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## Nata

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LumCAT: 3-1944-M

Luminaire:

Report No: NATA0100

Voltage(V): 34.2000

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.5100

Lamp flux(lm): 2559.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 2353.79

Efficiency(%): 91.98%

Lumens(lm)/Power(W): 114.76

Central intensity(cd): 4964.203

Maximum intensity(cd): 4964.203

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=37.9

[C90/270]Total=37.9

Field angle(10%Imax): [C0/180]Total=68.2

[C90/270]Total=68.2

Maximum s/h(1/2): C0\_180=0.64 C90\_270=0.64

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(%): 91.98%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.509%

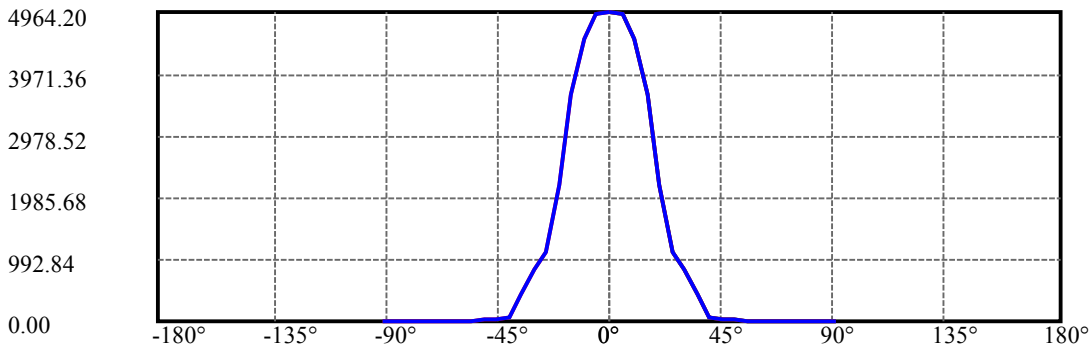
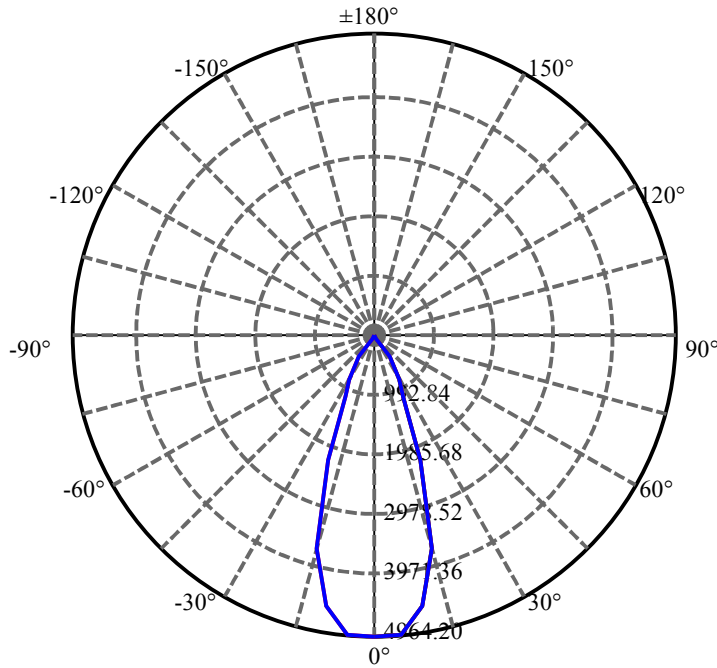
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4964.203	0.000	0	.000%	.000%
5.0	4946.063	118.474	118.474	4.630%	5.033%
10.0	4542.961	339.452	457.927	13.265%	19.455%
15.0	3631.711	484.916	942.843	18.949%	40.056%
20.0	2180.039	478.970	1421.813	18.717%	60.405%
25.0	1113.954	345.479	1767.292	13.501%	75.083%
30.0	832.282	246.298	2013.589	9.625%	85.547%
35.0	424.048	185.003	2198.593	7.230%	93.407%
40.0	72.886	82.910	2281.502	3.240%	96.929%
45.0	19.695	17.142	2298.644	.670%	97.657%
50.0	16.045	7.222	2305.866	.282%	97.964%
55.0	14.168	6.569	2312.436	.257%	98.243%
60.0	12.902	6.257	2318.693	.245%	98.509%
65.0	11.995	6.053	2324.745	.237%	98.766%
70.0	11.384	5.920	2330.665	.231%	99.018%
75.0	10.955	5.839	2336.504	.228%	99.266%
80.0	10.688	5.791	2342.295	.226%	99.512%
85.0	10.519	5.762	2348.057	.225%	99.757%
90.0	10.406	5.729	2353.786	.224%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2013.59	78.69%	85.55%
0-40	2281.50	89.16%	96.93%
0-60	2318.69	90.61%	98.51%
0-90	2348.06	91.76%	99.76%
0-120	2348.06	91.76%	99.76%
0-180	2353.79	91.98%	100.00%
60-90	35.62	1.39%	1.51%
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%
0-27.35	1883.03	73.58%	80.00%

