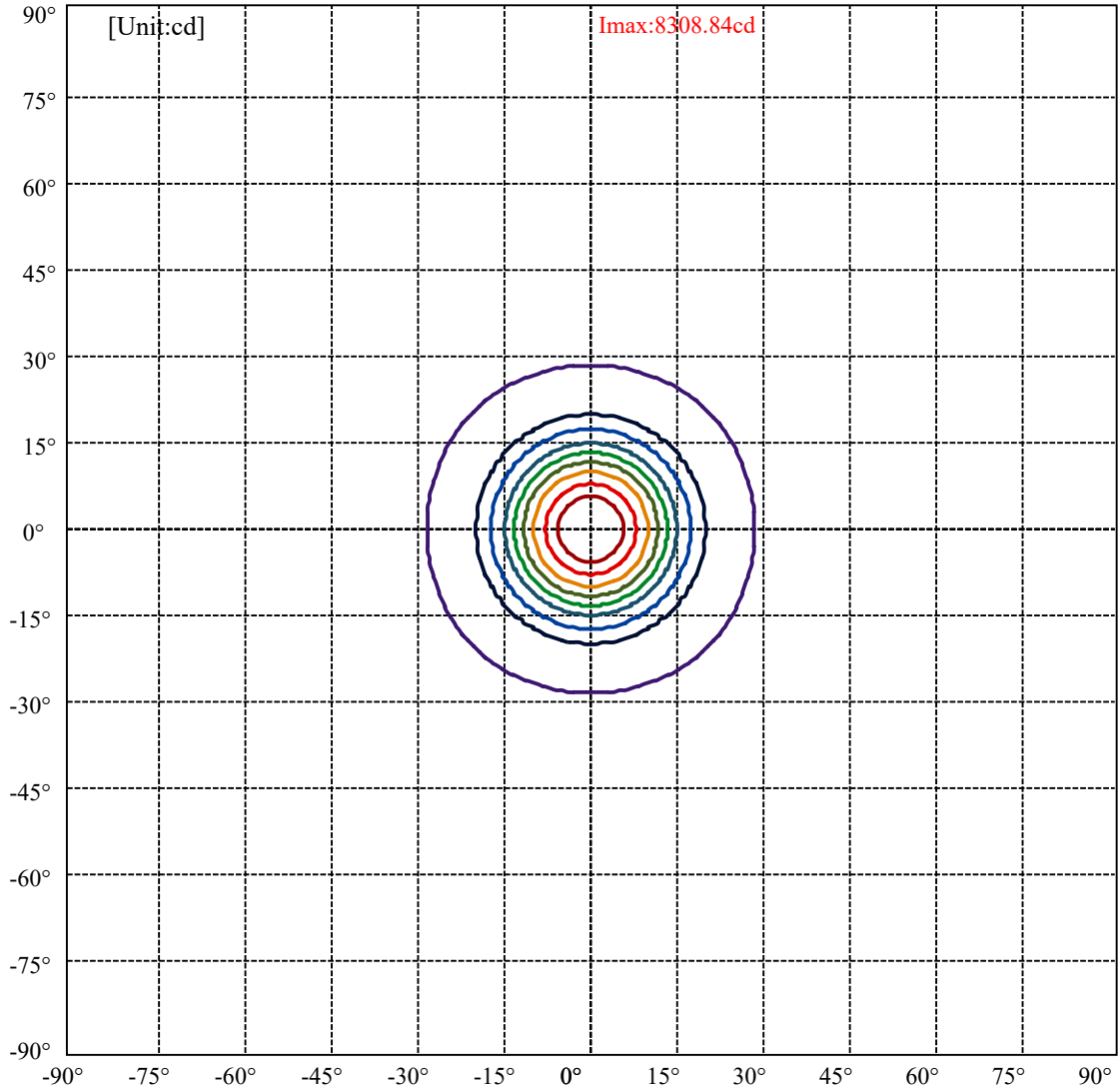
Field angle(10%Imax):C0/180Left:28.1 Right:28.1

