



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.cn  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380 JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

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## Nata

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LumCAT: 3-2117-N  
Luminaire: 92.70.135.00  
Report No: NT2018041205 Voltage(V): 37.5000  
Test No: nata-0100 Current(A): 0.6000  
LampCAT: LUMILEDS LUXEON COB 1205 Power (W): 22.5000  
Lamp flux(lm): 2186.0 PF: 0.0000  
Number of Lamps: 1 Ballast type: DC  
Length(mm): 74 Width(mm): 74  
Phm Type: C Height(mm): 0

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## Photometric Results

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Lumens(lm): 1895.96  
Efficiency(%): 86.73%  
Lumens(lm)/Power(W): 84.27  
Central intensity(cd): 5379.148  
Maximum intensity(cd): 5379.148  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=34.4  
                                  [C90/270]Total=34.4  
Field angle(10%Imax): [C0/180]Total=56.7  
                                  [C90/270]Total=56.7  
Maximum s/h(1/2): C0\_180=0.58 C90\_270=0.58  
Maximum s/h(1/4): C0\_180=0.53 C90\_270=0.53  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 88.12%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.090%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/4/12  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

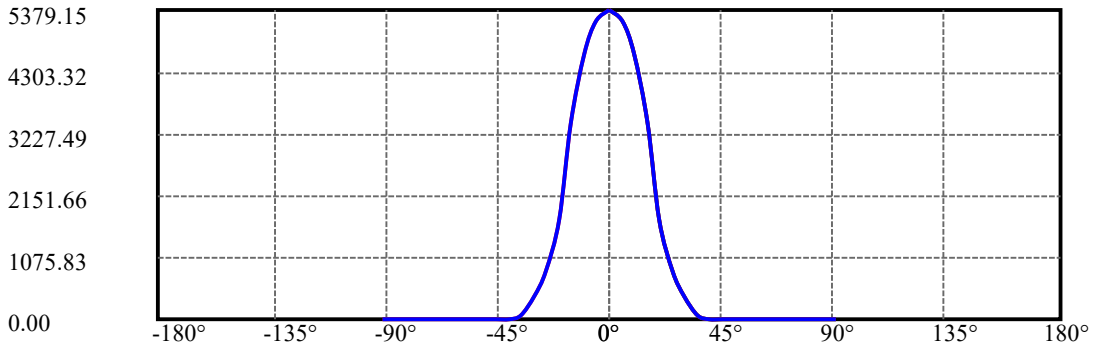
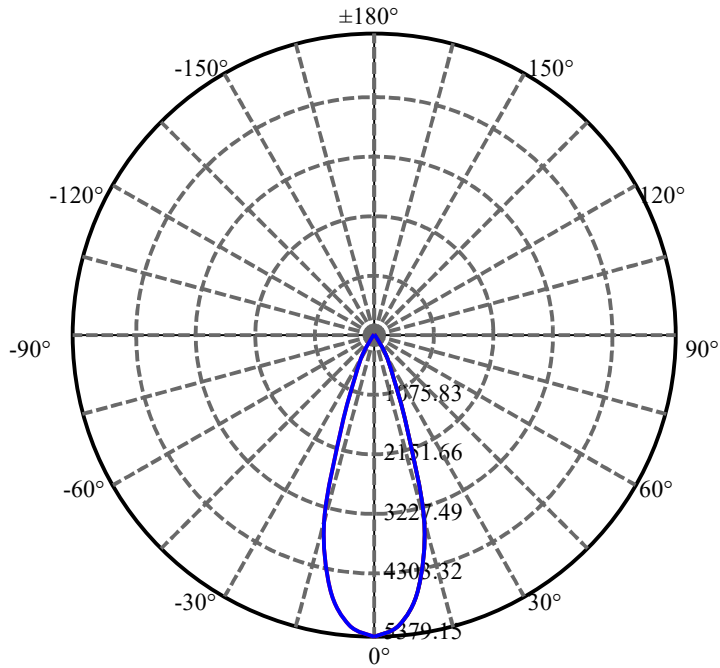
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5379.148	32.168	32.168	1.472%	1.697%
5.0	5176.884	247.317	279.485	11.314%	14.741%
10.0	4594.594	437.328	716.813	20.006%	37.807%
15.0	3415.286	484.521	1201.334	22.165%	63.363%
20.0	1749.479	327.982	1529.316	15.004%	80.662%
25.0	827.092	191.598	1720.914	8.765%	90.767%
30.0	396.475	108.661	1829.575	4.971%	96.498%
35.0	56.667	17.816	1847.391	.815%	97.438%
40.0	13.537	4.770	1852.161	.218%	97.690%
45.0	11.755	4.556	1856.717	.208%	97.930%
50.0	10.743	4.511	1861.228	.206%	98.168%
55.0	10.041	4.508	1865.736	.206%	98.406%
60.0	9.552	4.534	1870.271	.207%	98.645%
65.0	9.160	4.551	1874.821	.208%	98.885%
70.0	8.871	4.569	1879.391	.209%	99.126%
75.0	8.616	4.562	1883.953	.209%	99.366%
80.0	9.284	5.012	1888.964	.229%	99.631%
85.0	8.768	4.788	1893.752	.219%	99.883%
90.0	8.073	2.212	1895.964	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1829.58	83.70%	96.50%
0-40	1852.16	84.73%	97.69%
0-60	1870.27	85.56%	98.64%
0-90	1893.75	86.63%	99.88%
0-120	1893.75	86.63%	99.88%
0-180	1895.96	86.73%	100.00%
60-90	28.02	1.28%	1.48%
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%
0-19.81	1516.77	69.39%	80.00%

