
Nata

LumCAT: 2-1672-M
Luminaire: 92.70.131.00
Report No: NT2017071902
Test No: GC2017071902
LampCAT: SEOUL SAWx1
Lamp flux(lm): 2937.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 34.7600
Current(A): 0.6000
Power (W): 20.8560
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 2654.23
Efficiency(%): 90.37%
Lumens(lm)/Power(W): 127.26
Central intensity(cd): 8747.180
Maximum intensity(cd): 8747.180
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.5
 [C90/270]Total=26.5
Field angle(10%Imax): [C0/180]Total=61.4
 [C90/270]Total=61.4
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
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(%): 90.37%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.728%

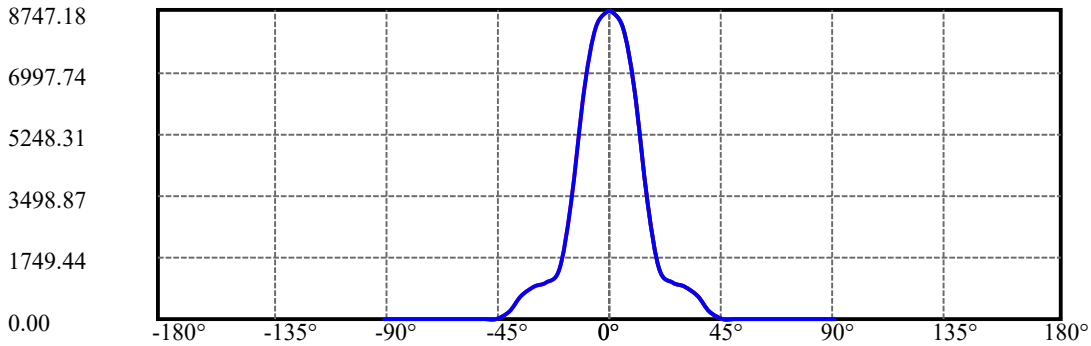
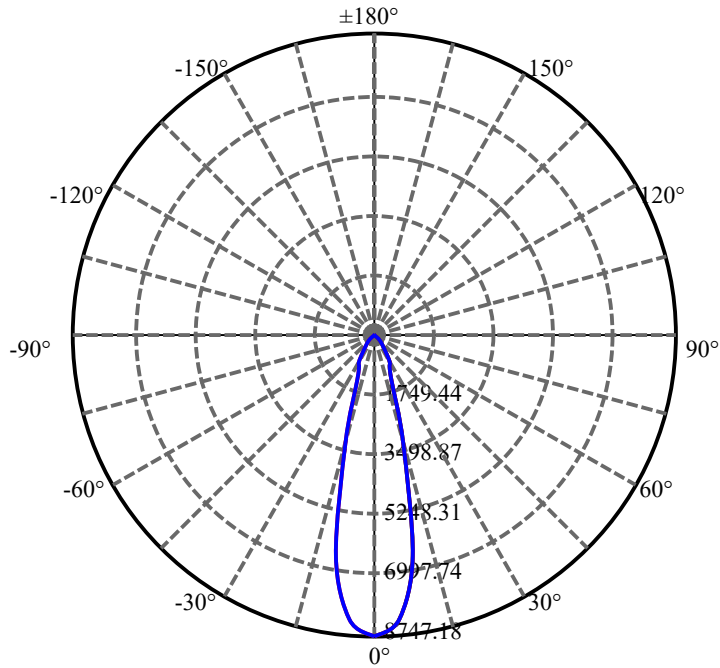
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8747.179	0.000	0	.000%	.000%
5.0	8259.324	203.308	203.308	6.922%	7.660%
10.0	6515.898	528.556	731.864	17.996%	27.574%
15.0	3238.158	578.604	1310.468	19.701%	49.373%
20.0	1399.158	382.180	1692.648	13.013%	63.772%
25.0	1015.809	253.285	1945.933	8.624%	73.315%
30.0	914.022	244.222	2190.155	8.315%	82.516%
35.0	627.291	226.969	2417.124	7.728%	91.067%
40.0	217.862	141.007	2558.132	4.801%	96.380%
45.0	21.454	44.311	2602.443	1.509%	98.049%
50.0	13.280	7.018	2609.461	.239%	98.313%
55.0	12.188	5.537	2614.999	.189%	98.522%
60.0	11.485	5.472	2620.471	.186%	98.728%
65.0	11.109	5.493	2625.964	.187%	98.935%
70.0	10.803	5.548	2631.512	.189%	99.144%
75.0	10.657	5.609	2637.121	.191%	99.356%
80.0	10.546	5.673	2642.795	.193%	99.569%
85.0	10.469	5.710	2648.505	.194%	99.784%
90.0	10.421	5.720	2654.225	.195%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2190.16	74.57%	82.52%
0-40	2558.13	87.10%	96.38%
0-60	2620.47	89.22%	98.73%
0-90	2648.51	90.18%	99.78%
0-120	2648.51	90.18%	99.78%
0-180	2654.23	90.37%	100.00%
60-90	33.51	1.14%	1.26%
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%
0-28.63	2123.38	72.30%	80.00%

