
Nata

LumCAT: 1658-S
Luminaire: 92.70.124.00
Report No: NT2018040905
Test No: nata-0100
LampCAT: SEOUL SAWX10
Lamp flux(lm): 1663.1
Number of Lamps: 1
Length(mm): 47
Phm Type: C

Voltage(V): 34.8000
Current(A): 0.3500
Power (W): 12.1800
PF: 0.0000
Ballast type: DC
Width(mm): 47
Height(mm): 0

Photometric Results

Lumens(lm): 1455.04
Efficiency(%): 87.49%
Lumens(lm)/Power(W): 119.46
Central intensity(cd): 3468.140
Maximum intensity(cd): 3468.140
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.8
 [C90/270]Total=34.8
Field angle(10%Imax): [C0/180]Total=65.7
 [C90/270]Total=65.7
Maximum s/h(1/2): C0_180=0.57 C90_270=0.57
Maximum s/h(1/4): C0_180=0.60 C90_270=0.60
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.65%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.447%

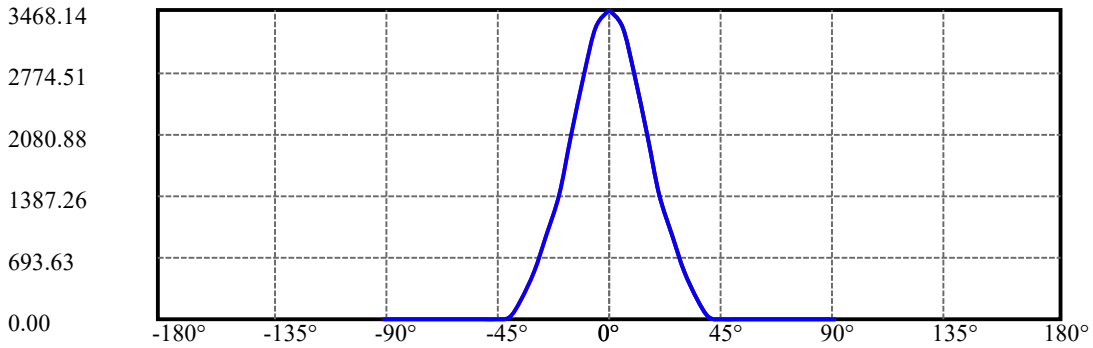
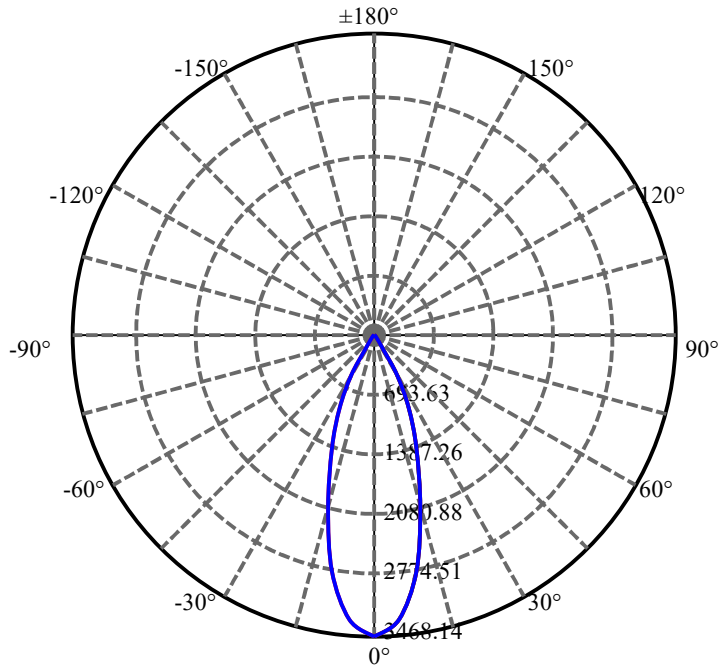
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3468.140	20.740	20.74	1.247%	1.425%
5.0	3271.864	156.308	177.048	9.399%	12.168%
10.0	2751.031	261.852	438.9	15.745%	30.164%
15.0	2052.365	291.166	730.065	17.507%	50.175%
20.0	1395.384	261.598	991.663	15.730%	68.154%
25.0	920.171	213.160	1204.824	12.817%	82.803%
30.0	532.437	145.924	1350.748	8.774%	92.832%
35.0	206.400	64.892	1415.64	3.902%	97.292%
40.0	25.994	9.158	1424.798	.551%	97.921%
45.0	7.660	2.969	1427.767	.179%	98.125%
50.0	6.965	2.924	1430.691	.176%	98.326%
55.0	6.662	2.991	1433.683	.180%	98.532%
60.0	6.483	3.077	1436.76	.185%	98.744%
65.0	6.373	3.166	1439.926	.190%	98.961%
70.0	6.331	3.261	1443.187	.196%	99.185%
75.0	6.290	3.330	1446.518	.200%	99.414%
80.0	6.276	3.388	1449.906	.204%	99.647%
85.0	6.270	3.423	1453.329	.206%	99.882%
90.0	6.249	1.713	1455.042	.103%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1350.75	81.22%	92.83%
0-40	1424.80	85.67%	97.92%
0-60	1436.76	86.39%	98.74%
0-90	1453.33	87.39%	99.88%
0-120	1453.33	87.39%	99.88%
0-180	1455.04	87.49%	100.00%
60-90	19.65	1.18%	1.35%
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%
0-24.04	1164.03	69.99%	80.00%