ZONAL LUMEN SUMMARY

0-10	716.81
10-20	812.50
20-30	300.26
30-40	22.59
40-50	9.07
50-60	9.04
60-70	9.12
70-80	9.57
80-90	4.79
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: —————

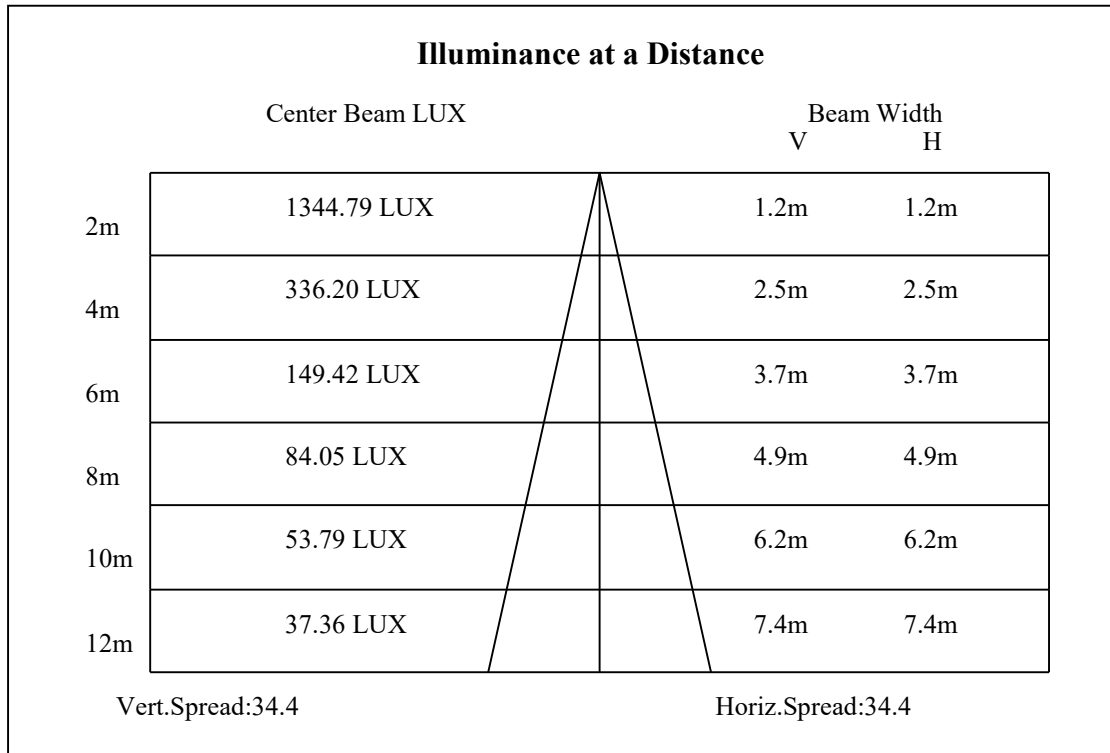
C90/C270: —————

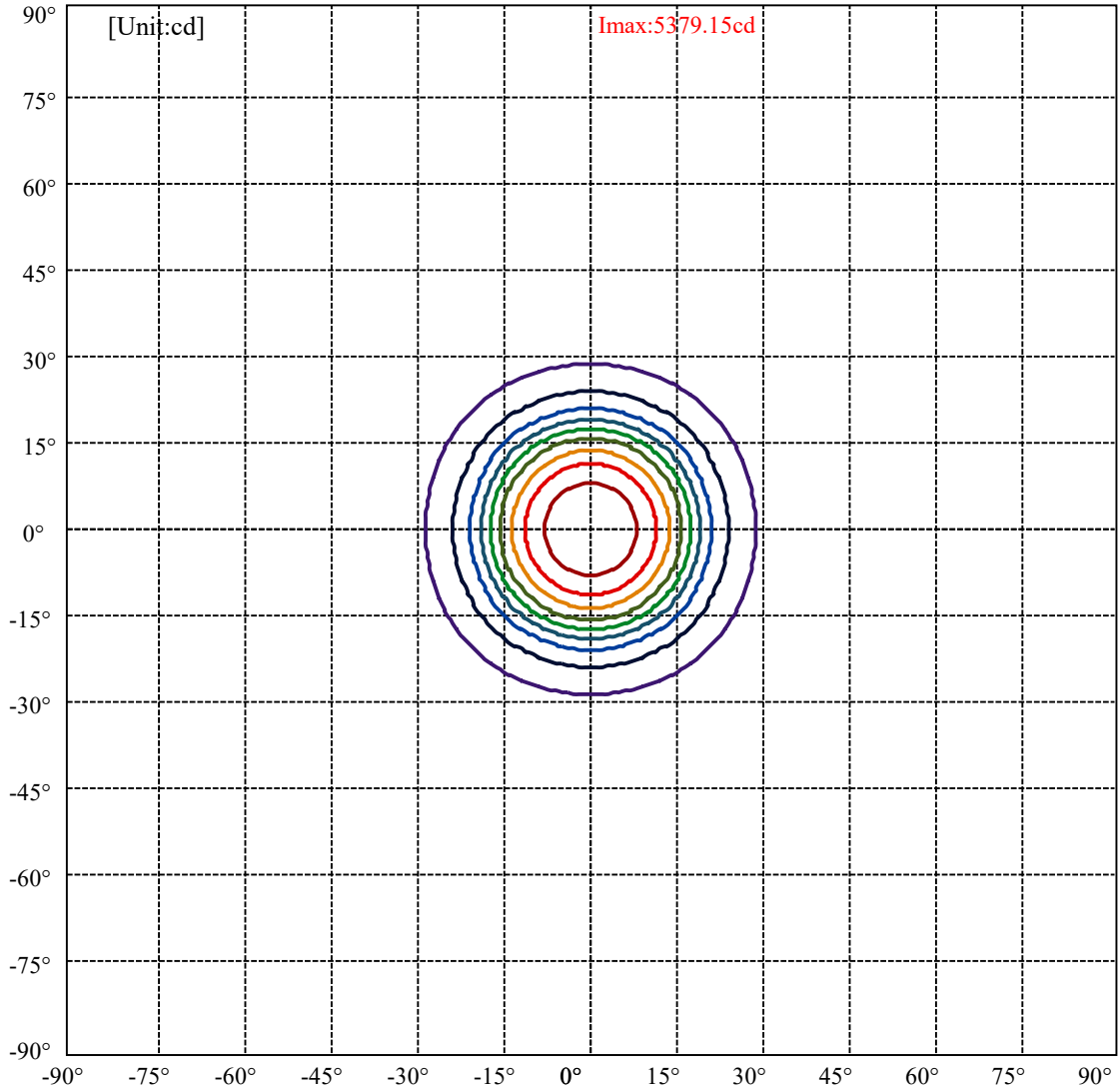
Field angle(10%Imax):C0/180Left:28.4 Right:28.4