:C90/270Left:28.1 Right:28.1

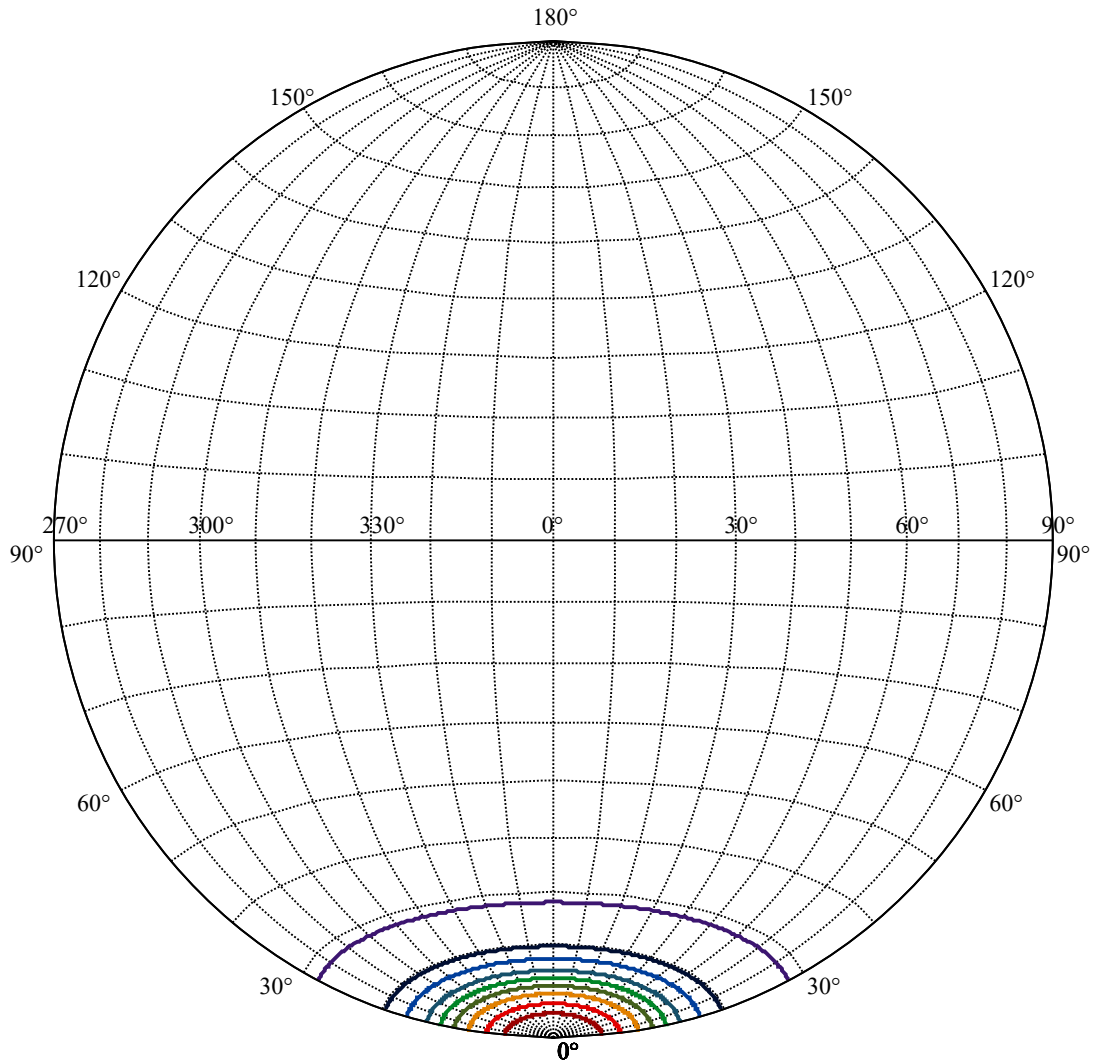
Beam Angle(50%Imax):C0/180Left:13.1 Right:13.1

:C90/270Left:13.1 Right:13.1





(10%Imax) 830.884	—
(20%Imax) 1661.77	—
(30%Imax) 2492.65	—
(40%Imax) 3323.53	—
(50%Imax) 4154.42	—
(60%Imax) 4985.3	—
(70%Imax) 5816.19	—
(80%Imax) 6647.07	—
(90%Imax) 7477.95	—