## ZONAL LUMEN SUMMARY

0-10	457.93
10-20	963.89
20-30	591.78
30-40	267.91
40-50	24.36
50-60	12.83
60-70	11.97
70-80	11.63
80-90	5.76
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: —————

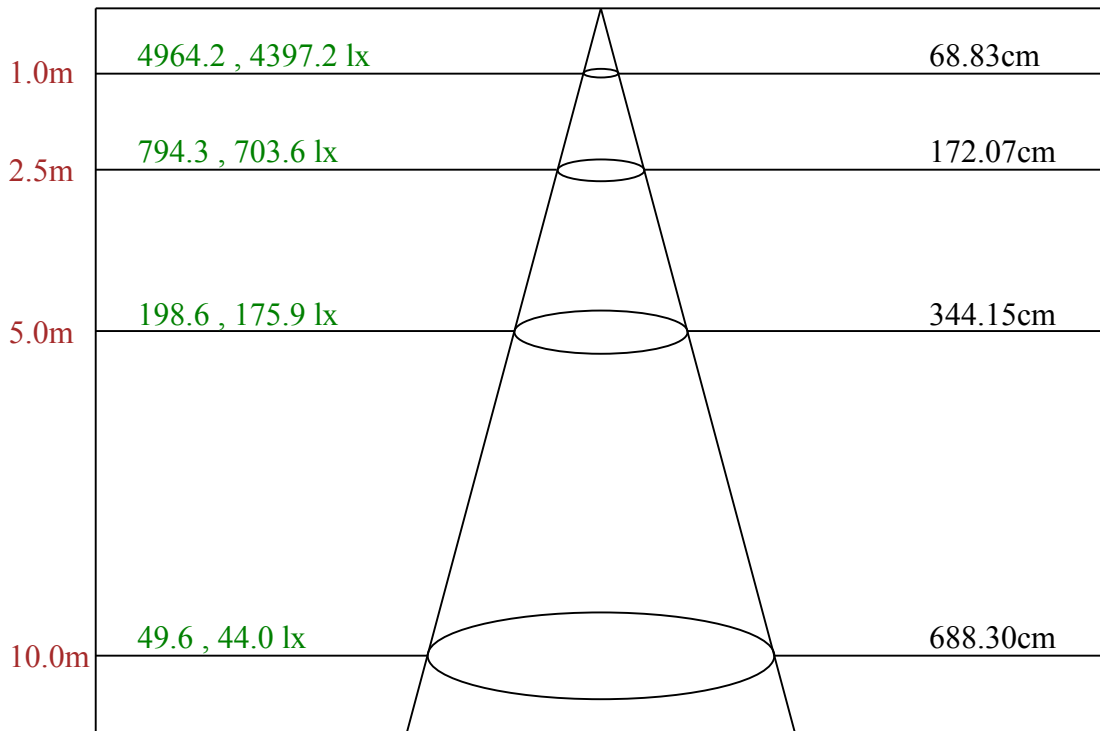
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.1 Right:34.1

