



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: 4-2174-E
Luminaire: LMOP009-3225DH+92.76.340.00
Report No: GC2016112306 Voltage(V): 217.9000
Test No: NT-0010 Current(A): 0.0730
LampCAT: CITIZEN CLC251 Power (W): 15.9000
Lamp flux(lm): 1738.0 PF: 0.9980
Number of Lamps: 1 Ballast type: DC
Length(mm): 100 Width(mm): 100
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 1542.26
Efficiency(%): 88.74%
Lumens(lm)/Power(W): 97.00
Central intensity(cd): 5362.356
Maximum intensity(cd): 5362.356
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.8
 [C90/270]Total=24.8
Field angle(10%Imax): [C0/180]Total=61.5
 [C90/270]Total=61.5
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
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(%): 88.74%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.362%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/11/23
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

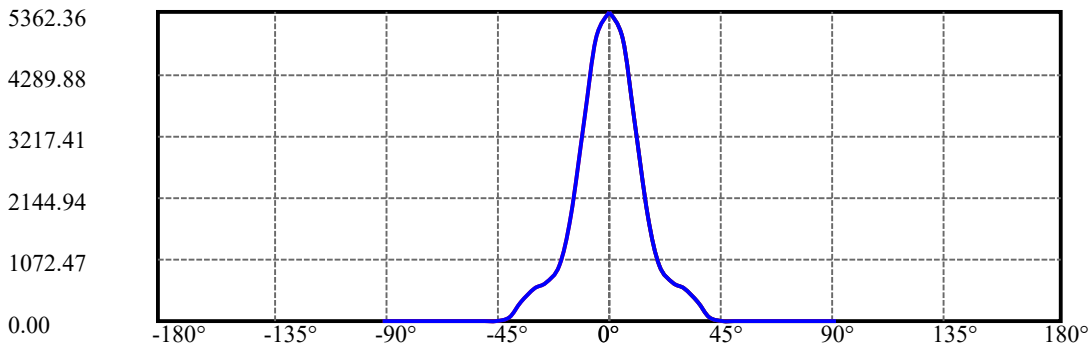
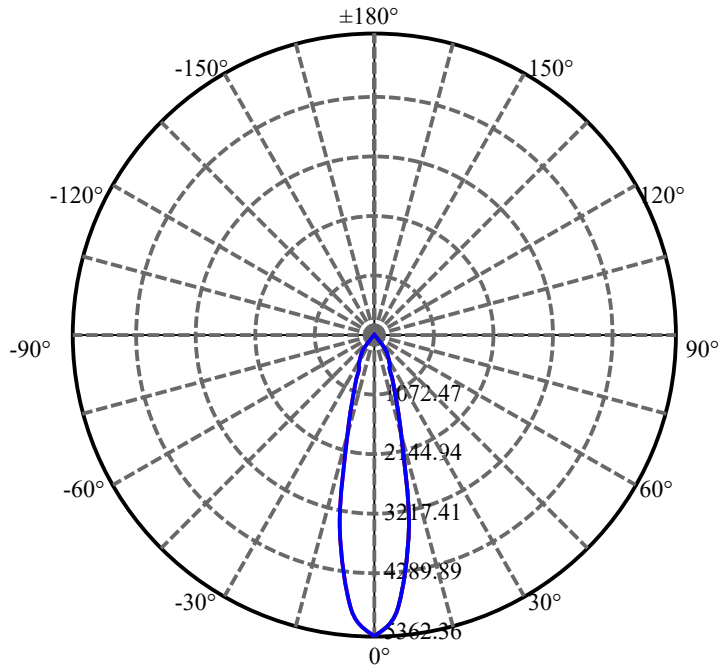
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5362.356	0.000	0	.000%	.000%
5.0	4891.348	122.580	122.58	7.053%	7.948%
10.0	3481.079	299.508	422.088	17.233%	27.368%
15.0	1829.504	315.020	737.108	18.125%	47.794%
20.0	959.681	229.868	966.976	13.226%	62.698%
25.0	666.533	170.560	1137.536	9.814%	73.758%
30.0	573.839	156.970	1294.506	9.032%	83.935%
35.0	327.606	132.744	1427.251	7.638%	92.543%
40.0	62.654	65.112	1492.363	3.746%	96.764%
45.0	10.660	13.575	1505.937	.781%	97.645%
50.0	8.231	3.817	1509.755	.220%	97.892%
55.0	8.031	3.536	1513.291	.203%	98.121%
60.0	8.031	3.713	1517.003	.214%	98.362%
65.0	8.320	3.975	1520.979	.229%	98.620%
70.0	8.912	4.363	1525.342	.251%	98.903%
75.0	8.245	4.485	1529.827	.258%	99.194%
80.0	8.024	4.353	1534.18	.250%	99.476%
85.0	7.825	4.307	1538.486	.248%	99.755%
90.0	5.974	3.778	1542.264	.217%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1294.51	74.48%	83.94%
0-40	1492.36	85.87%	96.76%
0-60	1517.00	87.28%	98.36%
0-90	1538.49	88.52%	99.76%
0-120	1538.49	88.52%	99.76%
0-180	1542.26	88.74%	100.00%
60-90	25.20	1.45%	1.63%
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%
0-28.07	1233.81	70.99%	80.00%