ZONAL LUMEN SUMMARY

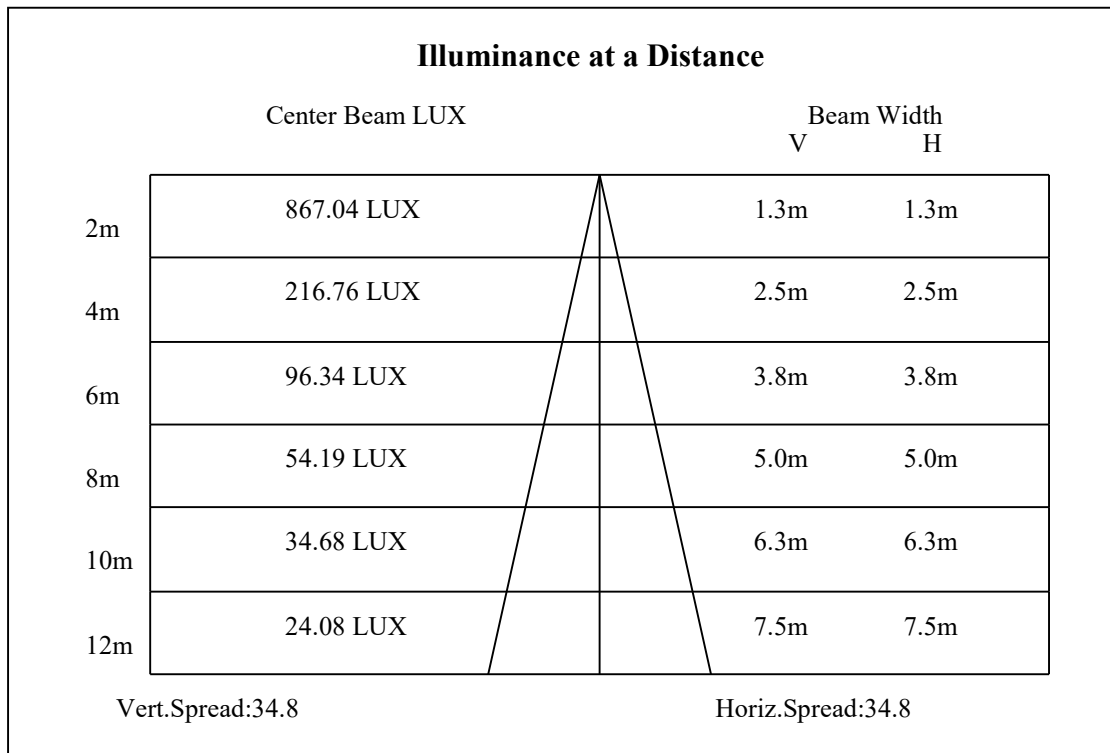
0-10	438.90
10-20	552.76
20-30	359.08
30-40	74.05
40-50	5.89
50-60	6.07
60-70	6.43
70-80	6.72
80-90	3.42
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