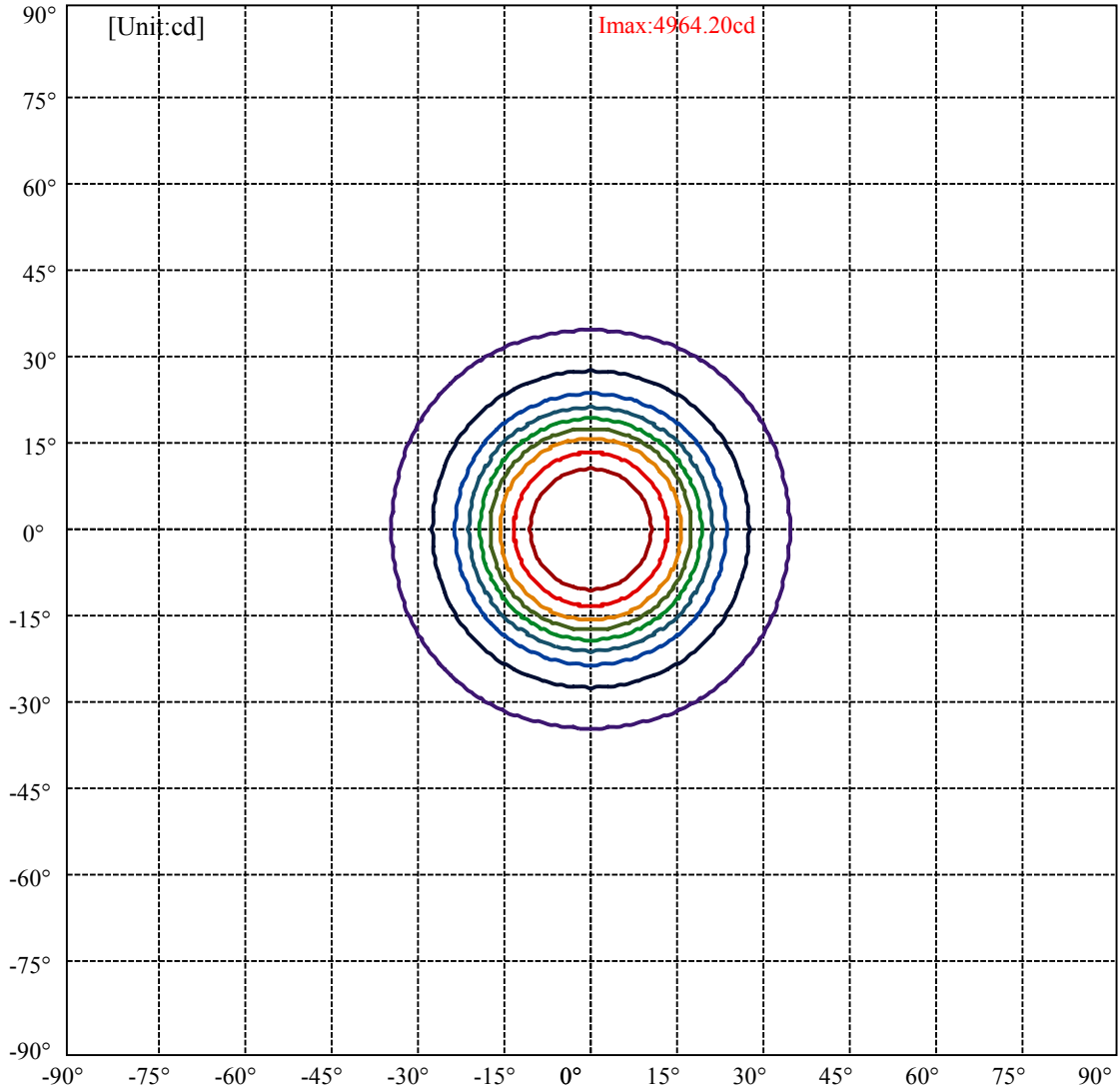
:C90/270Left:34.1 Right:34.1

Beam Angle(50%Imax):C0/180Left:19.0 Right:19.0

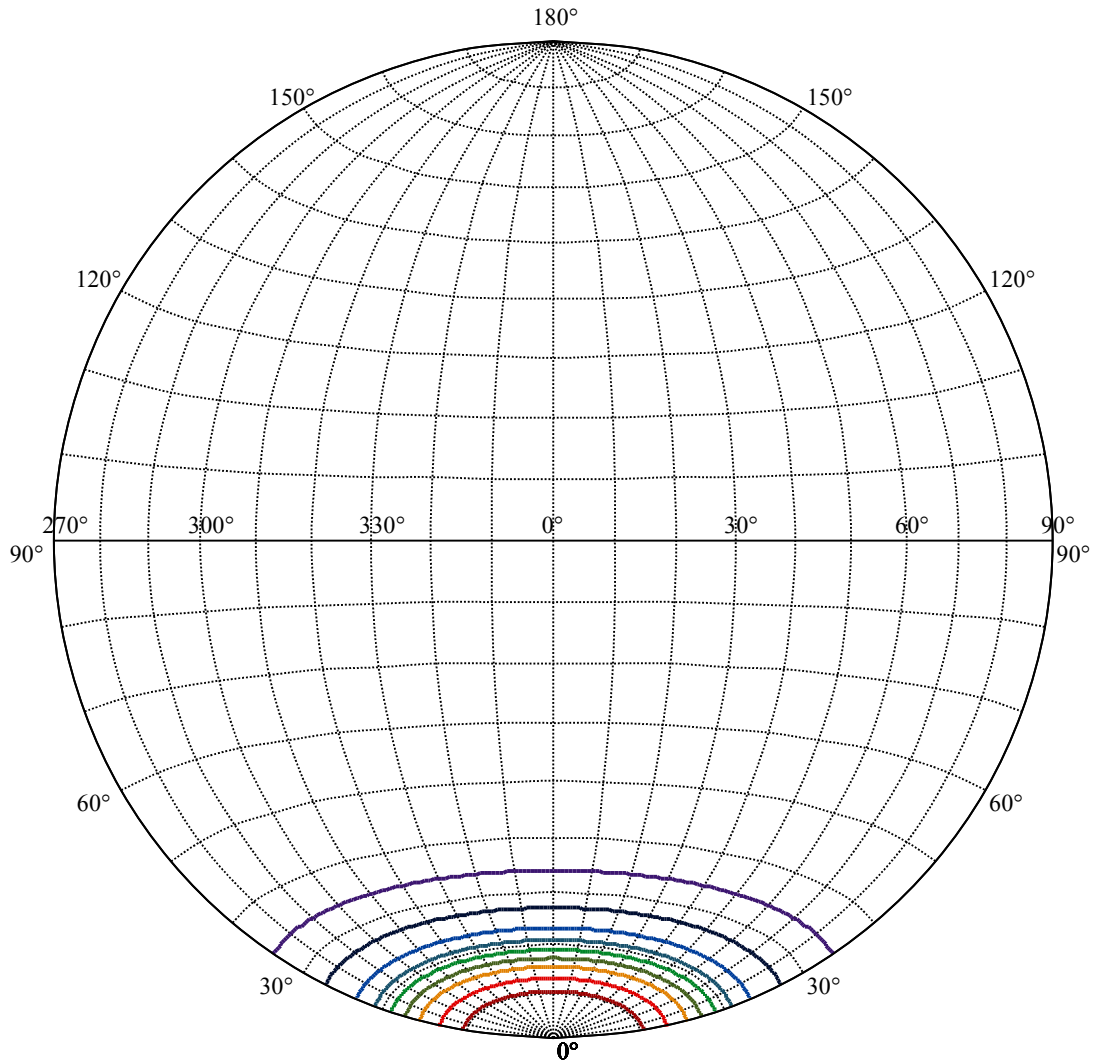
:C90/270Left:19.0 Right:19.0



Max , Ave      Beam angle of C0 plane 37.98



(10%Imax) 496.42	—
(20%Imax) 992.841	—
(30%Imax) 1489.26	—
(40%Imax) 1985.68	—
(50%Imax) 2482.1	—
(60%Imax) 2978.52	—
(70%Imax) 3474.94	—
(80%Imax) 3971.36	—
(90%Imax) 4467.78	—