ZONAL LUMEN SUMMARY

0-10	422.09
10-20	544.89
20-30	327.53
30-40	197.86
40-50	17.39
50-60	7.25
60-70	8.34
70-80	8.84
80-90	4.31
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: —————

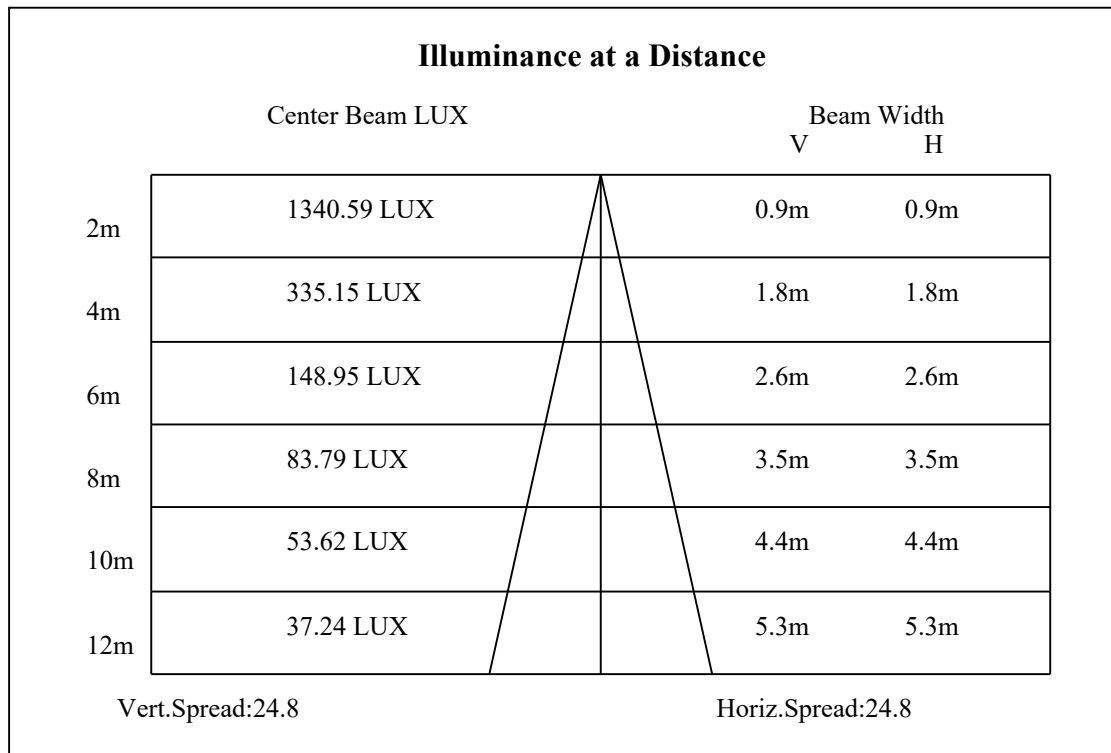