ZONAL LUMEN SUMMARY

0-10	731.86
10-20	960.78
20-30	497.51
30-40	367.98
40-50	51.33
50-60	11.01
60-70	11.04
70-80	11.28
80-90	5.71
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: —————

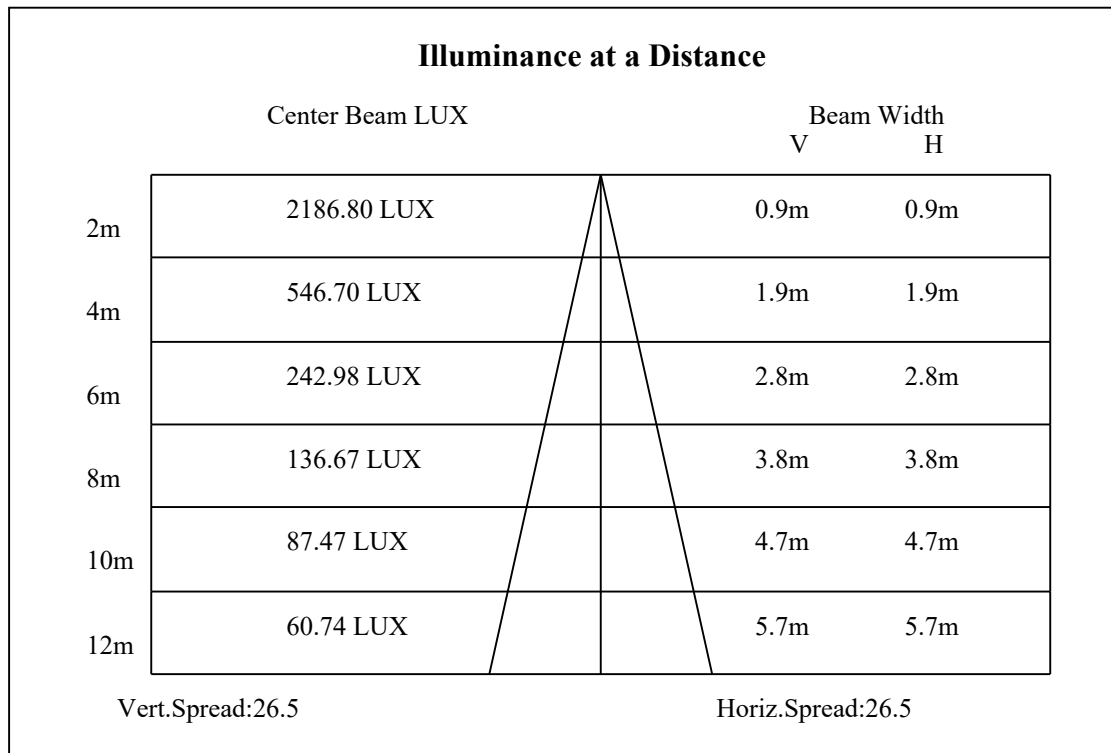