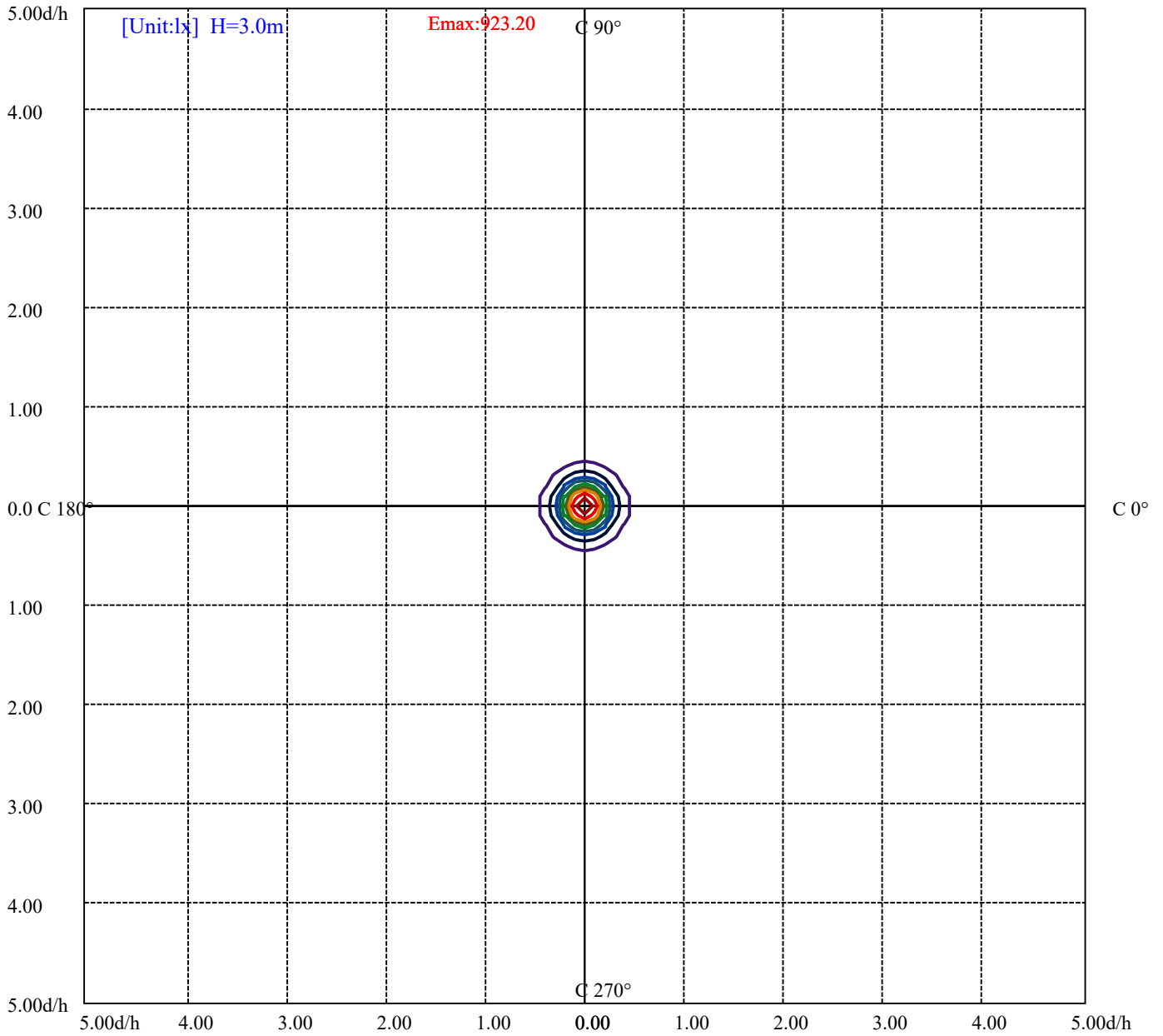
House

[Unit:cd]