C90/C270: —————

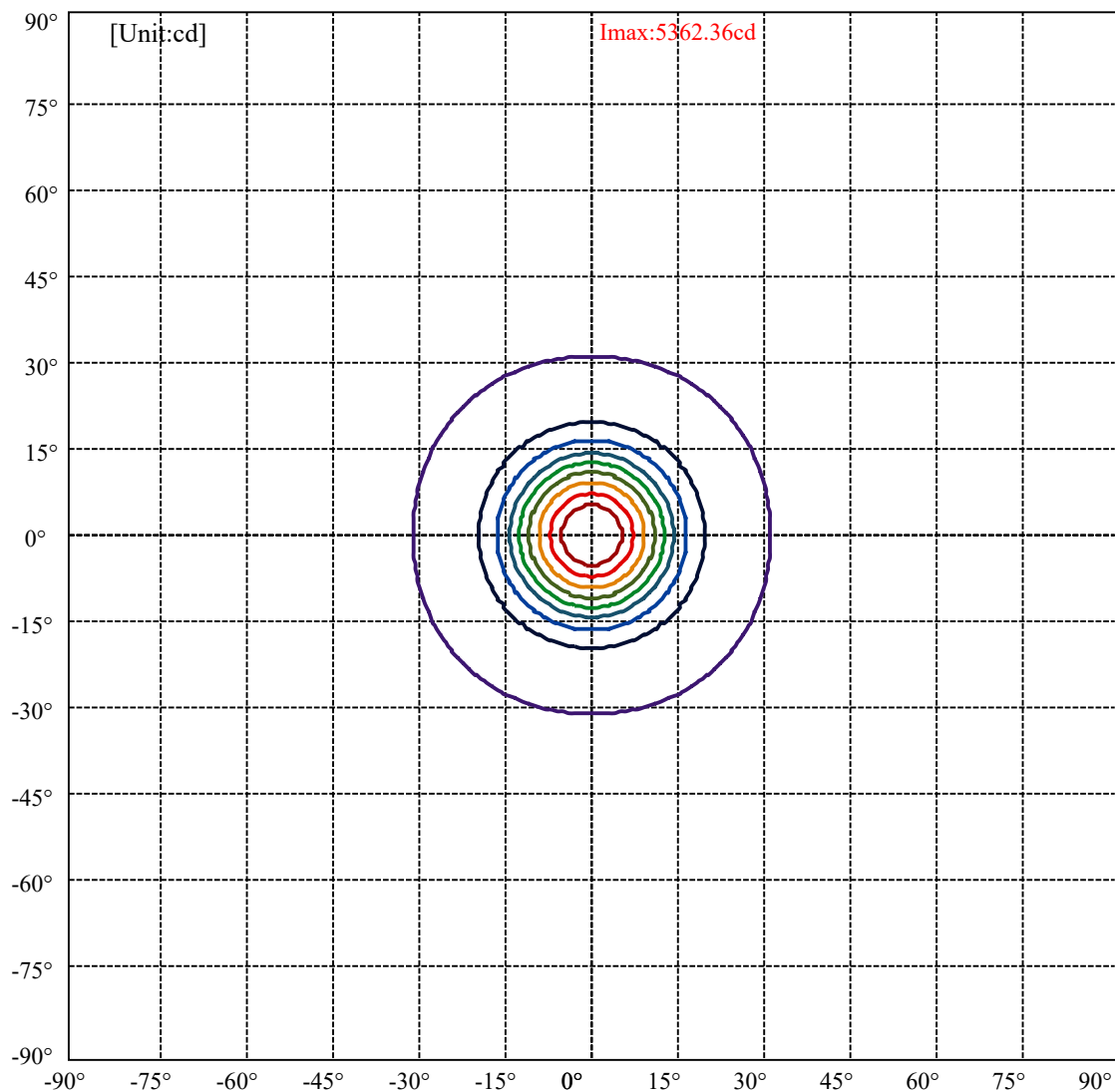
Field angle(10%Imax):C0/180Left:30.8 Right:30.8

:C90/270Left:30.8 Right:30.8

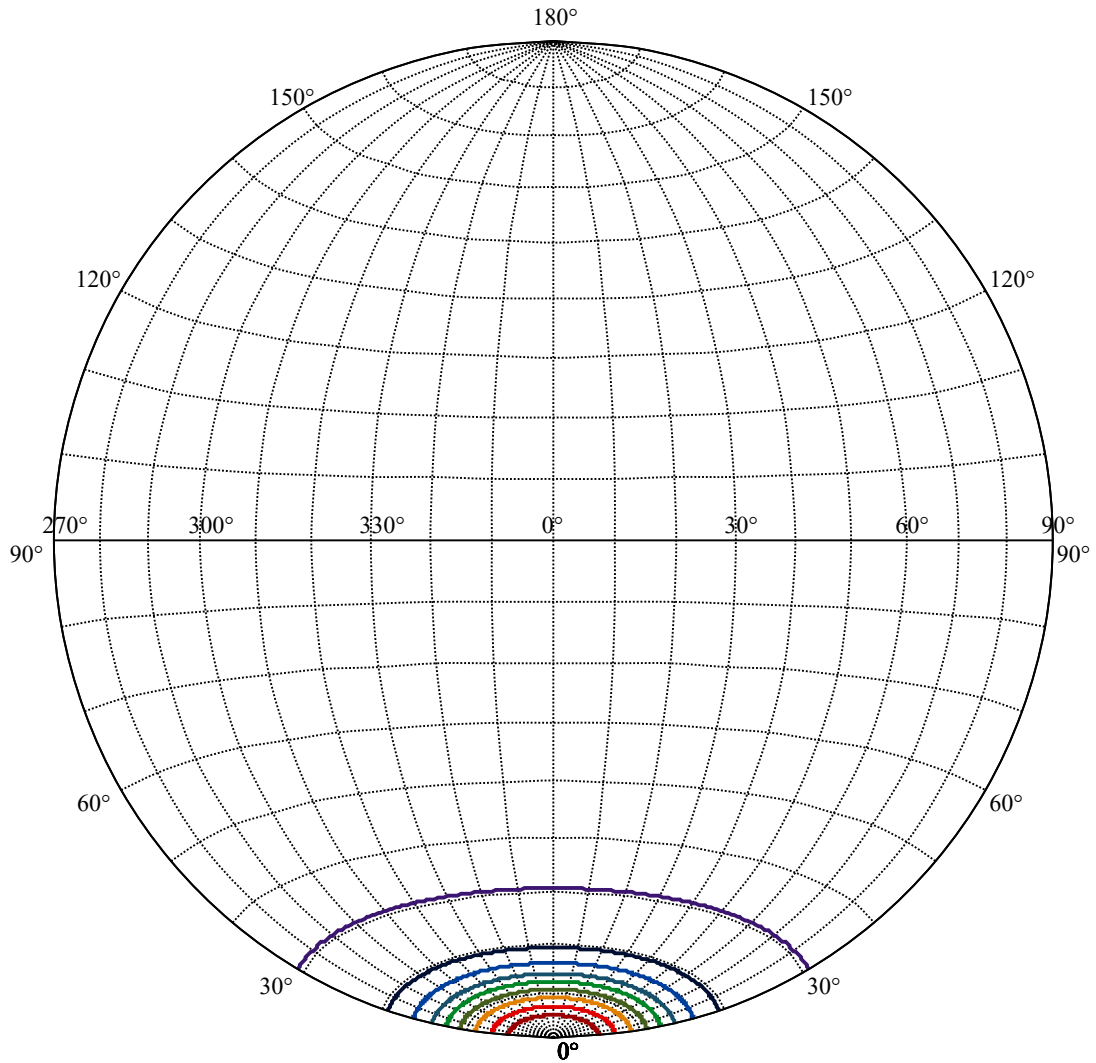
Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4