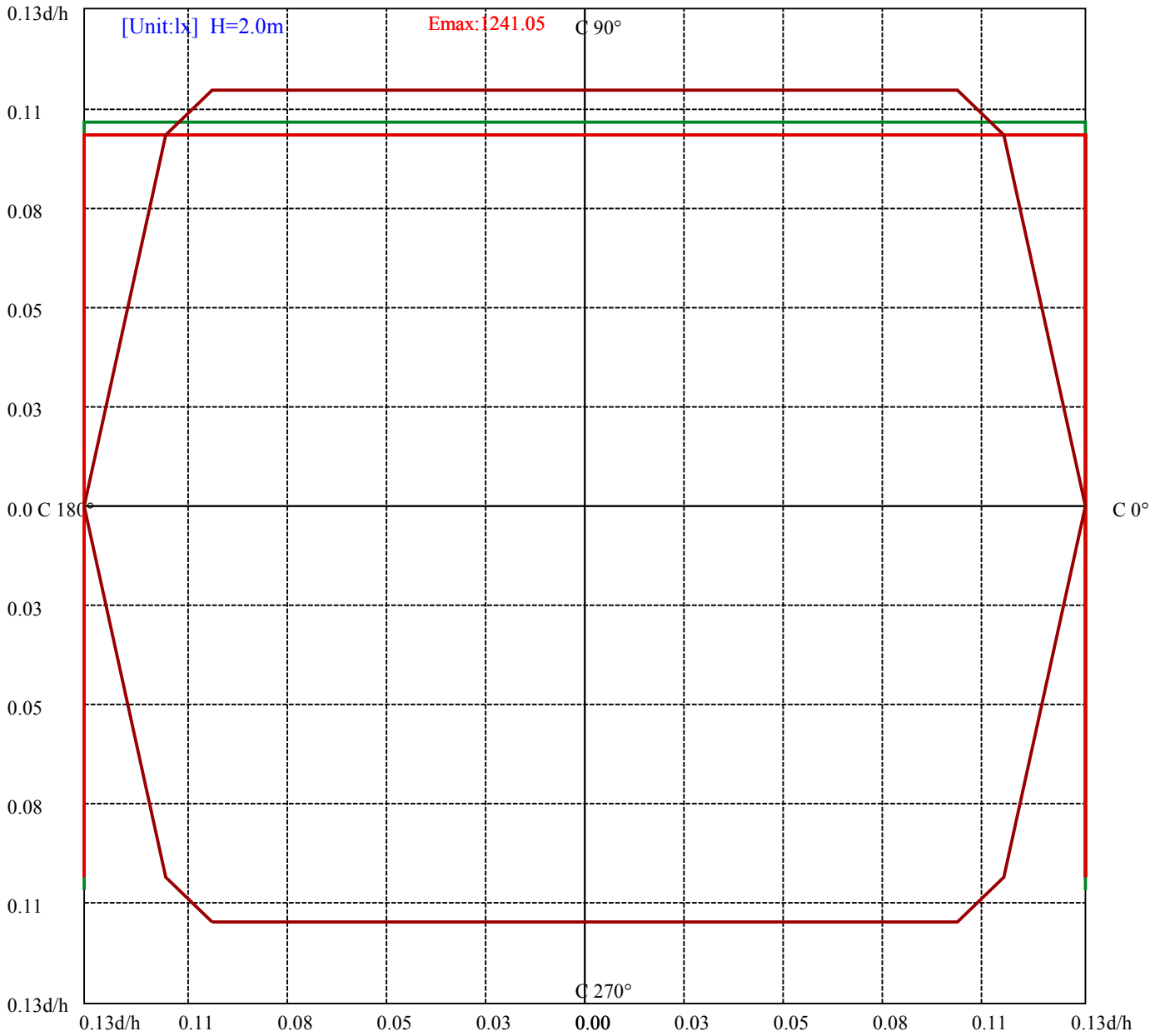
House

[Unit:cd]