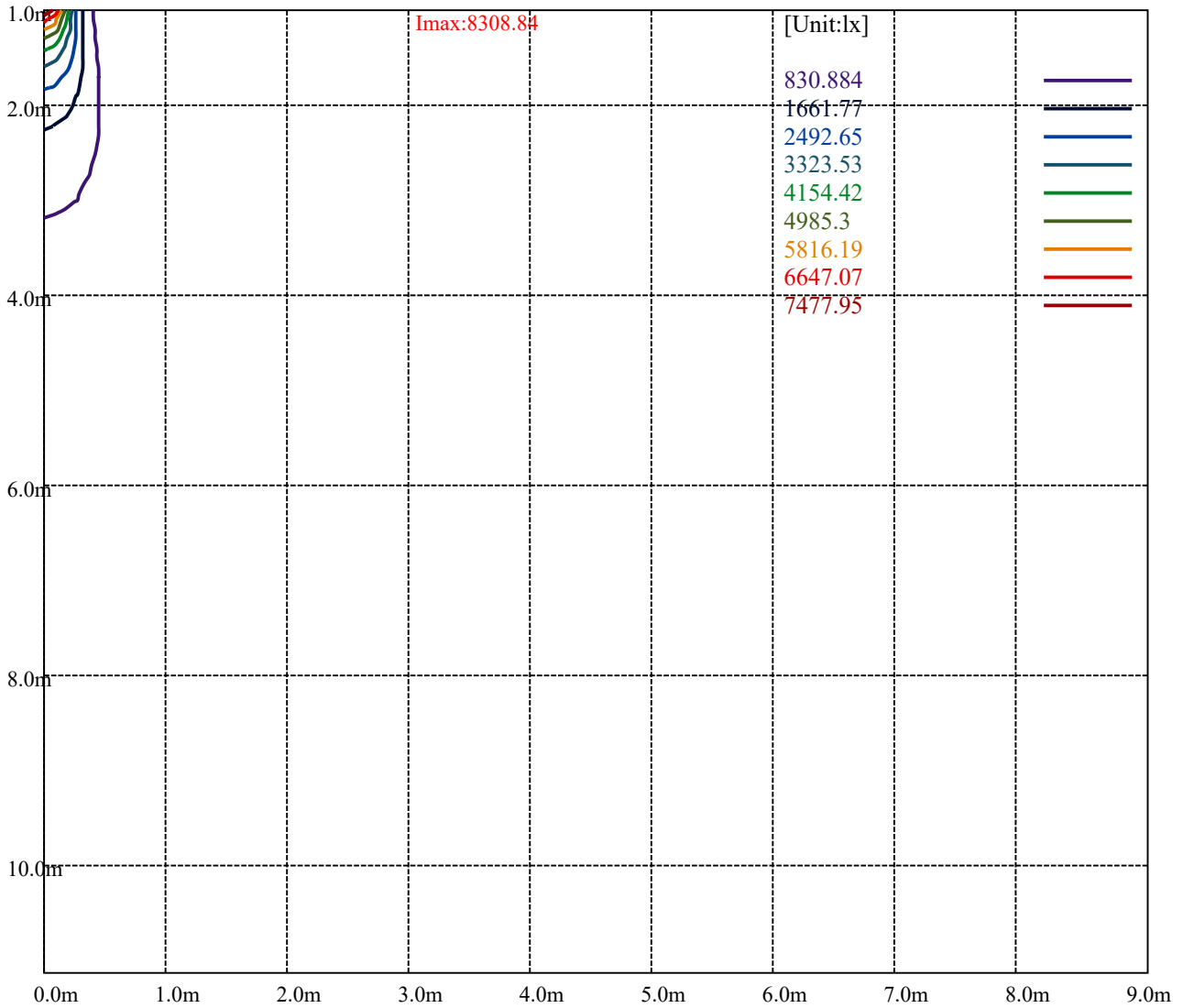
Road

Imax:8308.84

(10%Imax) 830.884	—
(20%Imax) 1661.77	—
(30%Imax) 2492.65	—
(40%Imax) 3323.53	—
(50%Imax) 4154.42	—
(60%Imax) 4985.3	—
(70%Imax) 5816.19	—
(80%Imax) 6647.07	—
(90%Imax) 7477.95	—



- (10%Emax) 92.32022
- (20%Emax) 184.64
- (30%Emax) 276.9611
- (40%Emax) 369.2811
- (50%Emax) 461.6011
- (60%Emax) 553.9211
- (70%Emax) 646.2411
- (80%Emax) 738.5611
- (90%Emax) 830.8822