:C90/270Left:12.4 Right:12.4





(10%Imax) 536.236	—
(20%Imax) 1072.47	—
(30%Imax) 1608.71	—
(40%Imax) 2144.94	—
(50%Imax) 2681.18	—
(60%Imax) 3217.41	—
(70%Imax) 3753.65	—
(80%Imax) 4289.88	—
(90%Imax) 4826.12	—



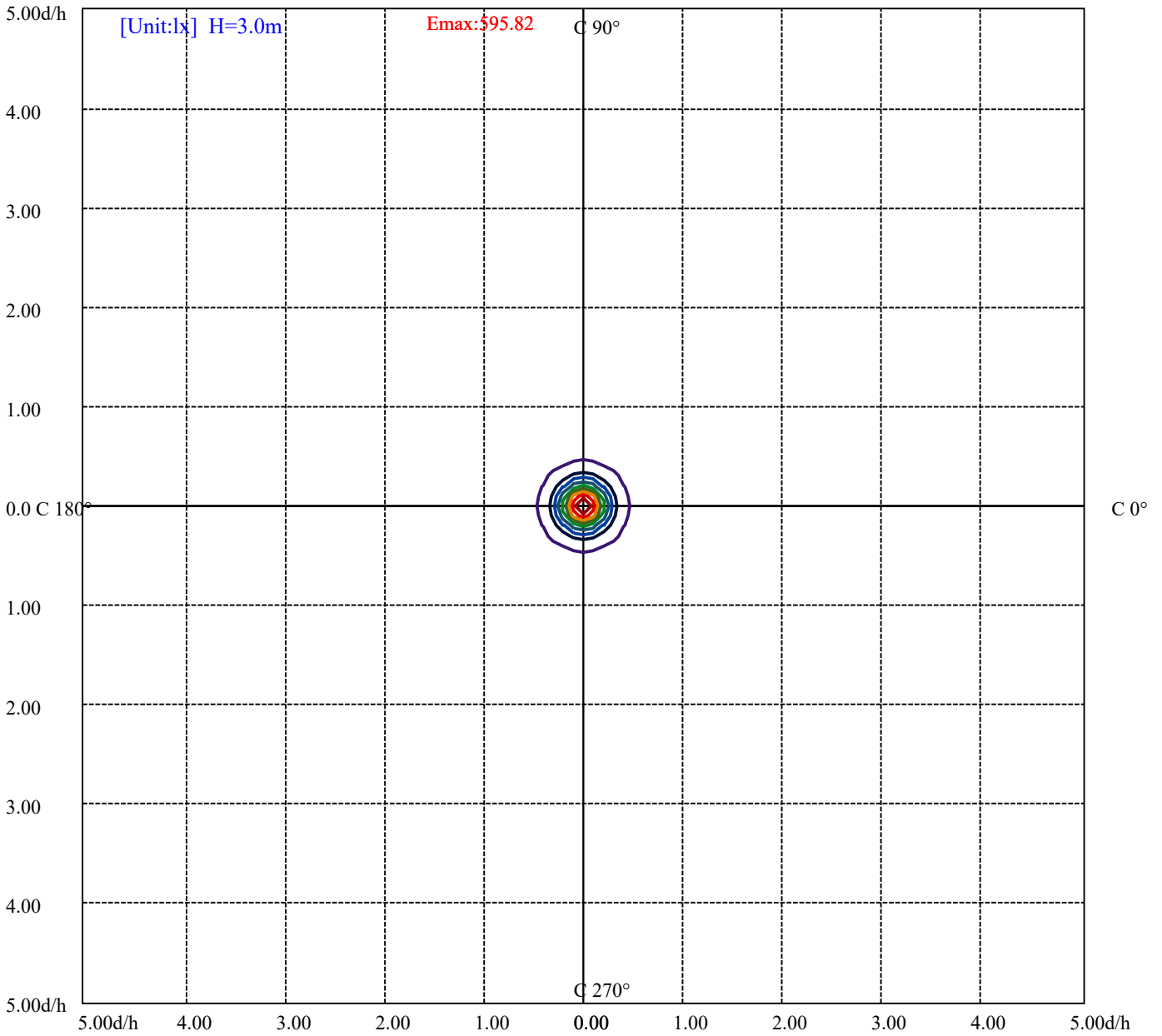
House

[Unit:cd]