:C90/270Left:28.4 Right:28.4

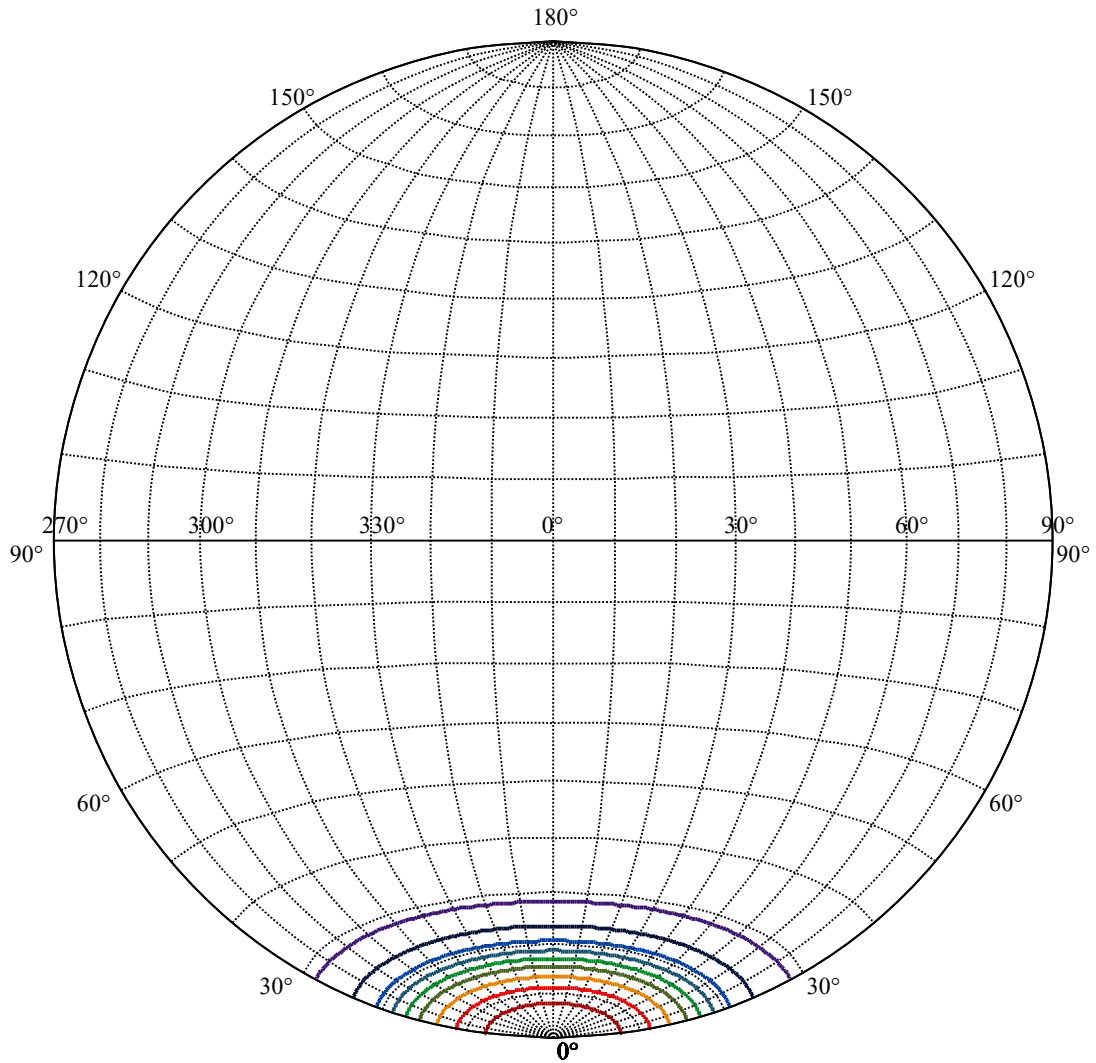
Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2

:C90/270Left:17.2 Right:17.2





(10%Imax) 537.915	—
(20%Imax) 1075.83	—
(30%Imax) 1613.74	—
(40%Imax) 2151.66	—
(50%Imax) 2689.57	—
(60%Imax) 3227.49	—
(70%Imax) 3765.4	—
(80%Imax) 4303.32	—
(90%Imax) 4841.23	—