C90/C270: —————

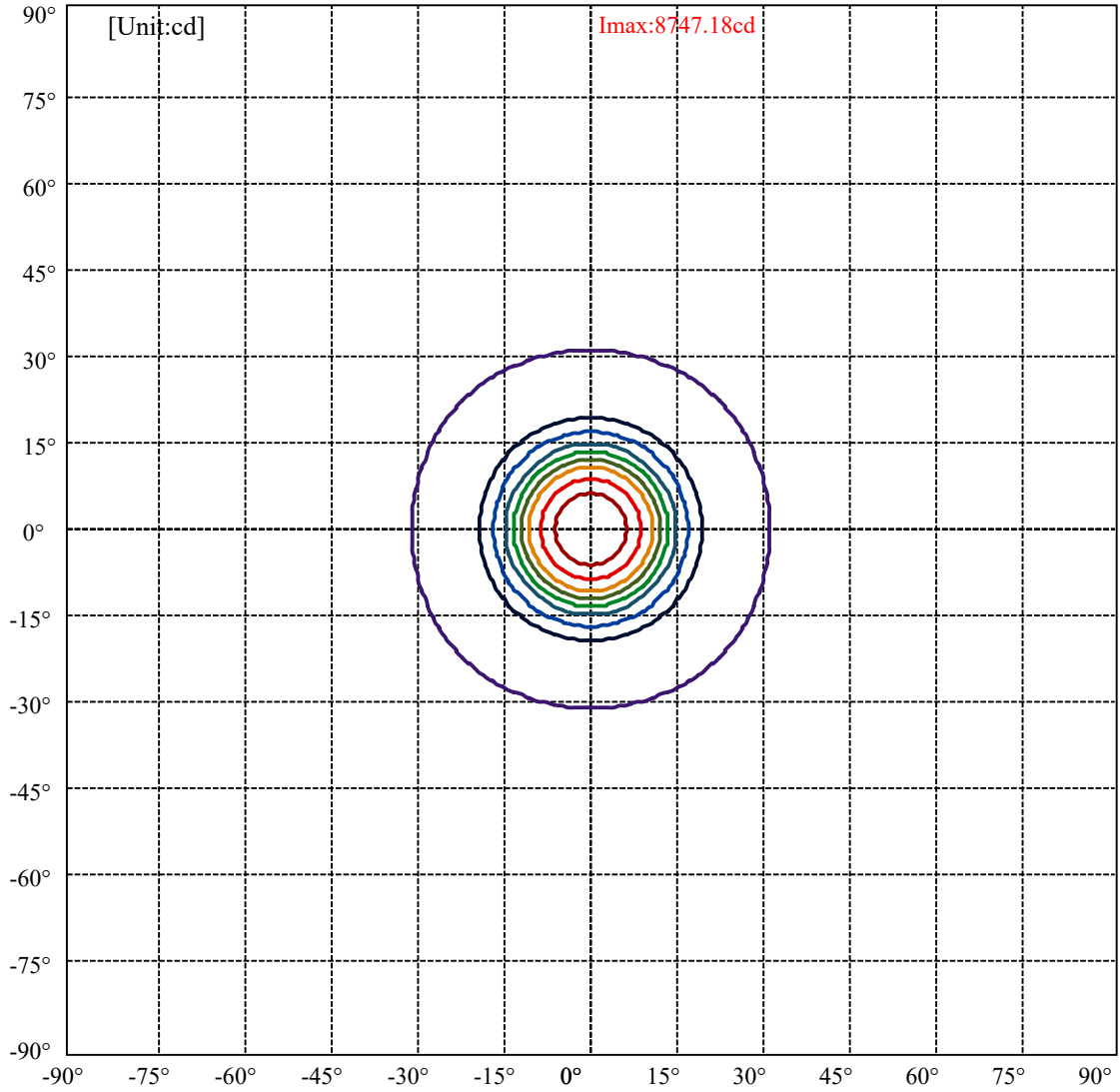
Field angle(10%Imax):C0/180Left:30.7 Right:30.7

:C90/270Left:30.7 Right:30.7

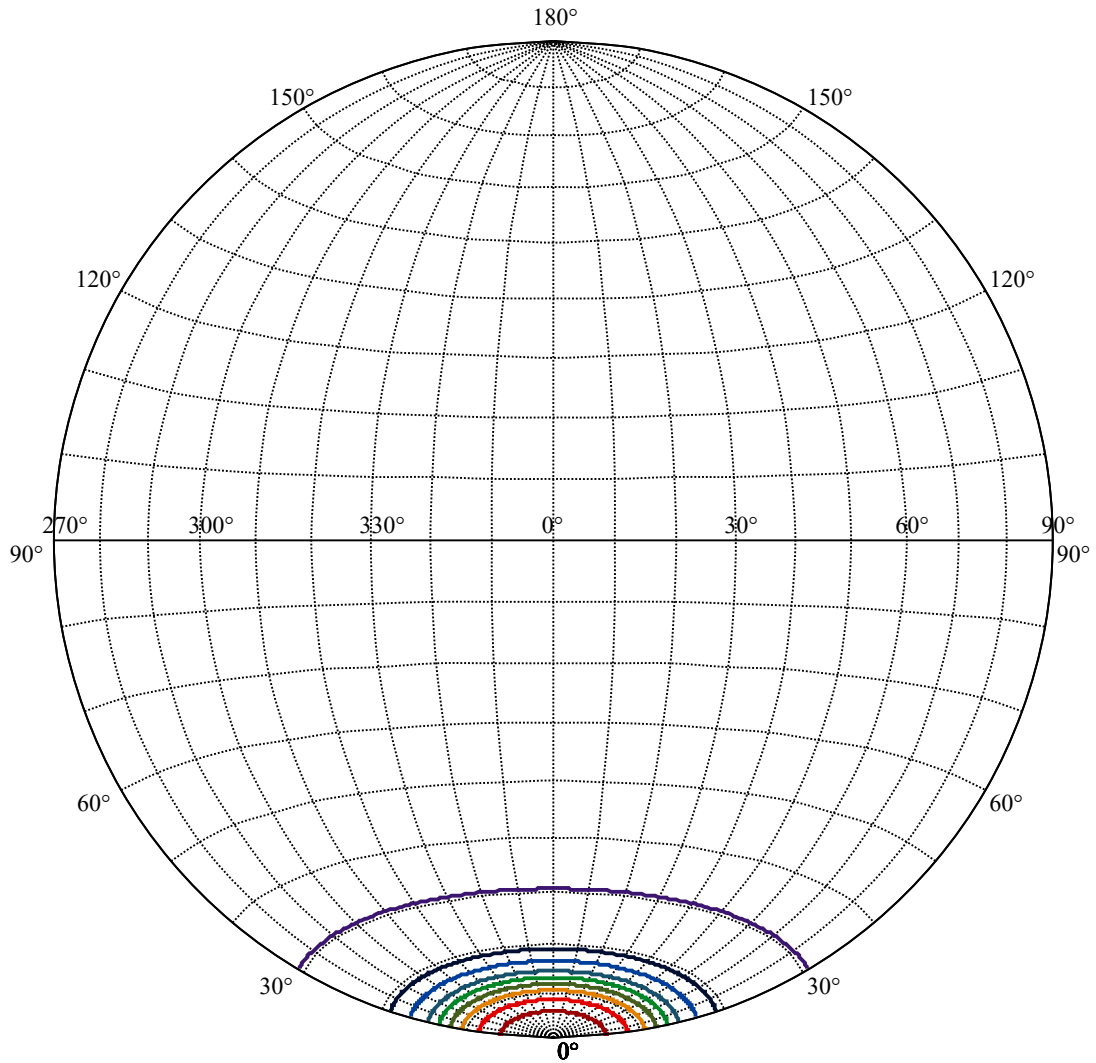
Beam Angle(50%Imax):C0/180Left:13.3 Right:13.3