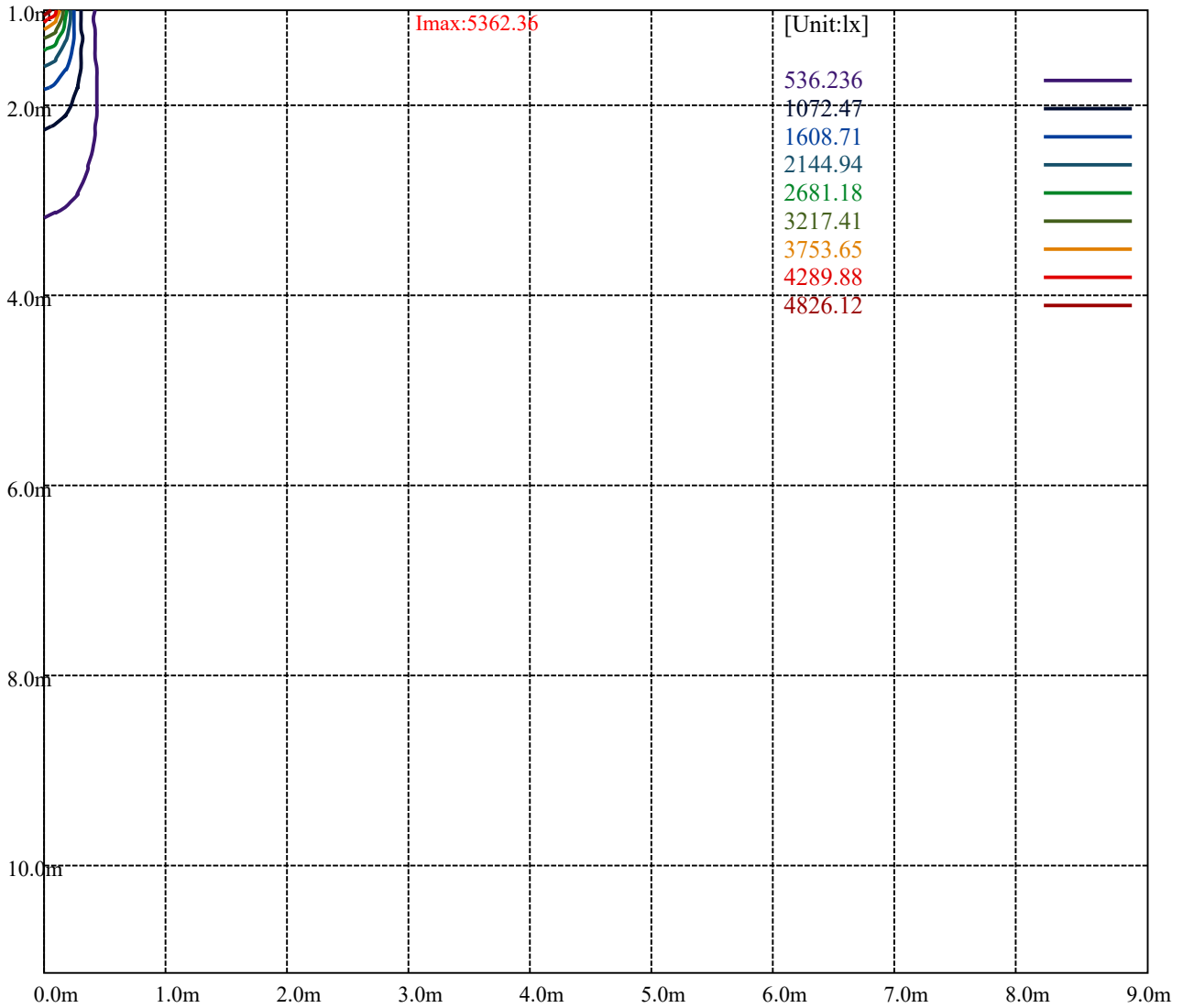
Road

Imax:5362.36

(10%Imax)	536.236	—
(20%Imax)	1072.47	—
(30%Imax)	1608.71	—
(40%Imax)	2144.94	—
(50%Imax)	2681.18	—
(60%Imax)	3217.41	—
(70%Imax)	3753.65	—
(80%Imax)	4289.88	—
(90%Imax)	4826.12	—



- (10%Emax) 59.58156
- (20%Emax) 119.1633
- (30%Emax) 178.7444
- (40%Emax) 238.3267