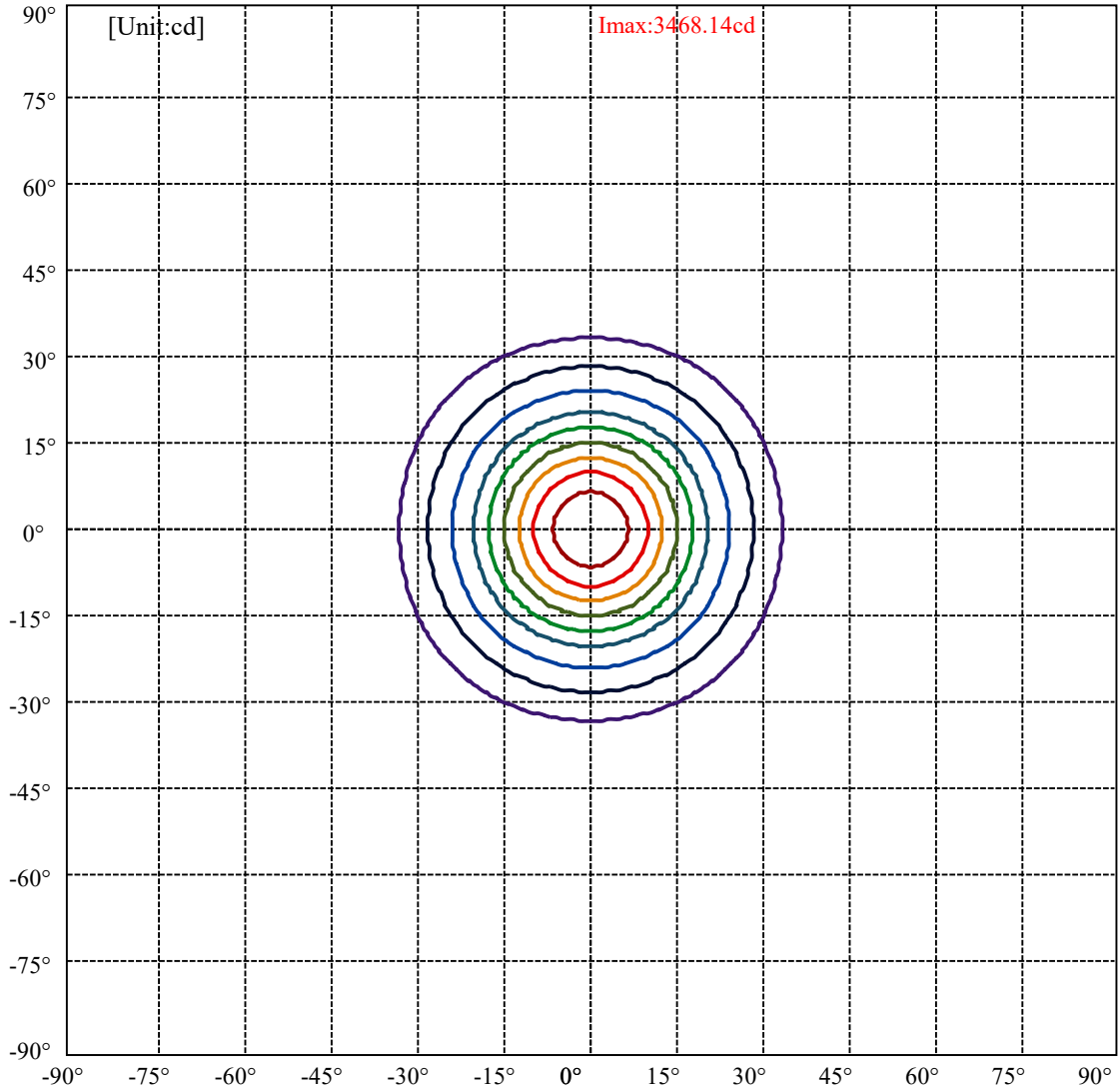


C0(Max): ———
C0/C180: ———
C90/C270: ———

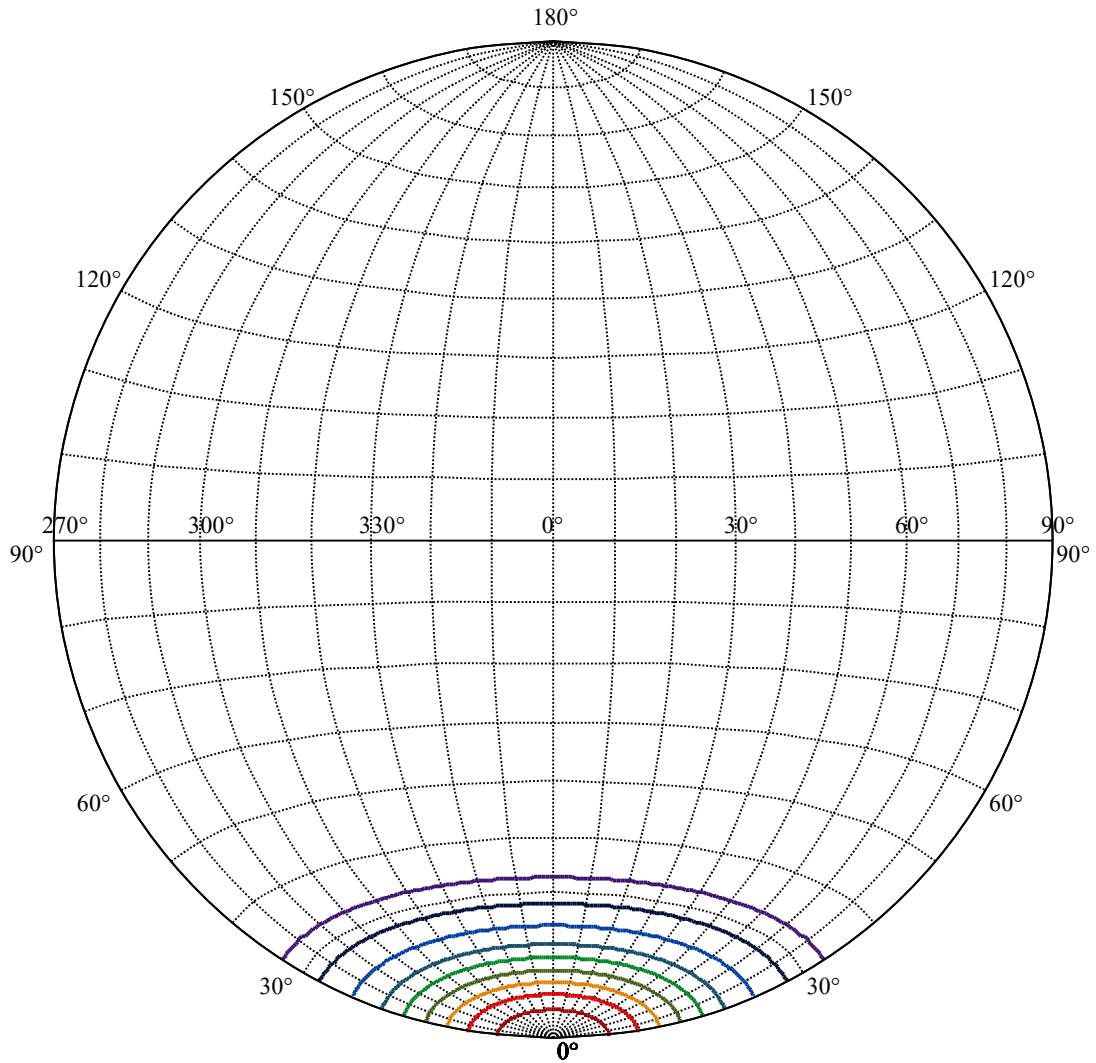
Field angle(10%Imax):C0/180Left:32.8 Right:32.8
:C90/270Left:32.8 Right:32.8

Beam Angle(50%Imax):C0/180Left:17.4 Right:17.4
:C90/270Left:17.4 Right:17.4





(10%Imax) 346.814	—
(20%Imax) 693.628	—
(30%Imax) 1040.44	—
(40%Imax) 1387.26	—
(50%Imax) 1734.07	—
(60%Imax) 2080.88	—
(70%Imax) 2427.7	—
(80%Imax) 2774.51	—
(90%Imax) 3121.33	—