:C90/270Left:13.3 Right:13.3





(10%Imax) 874.718	—
(20%Imax) 1749.44	—
(30%Imax) 2624.15	—
(40%Imax) 3498.87	—
(50%Imax) 4373.59	—
(60%Imax) 5248.31	—
(70%Imax) 6123.03	—
(80%Imax) 6997.74	—
(90%Imax) 7872.46	—



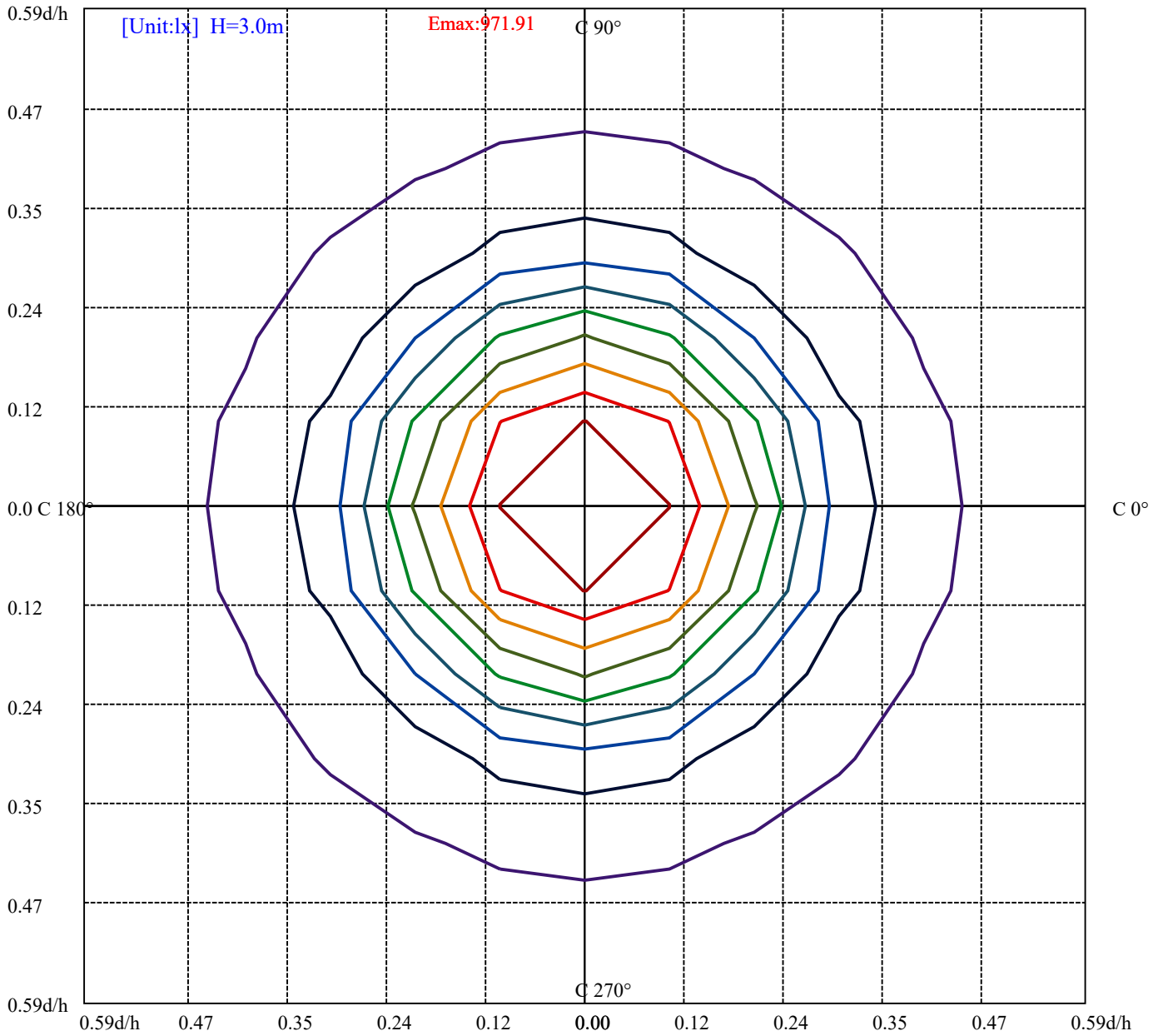
House

[Unit:cd]