Road

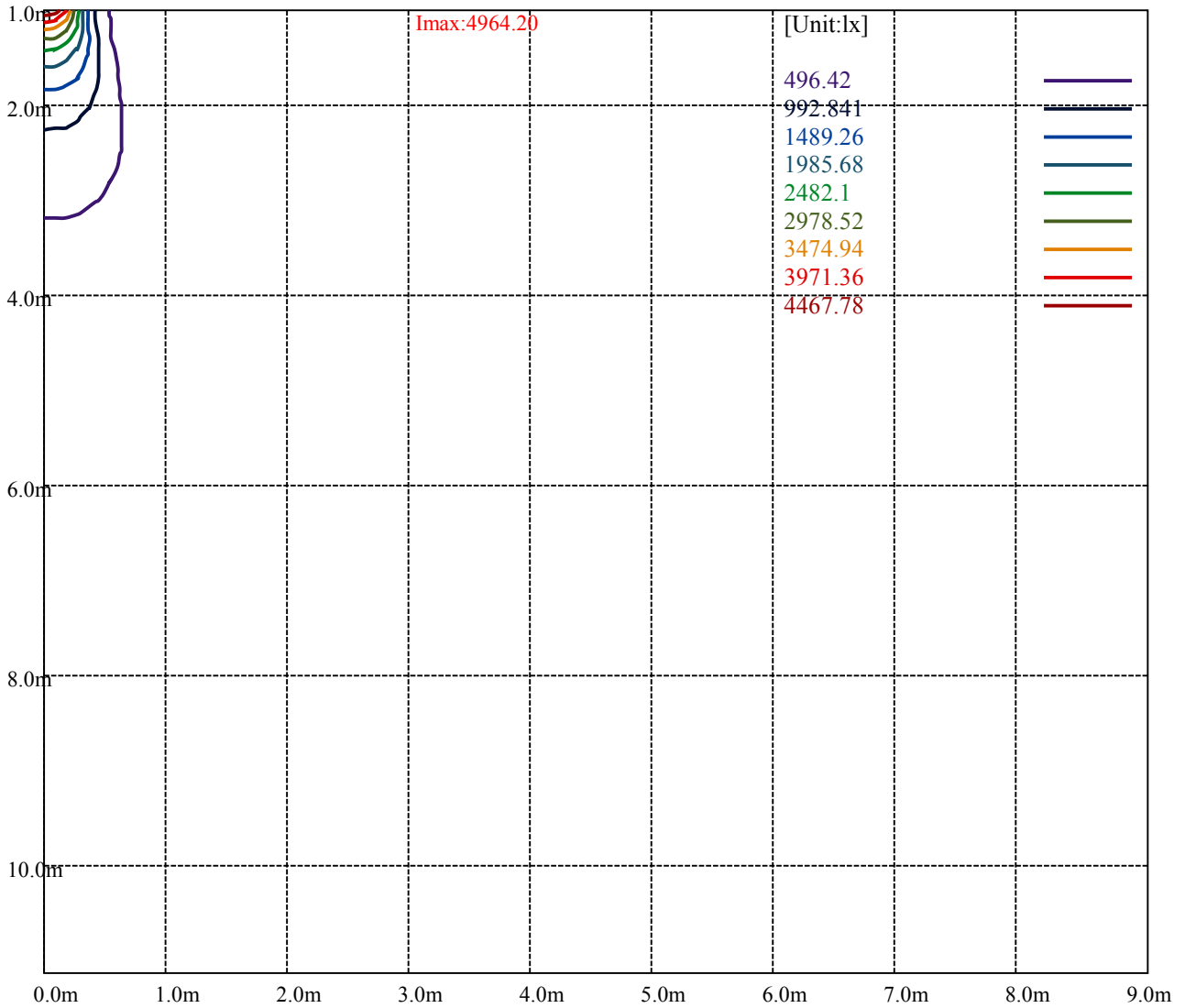
Imax:4964.20

(10%Imax) 496.42	—
(20%Imax) 992.841	—
(30%Imax) 1489.26	—
(40%Imax) 1985.68	—
(50%Imax) 2482.1	—
(60%Imax) 2978.52	—
(70%Imax) 3474.94	—
(80%Imax) 3971.36	—
(90%Imax) 4467.78	—



(10%Emax) 124.105	—