Luminance Table

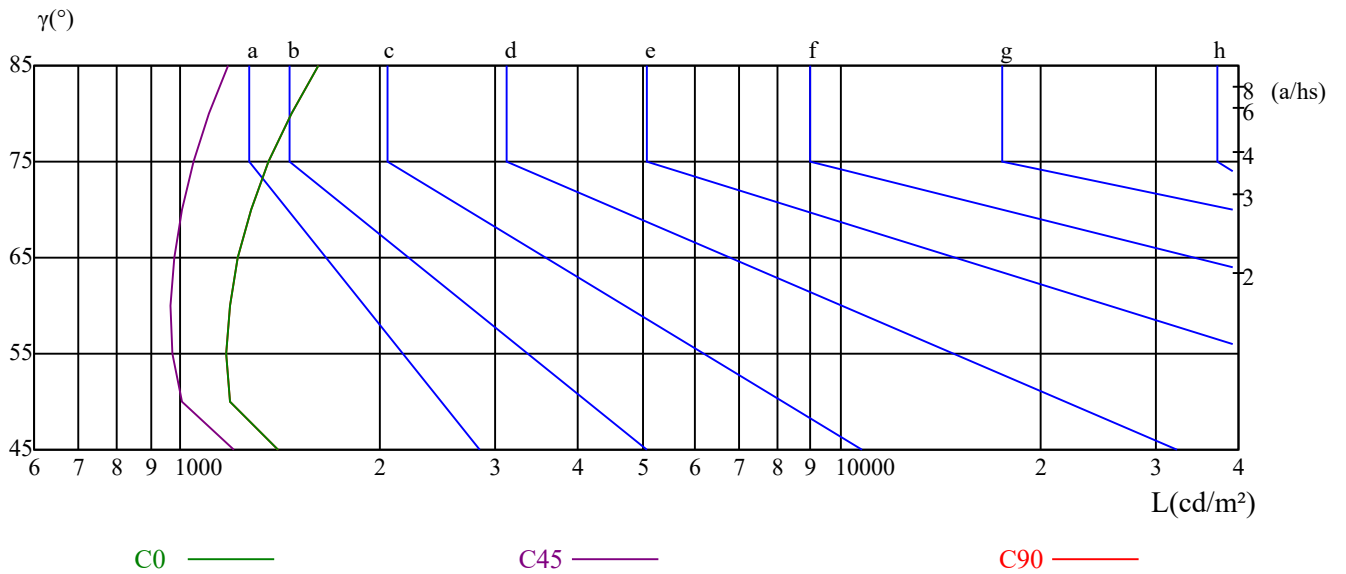
γ	45	50	55	60	65	70	75	80	85
C0	1403	1188	1170	1185	1219	1276	1359	1469	1617
C45	1201	1002	971	968	978	1005	1048	1105	1183
C90	1403	1188	1170	1185	1219	1276	1359	1469	1617

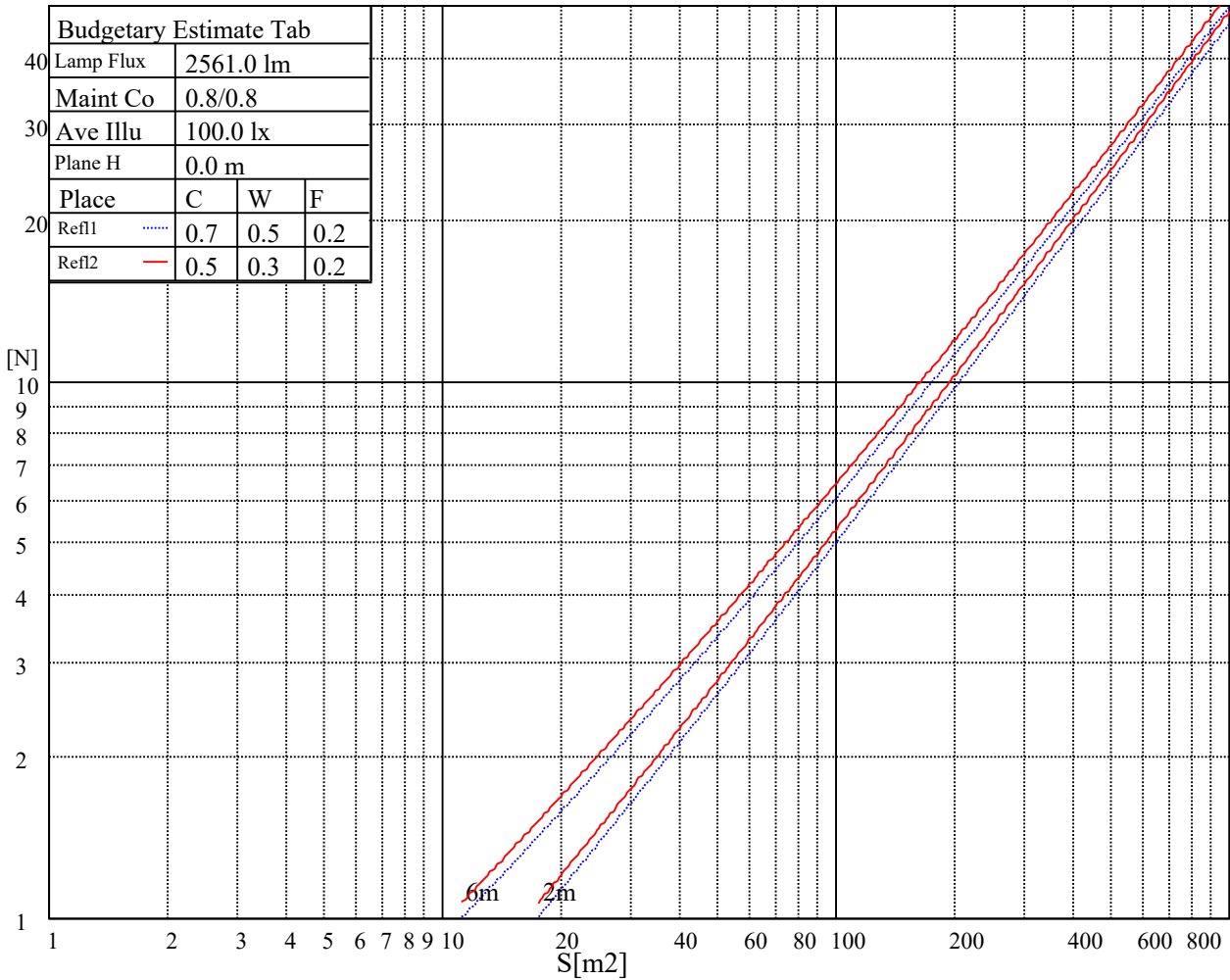
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3002	3002	3002	4821	4821	4821	14230	14230	14230