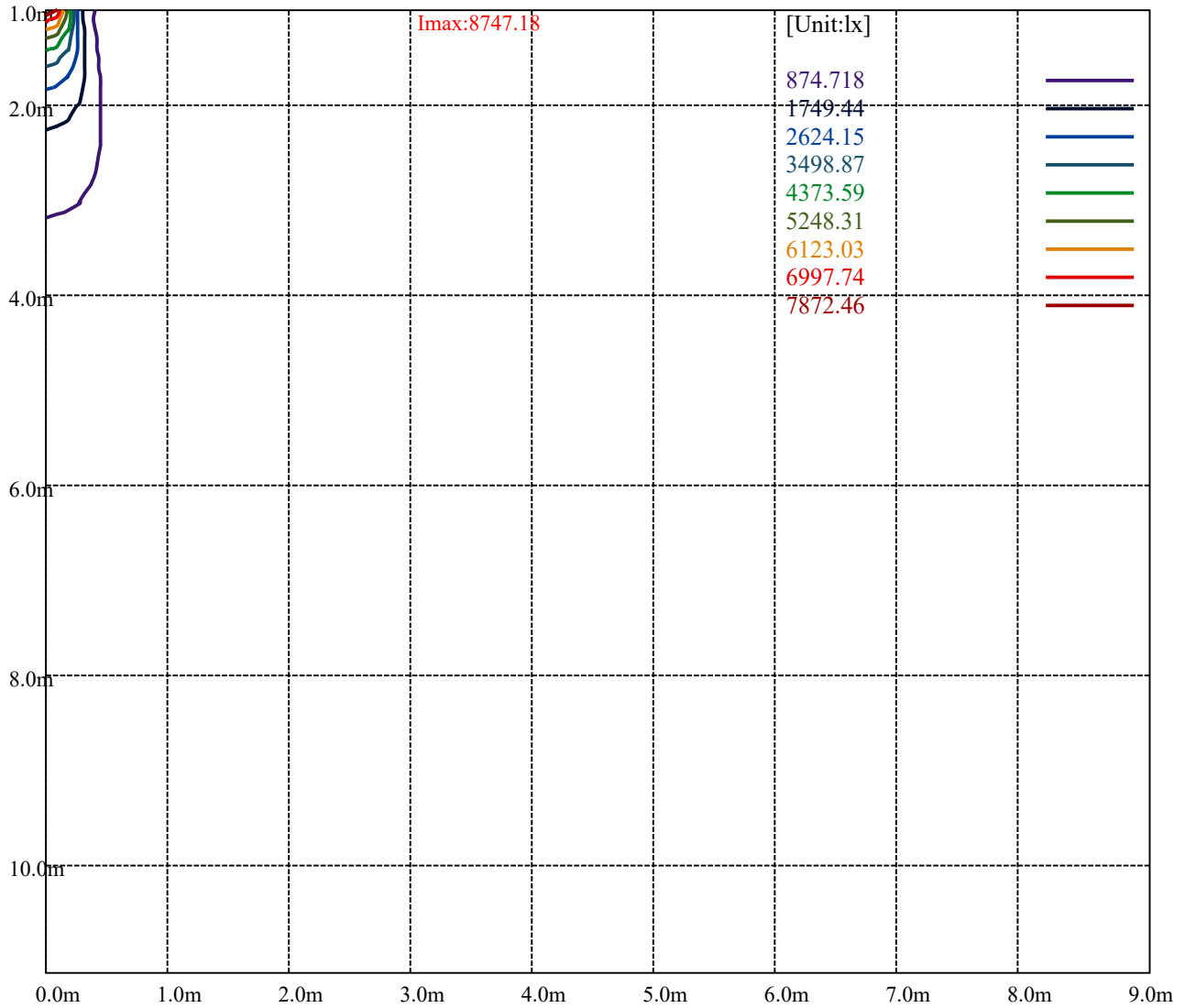
Road

I_{max}:8747.18

(10%I _{max})	874.718	—
(20%I _{max})	1749.44	—
(30%I _{max})	2624.15	—
(40%I _{max})	3498.87	—
(50%I _{max})	4373.59	—
(60%I _{max})	5248.31	—
(70%I _{max})	6123.03	—
(80%I _{max})	6997.74	—
(90%I _{max})	7872.46	—