(20%Emax) 248.21	—
(30%Emax) 372.315	—
(40%Emax) 496.42	—
(50%Emax) 620.525	—
(60%Emax) 744.63	—
(70%Emax) 868.735	—
(80%Emax) 992.84	—
(90%Emax) 1116.945	—





Luminance Table

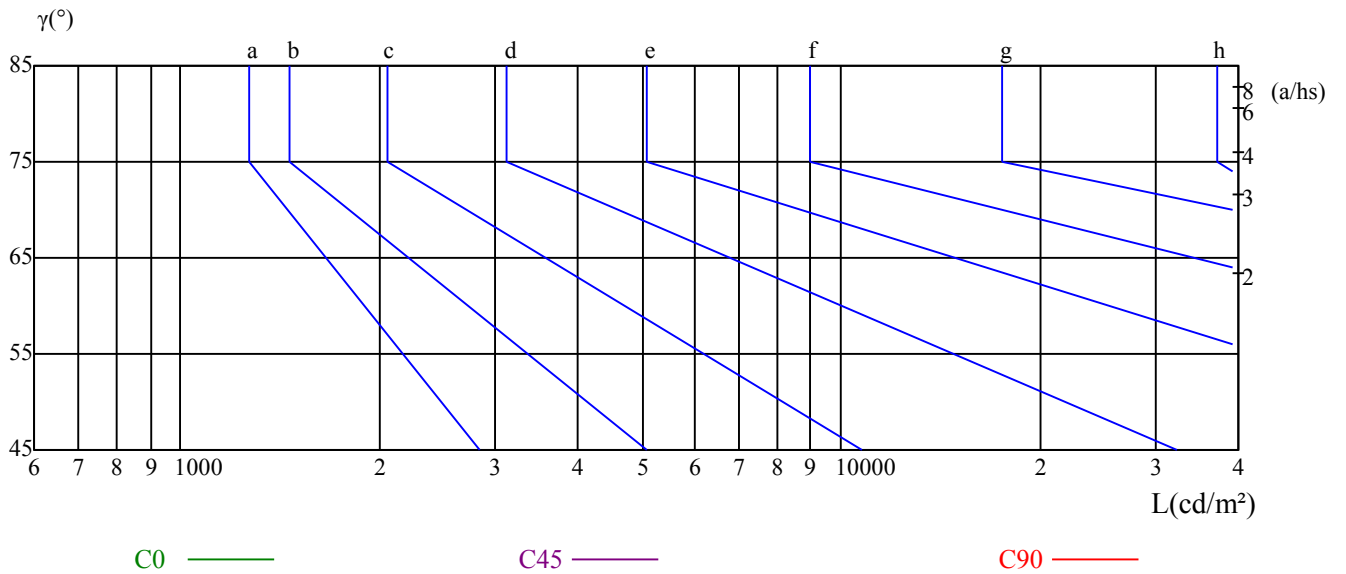
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