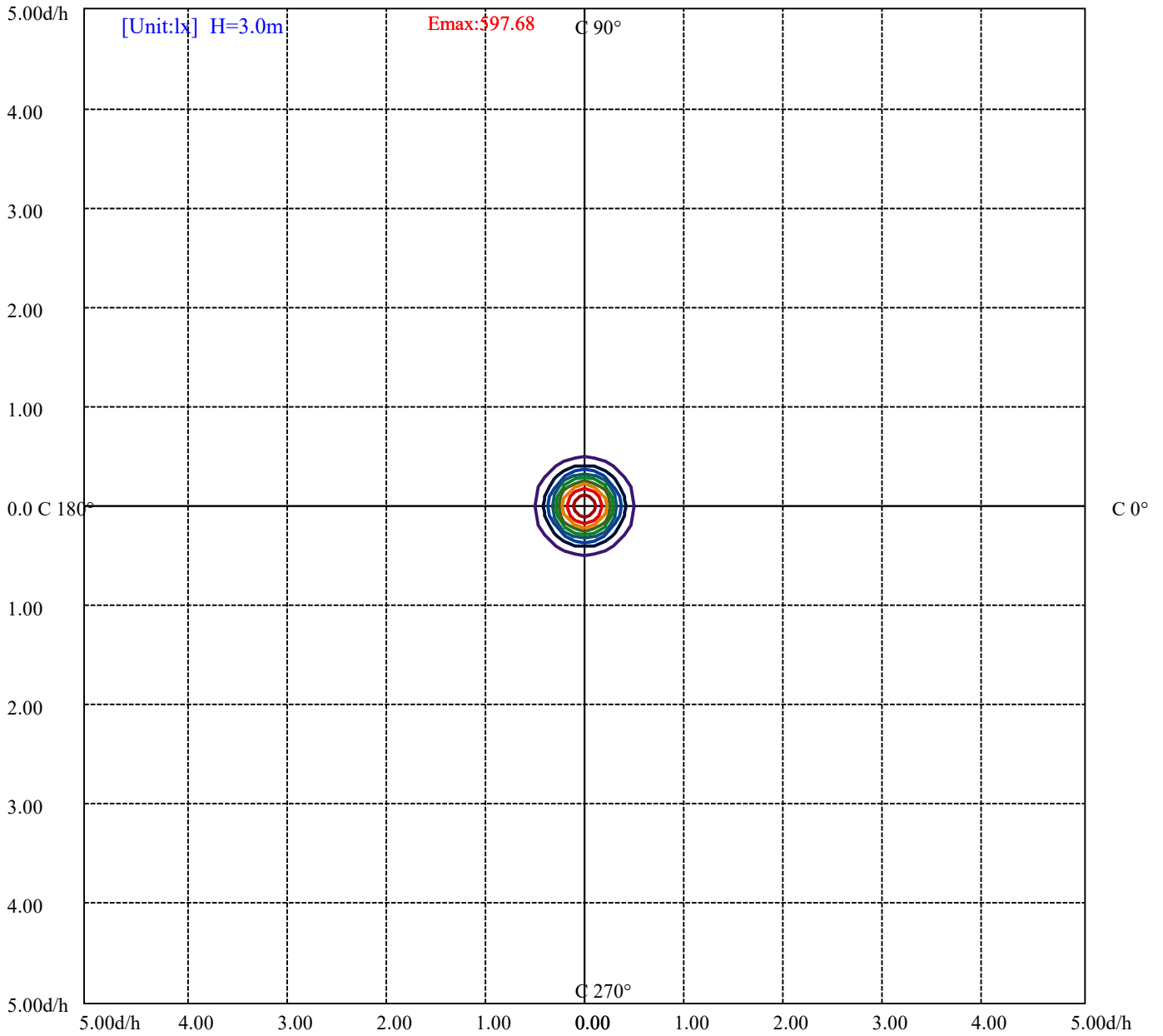
House

[Unit:cd]