- (10%Emax) 97.19067
- (20%Emax) 194.3811
- (30%Emax) 291.5722
- (40%Emax) 388.7633
- (50%Emax) 485.9533
- (60%Emax) 583.1444
- (70%Emax) 680.3356
- (80%Emax) 777.5256
- (90%Emax) 874.7167



Luminance Table

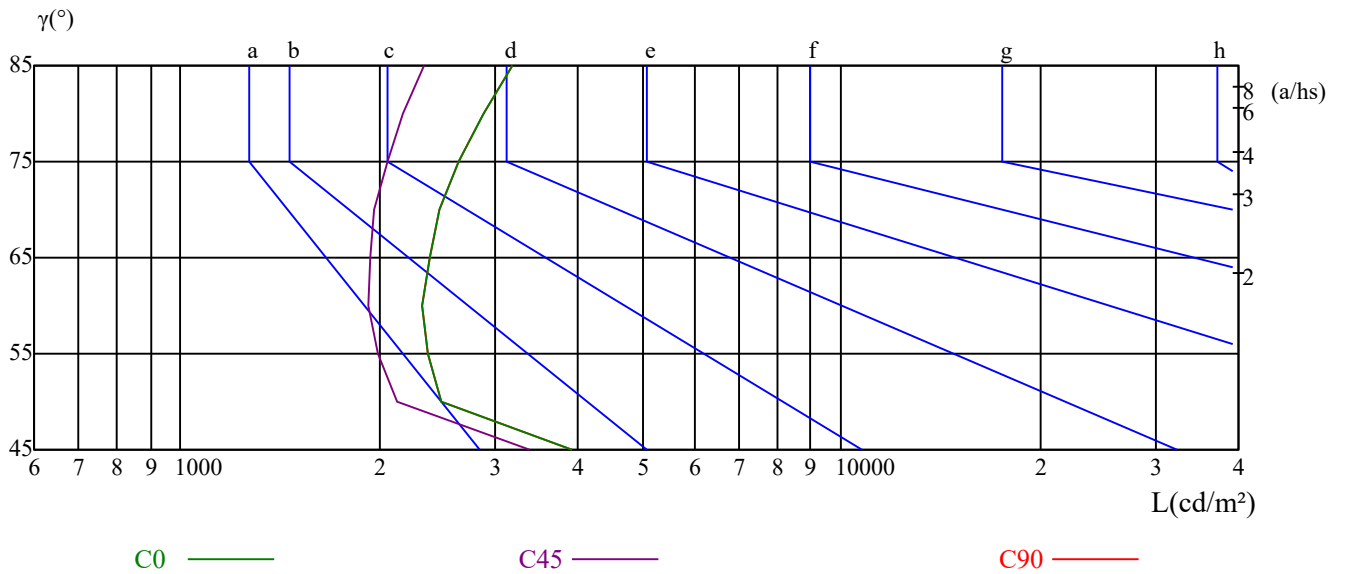
γ	45	50	55	60	65	70	75	80	85
C0	3905	2483	2361	2327	2378	2471	2638	2868	3186
C45	3387	2122	1986	1925	1932	1968	2054	2175	2342
C90	3905	2483	2361	2327	2378	2471	2638	2868	3186