- (50%Emax) 297.9078
- (60%Emax) 357.49
- (70%Emax) 417.0711
- (80%Emax) 476.6522
- (90%Emax) 536.2344



Luminance Table

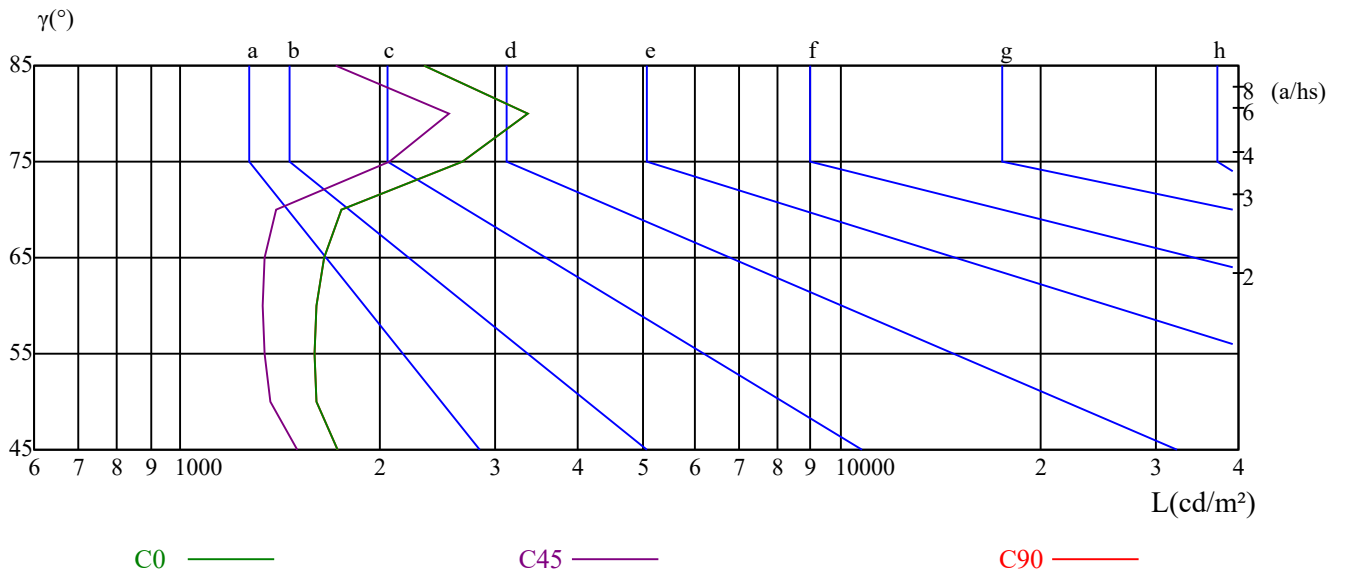
γ	45	50	55	60	65	70	75	80	85
C0	1734	1605	1591	1606	1655	1753	2667	3353	2333
C45	1504	1371	1338	1329	1345	1396	2077	2543	1715
C90	1734	1605	1591	1606	1655	1753	2667	3353	2333