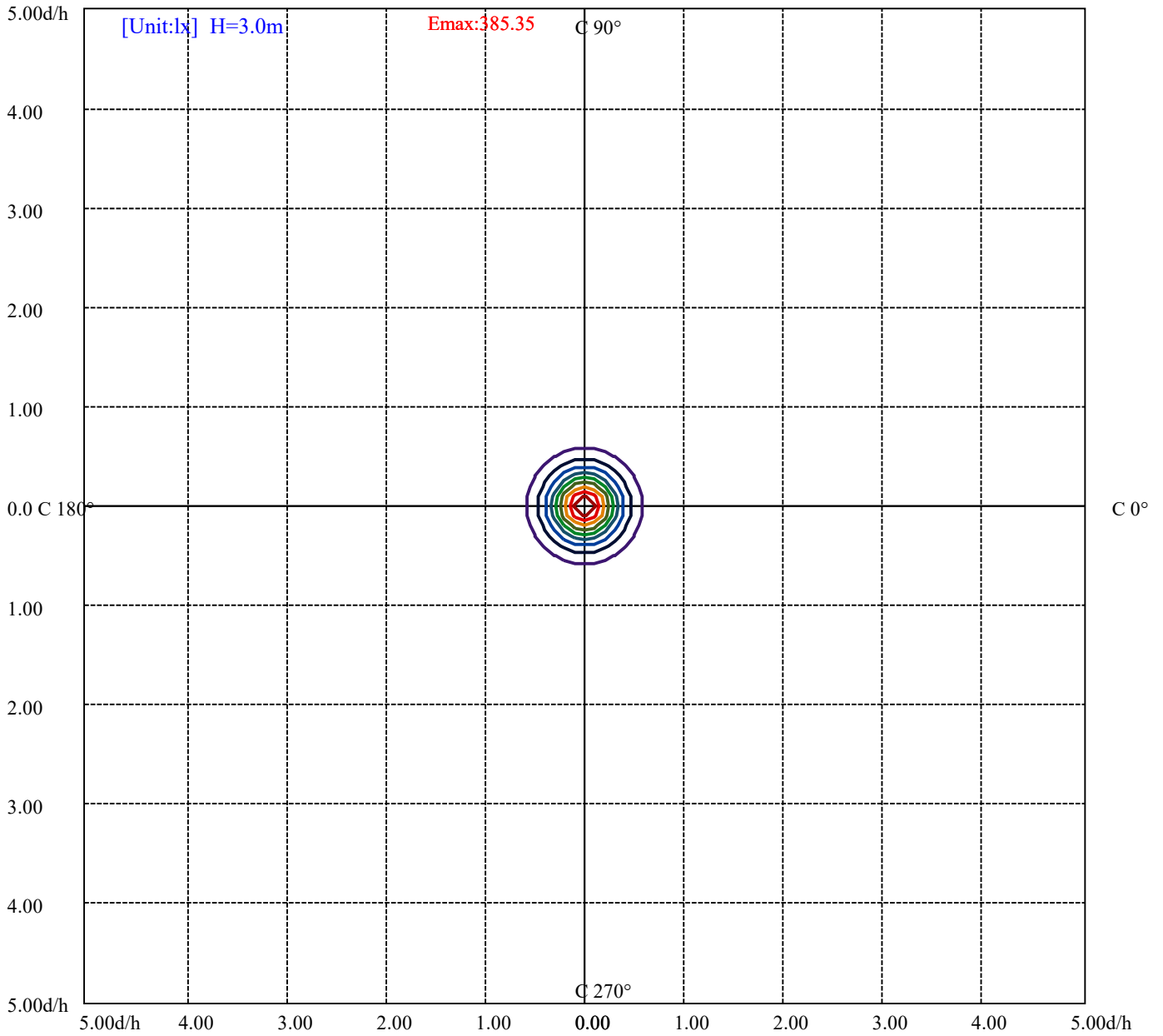
House

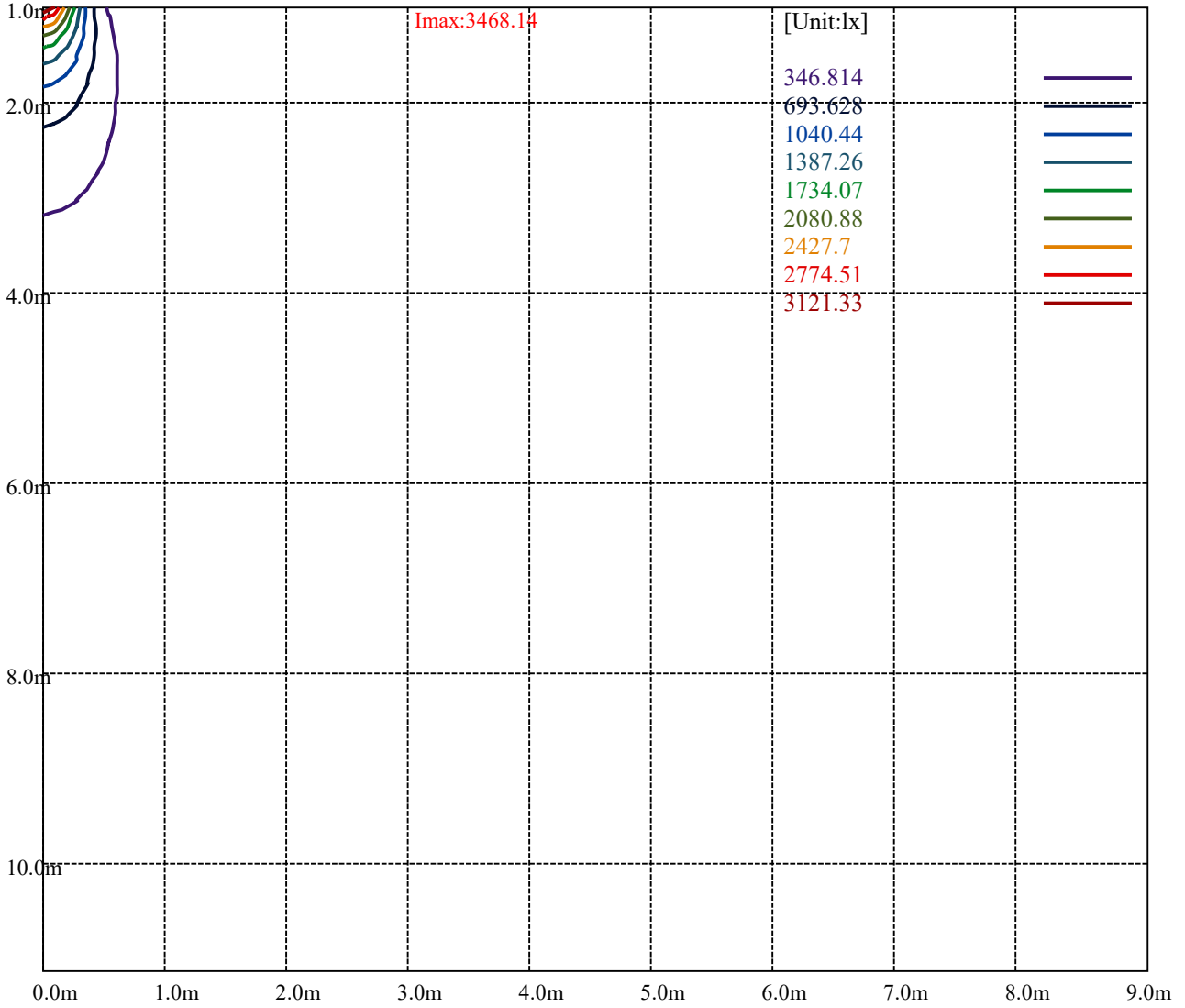
[Unit:cd]