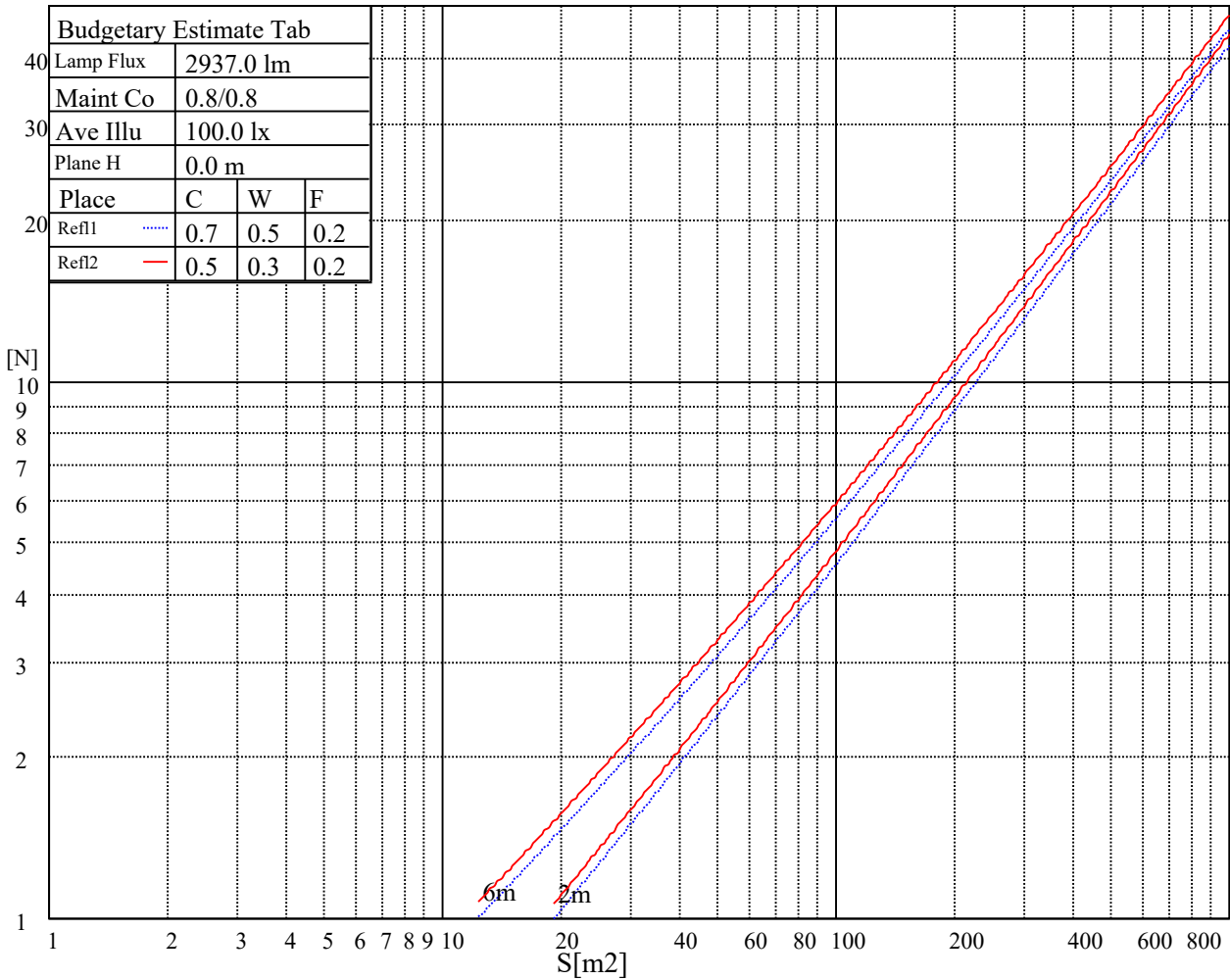
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5365	5365	5365	8403	8403	8403	24515	24515	24515