Glare Table

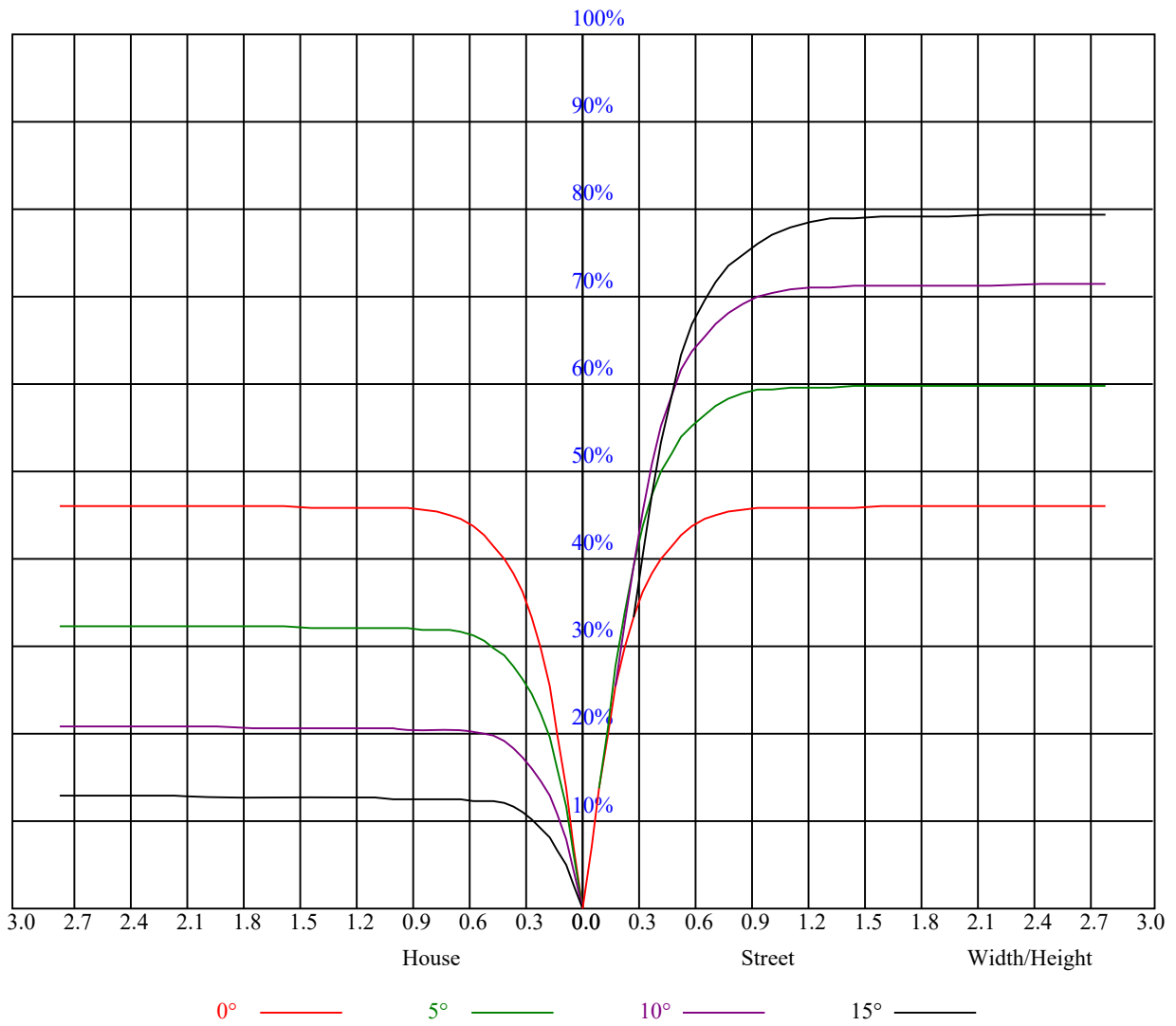
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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 RHOF=20 CU															
0	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.05	1.03	1.01	1.03	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.89
2	0.99	0.96	0.94	0.98	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.90	0.88	0.87	0.85
3	0.94	0.91	0.87	0.93	0.90	0.87	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.85	0.83	0.82
4	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.78
5	0.86	0.82	0.78	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.81	0.78	0.76	0.75
6	0.82	0.78	0.75	0.82	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
7	0.79	0.75	0.71	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
8	0.76	0.72	0.69	0.76	0.71	0.68	0.75	0.71	0.68	0.74	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	0.68	0.66	0.71	0.68	0.65	0.71	0.68	0.65	0.64
10	0.71	0.66	0.64	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62