Road

Imax:3468.14

(10%Imax)	346.814	—
(20%Imax)	693.628	—
(30%Imax)	1040.44	—
(40%Imax)	1387.26	—
(50%Imax)	1734.07	—
(60%Imax)	2080.88	—
(70%Imax)	2427.7	—
(80%Imax)	2774.51	—
(90%Imax)	3121.33	—





Luminance Table

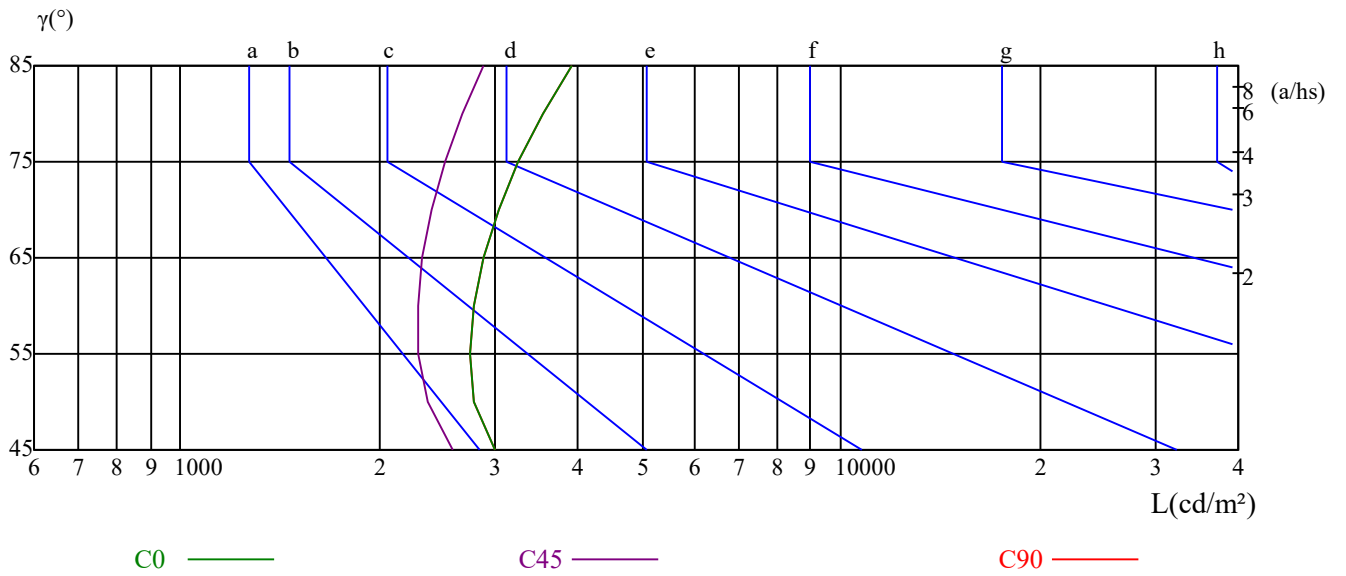
γ	45	50	55	60	65	70	75	80	85
C0	2993	2786	2751	2788	2882	3043	3253	3542	3925
C45	2577	2363	2297	2290	2325	2408	2518	2674	2877
C90	2993	2786	2751	2788	2882	3043	3253	3542	3925