Road

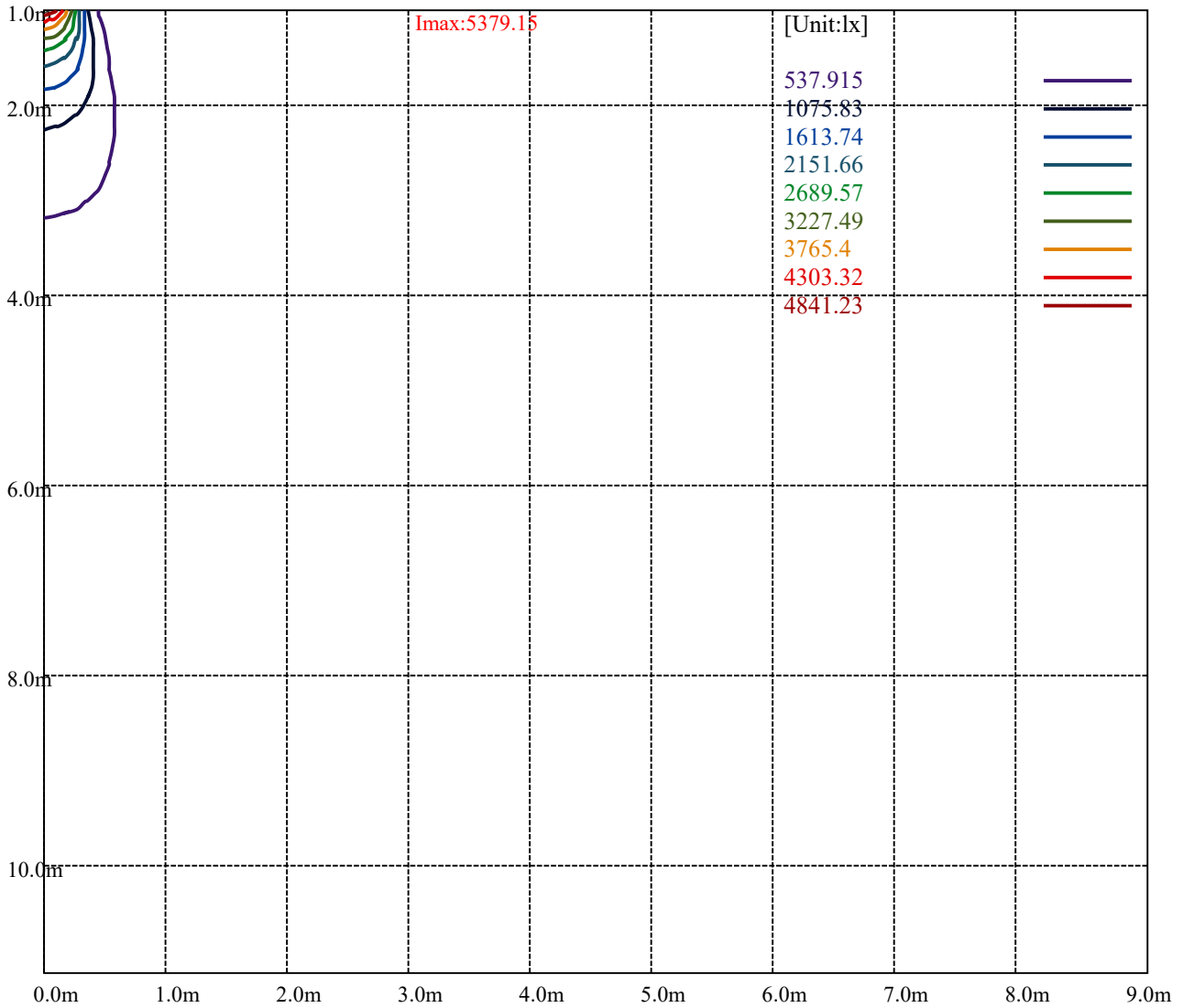
**Imax:5379.15**

(10%Imax) 537.915	—
(20%Imax) 1075.83	—
(30%Imax) 1613.74	—
(40%Imax) 2151.66	—
(50%Imax) 2689.57	—
(60%Imax) 3227.49	—
(70%Imax) 3765.4	—
(80%Imax) 4303.32	—
(90%Imax) 4841.23	—



- (10%Emax) 59.76822
- (20%Emax) 119.5367
- (30%Emax) 179.3044
- (40%Emax) 239.0733
- (50%Emax) 298.8411