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	8341.04	7539.97	5172.00	2519.93	1250.33	862.18	776.30	368.88	20.59
45.0	8282.13	8273.33	6845.71	4467.28	2007.91	988.26	811.53	660.13	283.54
90.0	8334.44	8142.84	6513.17	3853.40	1768.41	969.65	797.33	609.58	133.24
135.0	8277.73	8216.62	6943.16	4221.72	2094.90	1039.46	817.59	668.94	298.41
180.0	8341.04	8094.39	6296.80	3511.50	1759.60	936.84	793.20	572.31	106.20
225.0	8282.13	7146.87	4642.91	2232.54	1076.02	842.03	737.43	269.83	18.22
270.0	8334.44	7388.57	5276.05	2517.73	1215.65	859.98	779.60	333.09	19.82
315.0	8277.73	6989.96	4381.39	2133.44	1071.45	829.98	728.23	223.14	16.90
360.0	8341.04	7539.97	5172.00	2519.93	1250.33	862.18	776.30	368.88	20.59
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.41	9.80	9.36	9.19	9.03	8.97	9.03	8.97	8.97
45.0	13.93	10.24	9.80	9.52	9.36	9.19	9.08	9.08	9.03
90.0	13.21	10.19	9.69	9.41	9.25	9.14	9.08	8.97	8.97
135.0	14.92	10.35	9.91	9.58	9.36	9.19	9.08	9.03	8.97
180.0	12.83	10.13	9.63	9.36	9.19	9.08	9.03	8.92	8.92
225.0	10.30	9.74	9.36	9.19	9.03	8.97	8.97	8.97	8.97
270.0	10.52	9.91	9.47	9.30	9.08	9.03	8.97	8.97	8.97
315.0	10.35	9.69	9.36	9.14	9.03	8.92	8.86	8.86	8.86
360.0	10.41	9.80	9.36	9.19	9.03	8.97	9.03	8.97	8.97
C/ γ (°)	90.0								
0.0	8.92								
45.0	8.97								
90.0	8.92								
135.0	8.92								
180.0	8.86								
225.0	8.97								
270.0	8.97								
315.0	8.92								
360.0	8.92								