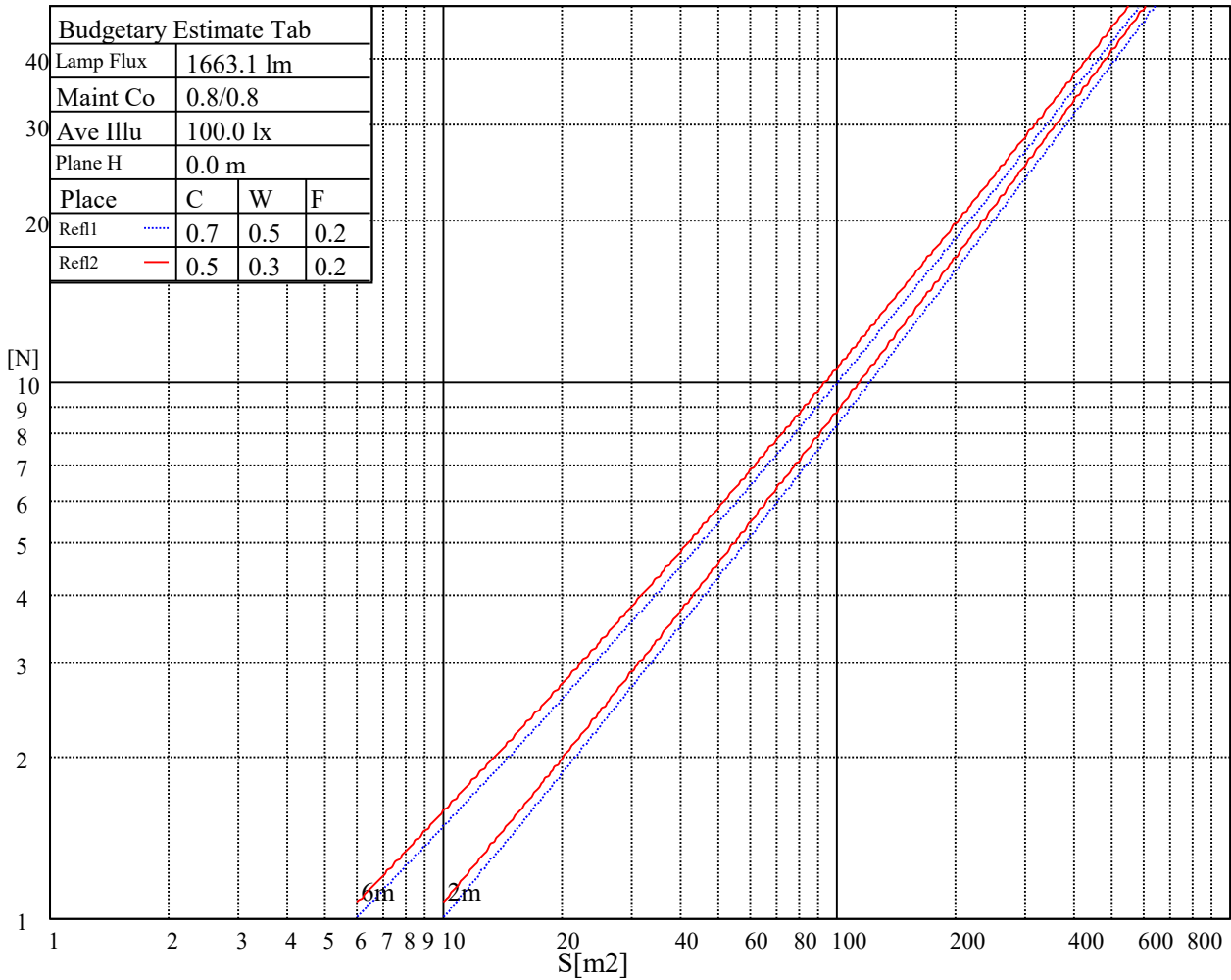
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6826	6826	6826	11002	11002	11002	32565	32565	32565