- (60%Emax) 358.6089
- (70%Emax) 418.3778
- (80%Emax) 478.1456
- (90%Emax) 537.9144





Luminance Table

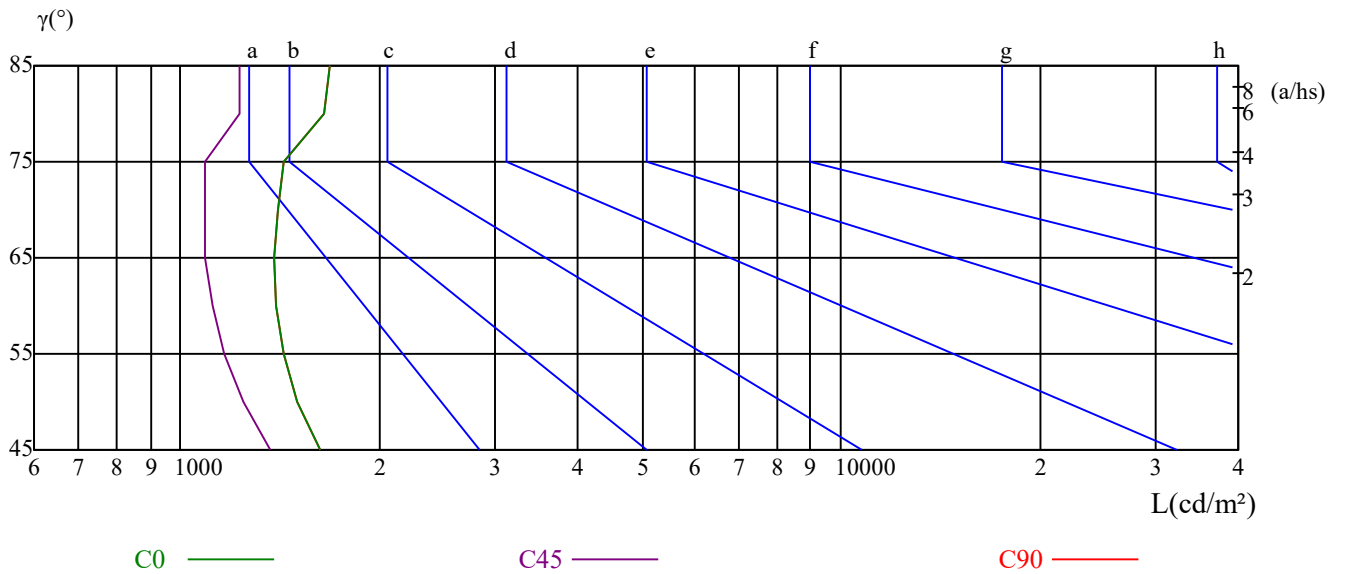
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1628	1503	1430	1397	1387	1403	1438	1653	1688
C45	1366	1242	1164	1119	1093	1086	1093	1230	1226
C90	1628	1503	1430	1397	1387	1403	1438	1653	1688