Glare Table

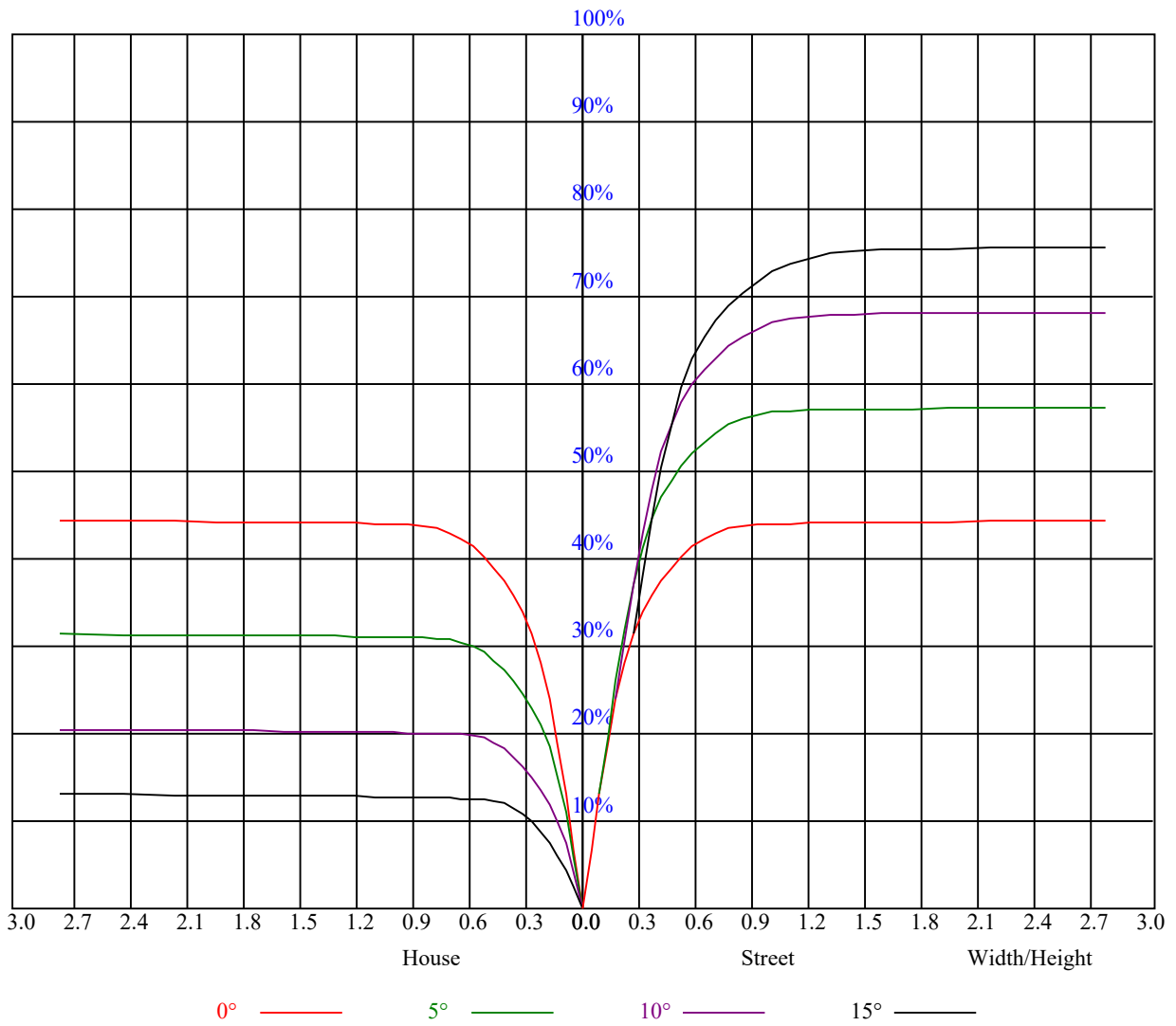
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.01	0.99	0.97	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.92	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.88	0.86	0.85	0.86	0.84	0.83	0.82
3	0.90	0.87	0.83	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.82	0.80	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.79	0.76	0.80	0.77	0.75	0.74
5	0.82	0.78	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	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.75	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.66	0.65
8	0.72	0.68	0.65	0.72	0.67	0.65	0.71	0.67	0.64	0.70	0.67	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	0.68	0.64	0.62	0.67	0.64	0.61	0.60
10	0.67	0.63	0.60	0.67	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.65	0.62	0.59	0.58



Nata 2-1672-M

Intensity data(cd)

C/\u03b3(\u00b0)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	8752.33	8077.83	6220.18	3101.46	1376.26	1009.52	918.81	630.53	297.74
45.0	8747.88	8177.45	6120.01	2833.78	1292.79	987.26	907.68	567.09	191.33
90.0	8749.54	8290.42	6229.64	2919.48	1319.50	989.99	902.89	571.60	131.45
135.0	8738.97	8543.63	7229.14	3920.10	1637.27	1064.62	936.62	762.43	282.15
180.0	8752.33	8333.27	6682.64	3265.08	1421.34	1022.99	917.58	657.69	211.98
225.0	8747.88	8415.63	7005.42	3632.38	1513.17	1040.68	923.37	647.78	257.33
270.0	8749.54	8369.44	6888.56	3670.22	1537.65	1039.02	919.92	663.37	288.28
315.0	8738.97	7866.91	5751.59	2562.76	1095.28	972.40	885.31	517.84	82.64
360.0	8752.33	8077.83	6220.18	3101.46	1376.26	1009.52	918.81	630.53	297.74

C/\u03b3(\u00b0)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	20.81	13.30	12.13	11.35	10.96	10.69	10.57	10.46	10.35
45.0	20.42	13.13	12.24	11.63	11.35	10.96	10.80	10.69	10.57
90.0	20.09	13.25	12.24	11.74	11.35	10.96	10.69	10.57	10.57
135.0	25.77	13.91	12.52	11.69	11.13	10.91	10.69	10.57	10.41
180.0	21.65	13.25	12.19	11.35	11.02	10.69	10.57	10.46	10.35
225.0	23.93	13.47	12.41	11.46	11.13	10.85	10.80	10.63	10.57
270.0	22.26	13.25	12.08	11.46	11.07	10.74	10.69	10.57	10.52
315.0	16.70	12.69	11.69	11.19	10.85	10.63	10.46	10.41	10.41
360.0	20.81	13.30	12.13	11.35	10.96	10.69	10.57	10.46	10.35

C/\u03b3(\u00b0)	90.0
0.0	10.30
45.0	10.46
90.0	10.46
135.0	10.41
180.0	10.35
225.0	10.52
270.0	10.46
315.0	10.41
360.0	10.30