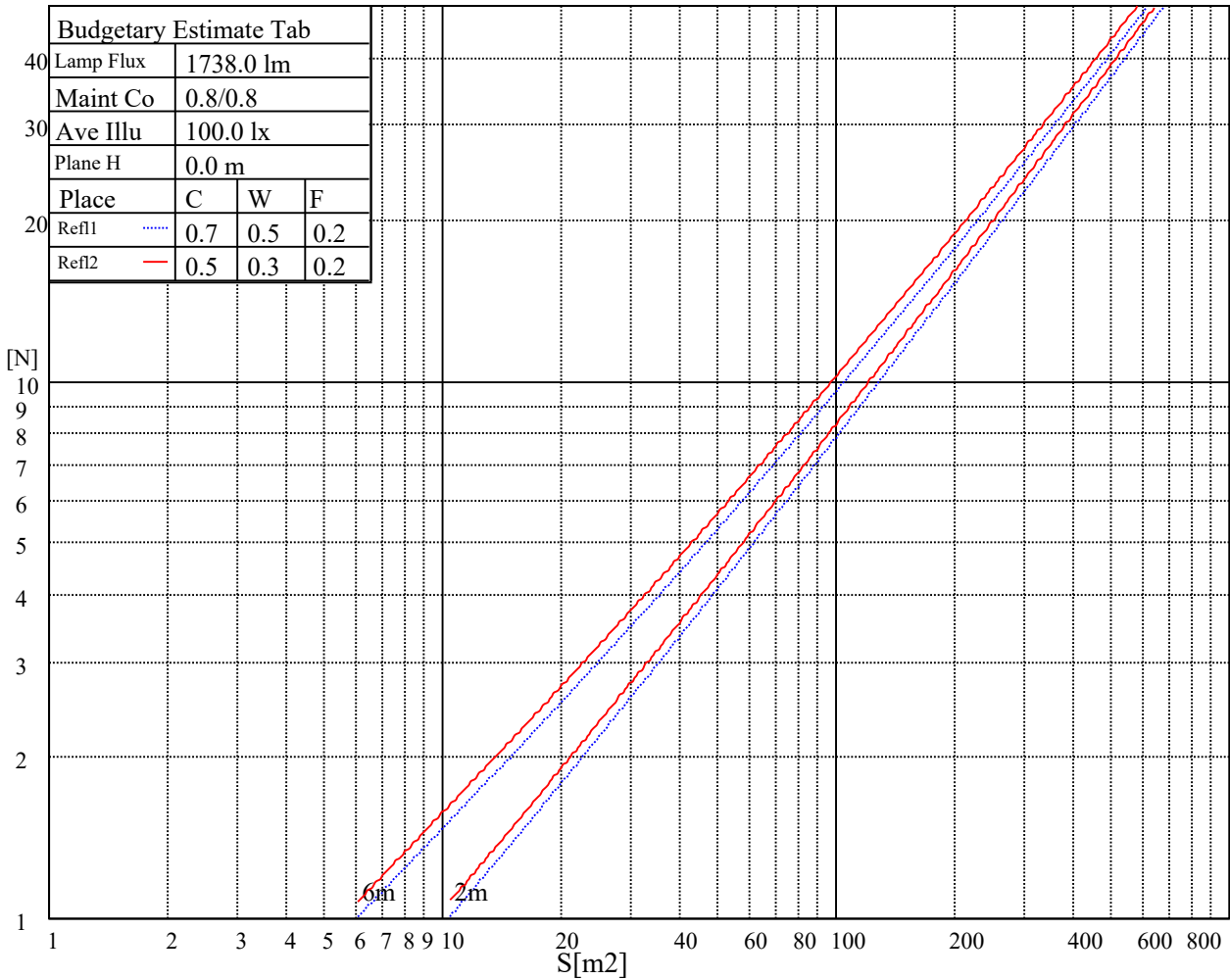
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3732	3732	3732	8494	8494	8494	17945	17945	17945