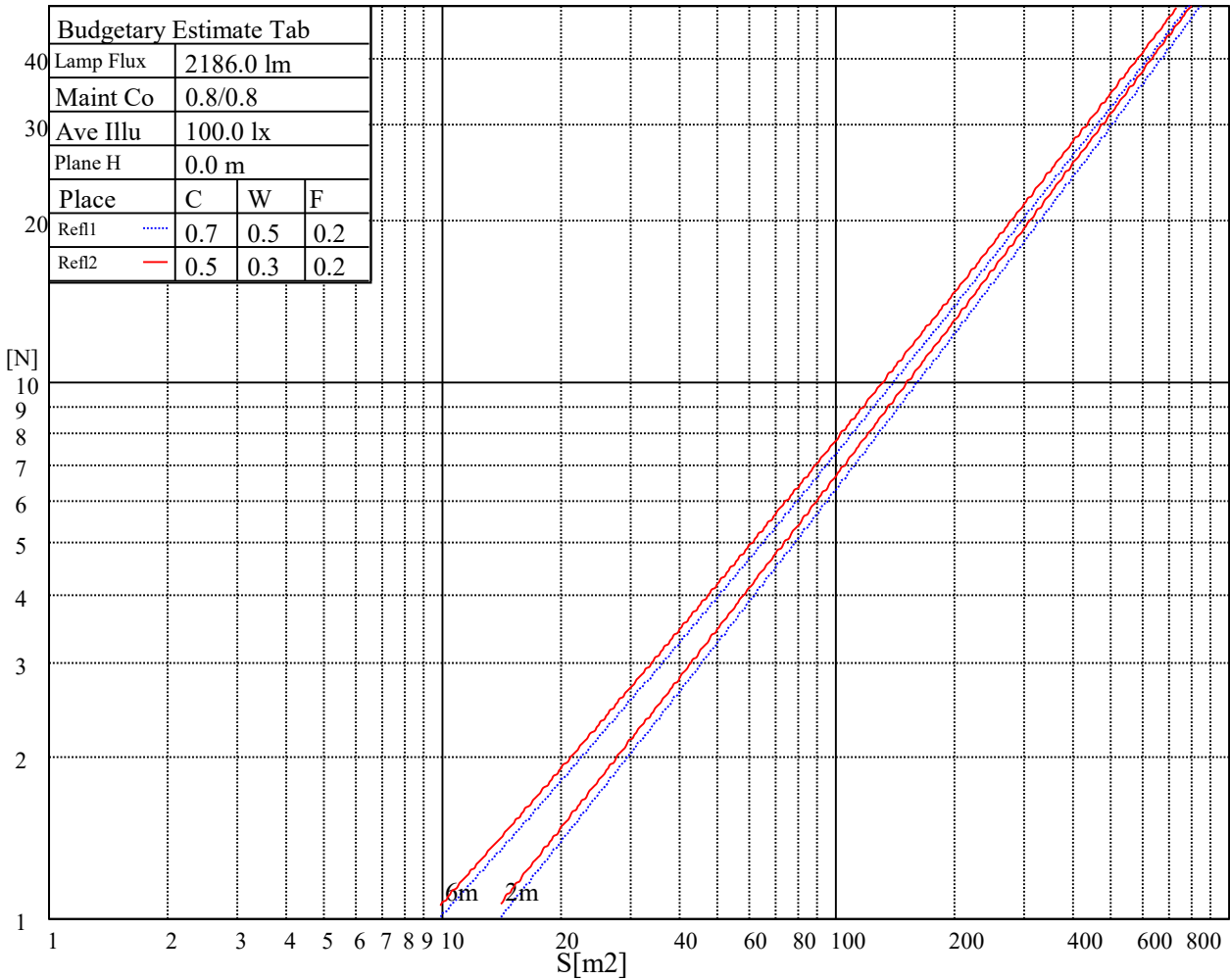
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3958	3958	3958	6079	6079	6079	18371	18371	18371