Glare Table

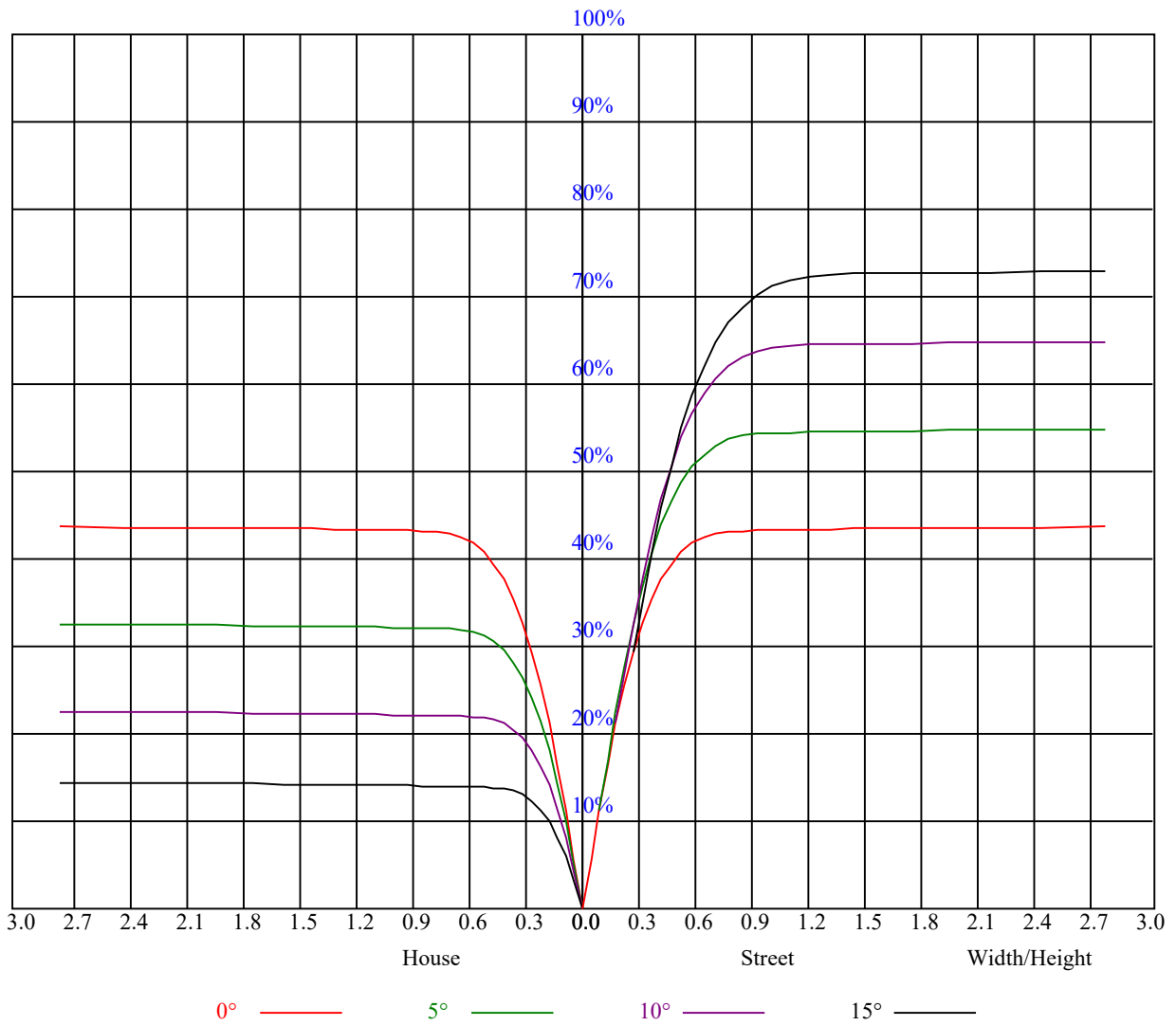
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.90	0.90	0.90	0.89
1	0.98	0.96	0.93	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.82
2	0.93	0.89	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.80	0.79
3	0.88	0.84	0.81	0.87	0.83	0.81	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
4	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.77	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
7	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.65	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
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	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	0.65	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	3457.54	3371.10	2948.27	2282.64	1615.35	1044.97	661.78	294.00	37.99
45.0	3459.74	3385.42	2962.03	2311.82	1646.19	1065.89	679.40	297.86	48.72
90.0	3477.36	3306.69	2739.61	2109.76	1473.86	945.54	571.38	218.90	26.37
135.0	3477.91	3295.68	2801.82	2097.10	1494.23	954.68	569.28	289.05	26.81
180.0	3457.54	3178.41	2560.67	1844.94	1093.64	798.32	426.14	95.91	15.58
225.0	3459.74	3142.07	2553.52	1828.97	1086.43	782.74	400.43	100.15	14.31
270.0	3477.36	3237.32	2740.16	2012.86	1376.96	896.87	489.45	205.03	19.49
315.0	3477.91	3258.24	2702.17	1930.83	1376.41	872.37	461.65	150.30	18.66
360.0	3457.54	3371.10	2948.27	2282.64	1615.35	1044.97	661.78	294.00	37.99
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.93	6.99	6.66	6.50	6.33	6.33	6.28	6.28	6.28
45.0	8.81	7.10	6.77	6.55	6.44	6.39	6.33	6.33	6.28
90.0	7.65	7.05	6.72	6.50	6.39	6.33	6.28	6.28	6.28
135.0	7.65	7.10	6.72	6.55	6.39	6.33	6.28	6.22	6.22
180.0	7.32	6.94	6.66	6.50	6.39	6.39	6.28	6.28	6.28
225.0	7.27	6.88	6.61	6.44	6.39	6.33	6.33	6.33	6.33
270.0	7.38	6.83	6.61	6.44	6.33	6.28	6.28	6.28	6.28
315.0	7.27	6.83	6.55	6.39	6.33	6.28	6.28	6.22	6.22
360.0	7.93	6.99	6.66	6.50	6.33	6.33	6.28	6.28	6.28
C/γ(°)	90.0								
0.0	6.28								
45.0	6.28								
90.0	6.22								
135.0	6.22								
180.0	6.22								
225.0	6.28								
270.0	6.28								
315.0	6.22								
360.0	6.28								