Glare Table

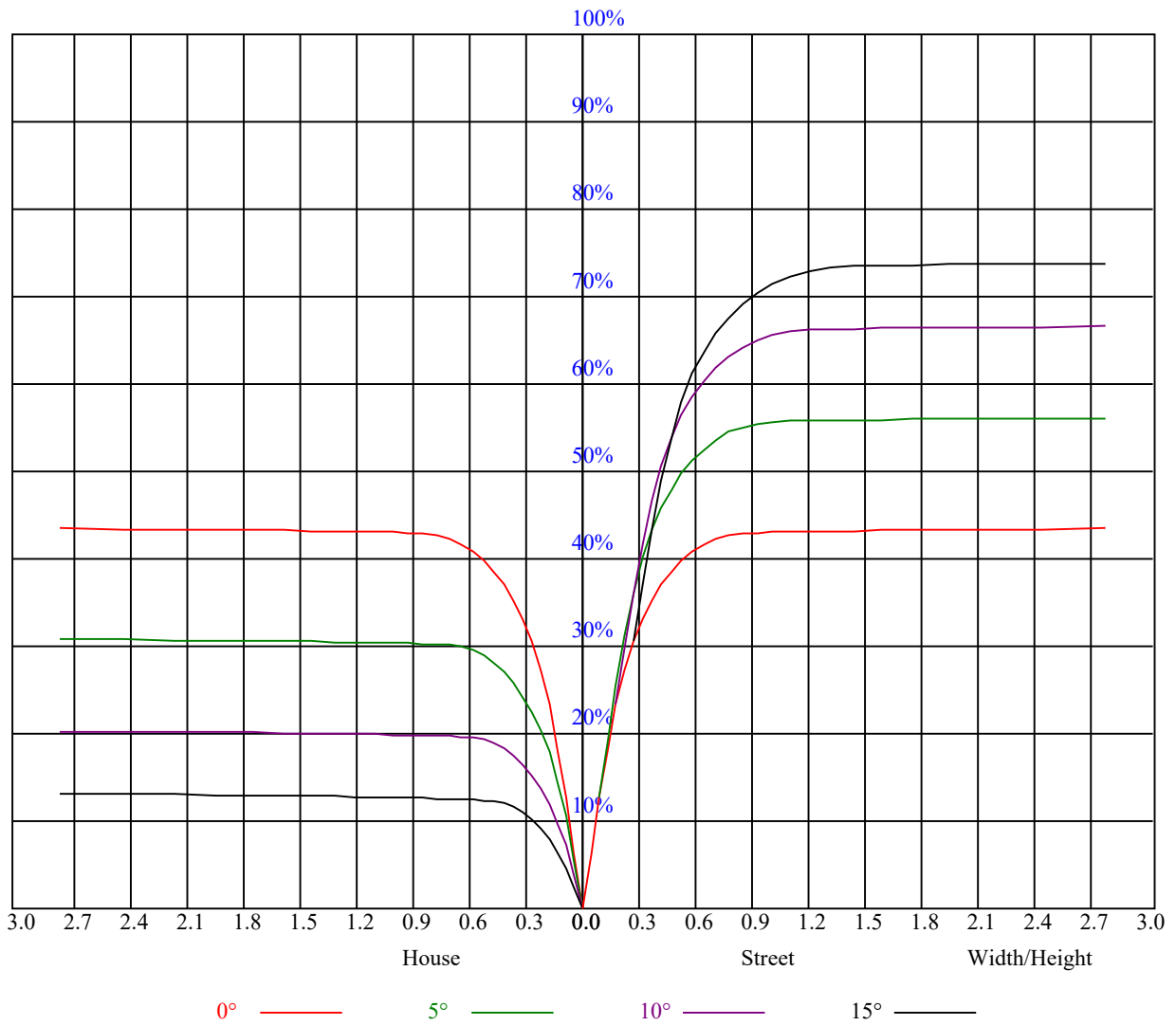
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	0.99	0.97	0.95	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.86	0.84
2	0.93	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.81	0.80
3	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.78	0.76
4	0.84	0.80	0.77	0.83	0.80	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.80	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.70
6	0.77	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
8	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62
9	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.60	0.59
10	0.66	0.61	0.59	0.65	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.57



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	5370.20	4849.37	3509.29	1924.77	987.71	667.28	586.35	319.88	24.17
45.0	5376.81	4651.16	3124.45	1624.16	837.41	644.71	549.46	297.86	21.69
90.0	5326.71	4385.24	2590.95	1075.09	754.16	616.96	498.48	129.11	15.86
135.0	5375.71	4836.15	3180.06	1674.82	855.03	645.81	569.83	290.15	23.18
180.0	5370.20	4904.97	3347.98	1663.25	847.37	649.78	573.25	299.67	33.25
225.0	5376.81	5173.10	3977.82	2094.90	1037.10	685.78	607.22	419.92	53.24
270.0	5326.71	5332.76	4381.94	2573.34	1309.24	746.01	618.28	490.55	281.89
315.0	5375.71	4998.02	3736.13	2005.70	1049.43	675.93	587.84	373.72	47.95
360.0	5370.20	4849.37	3509.29	1924.77	987.71	667.28	586.35	319.88	24.17
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	9.74	9.30	9.25	9.47	9.36	9.08	9.14	9.52	9.47
45.0	9.91	9.80	9.86	10.02	10.57	12.00	11.01	10.19	9.69
90.0	9.41	9.19	9.25	9.47	11.78	15.91	11.34	9.97	9.41
135.0	8.53	8.09	7.87	7.82	7.71	7.54	7.82	7.87	7.60
180.0	7.60	7.10	6.83	6.72	6.66	6.55	6.50	6.50	6.28
225.0	7.87	6.94	6.50	6.28	6.17	6.11	6.06	6.00	5.89
270.0	23.56	7.32	6.88	6.66	6.61	6.50	6.55	6.50	6.50
315.0	8.64	8.09	7.82	7.82	7.71	7.60	7.54	7.65	7.76
360.0	9.74	9.30	9.25	9.47	9.36	9.08	9.14	9.52	9.47
C/ γ (°)	90.0								
0.0	6.61								
45.0	6.06								
90.0	5.84								
135.0	5.89								
180.0	5.78								
225.0	5.67								
270.0	5.89								
315.0	6.06								
360.0	6.61								