Glare Table

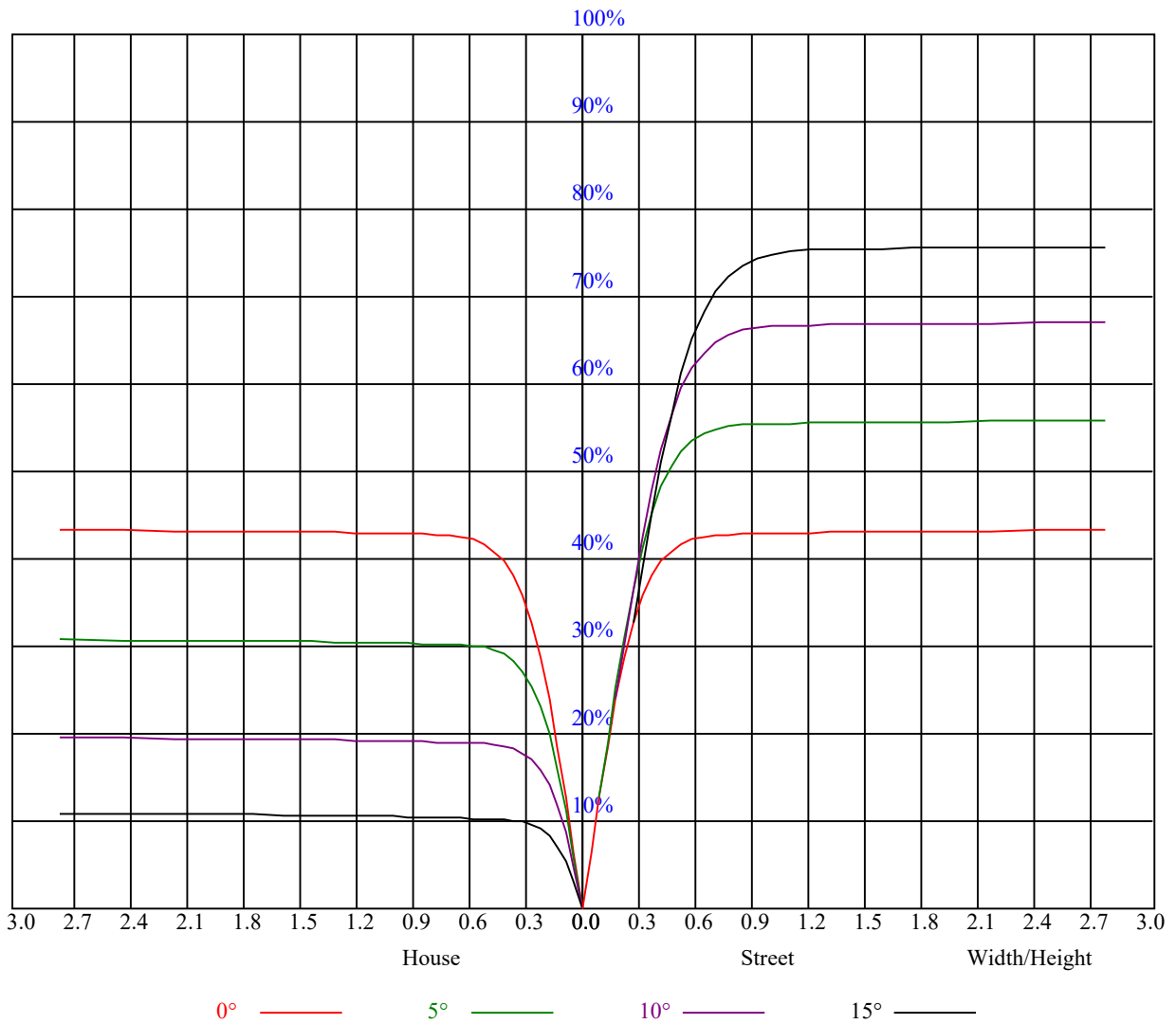
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300

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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.95	0.93	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.82
2	0.93	0.90	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.81	0.79
3	0.89	0.85	0.82	0.87	0.84	0.82	0.85	0.83	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.77
4	0.85	0.81	0.78	0.84	0.81	0.78	0.82	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.78	0.75	0.81	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.73	0.72
6	0.79	0.75	0.73	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.74	0.71	0.75	0.73	0.71	0.70
7	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.72	0.69	0.74	0.71	0.69	0.68
8	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.67	0.72	0.69	0.67	0.66
9	0.72	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.66	0.65
10	0.70	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.63



Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	5365.25	5337.17	4895.62	3865.51	2186.84	852.82	504.32	38.92	14.42
45.0	5382.31	5185.76	4576.84	3333.67	1656.65	773.54	328.69	19.88	13.05
90.0	5361.39	4974.90	4158.41	2640.50	1057.41	686.33	137.37	14.65	12.50
135.0	5407.64	5054.18	4361.02	3029.20	1407.24	799.97	309.42	17.12	13.21
180.0	5365.25	4984.26	4298.80	3081.51	1084.23	766.33	269.12	18.17	13.16
225.0	5382.31	5173.65	4571.33	3458.09	1906.05	851.23	412.70	21.91	13.27
270.0	5361.39	5351.48	4942.41	4070.32	2525.44	1026.80	663.43	285.74	14.37
315.0	5407.64	5353.68	4952.32	3843.49	2171.97	859.71	546.77	36.94	14.31
360.0	5365.25	5337.17	4895.62	3865.51	2186.84	852.82	504.32	38.92	14.42
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	12.33	11.12	10.30	9.74	9.30	8.97	8.64	8.48	8.53
45.0	11.40	10.46	9.80	9.25	8.92	8.59	8.31	8.15	8.31
90.0	11.23	10.41	9.80	9.41	9.03	8.81	8.64	9.80	9.14
135.0	11.62	10.74	10.13	9.63	9.30	9.08	8.81	11.45	9.47
180.0	11.56	10.79	10.19	9.74	9.36	9.08	8.86	11.29	9.63
225.0	11.51	10.52	9.80	9.36	8.92	8.64	8.37	8.20	8.37
270.0	12.17	10.90	10.13	9.63	9.19	8.86	8.64	8.42	8.31
315.0	12.22	11.01	10.19	9.63	9.25	8.92	8.64	8.48	8.37
360.0	12.33	11.12	10.30	9.74	9.30	8.97	8.64	8.48	8.53
C/ $\gamma$ (°)	90.0								
0.0	8.20								
45.0	7.87								
90.0	7.98								
135.0	8.20								
180.0	8.26								
225.0	7.87								
270.0	8.04								
315.0	8.15								
360.0	8.20								