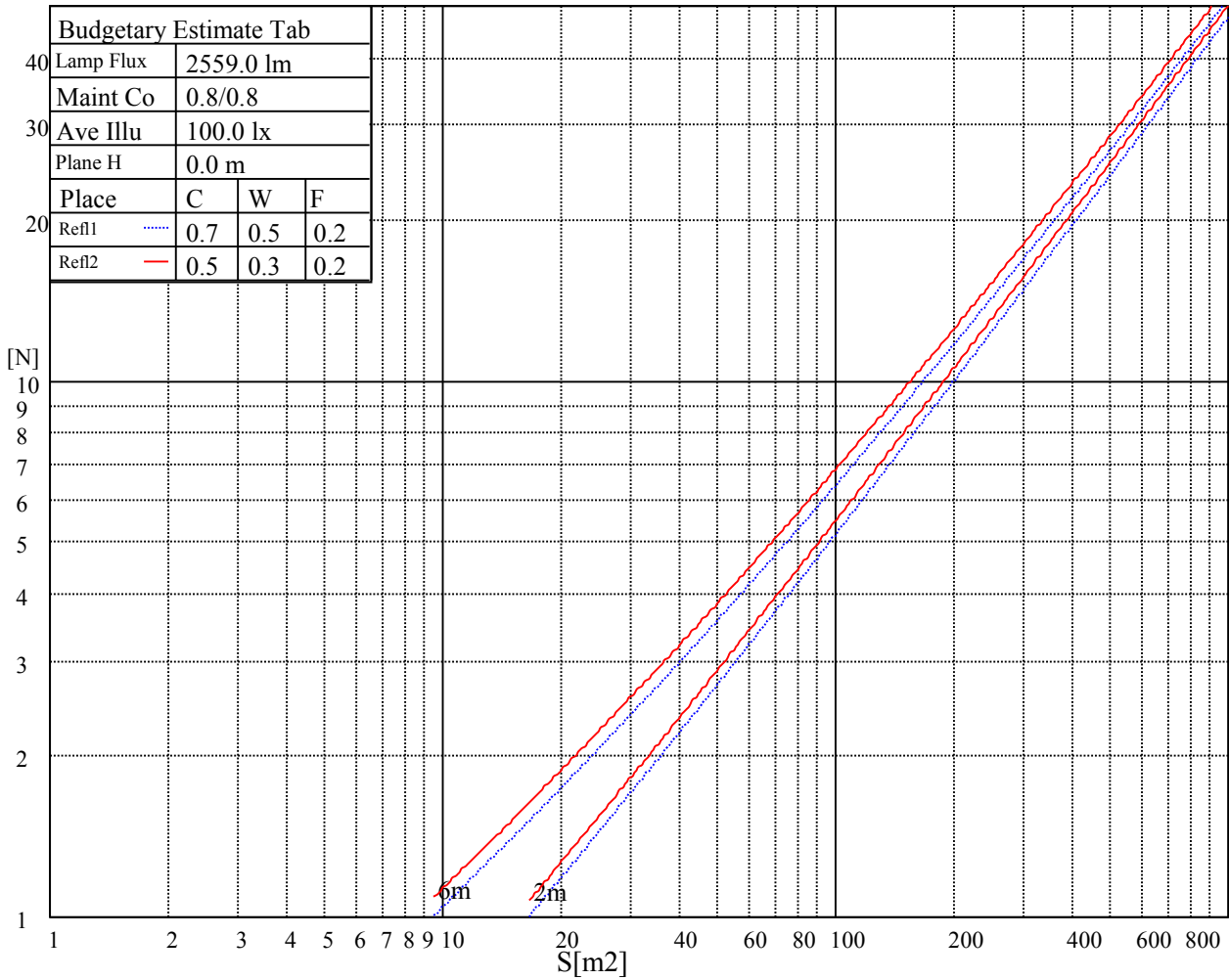
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

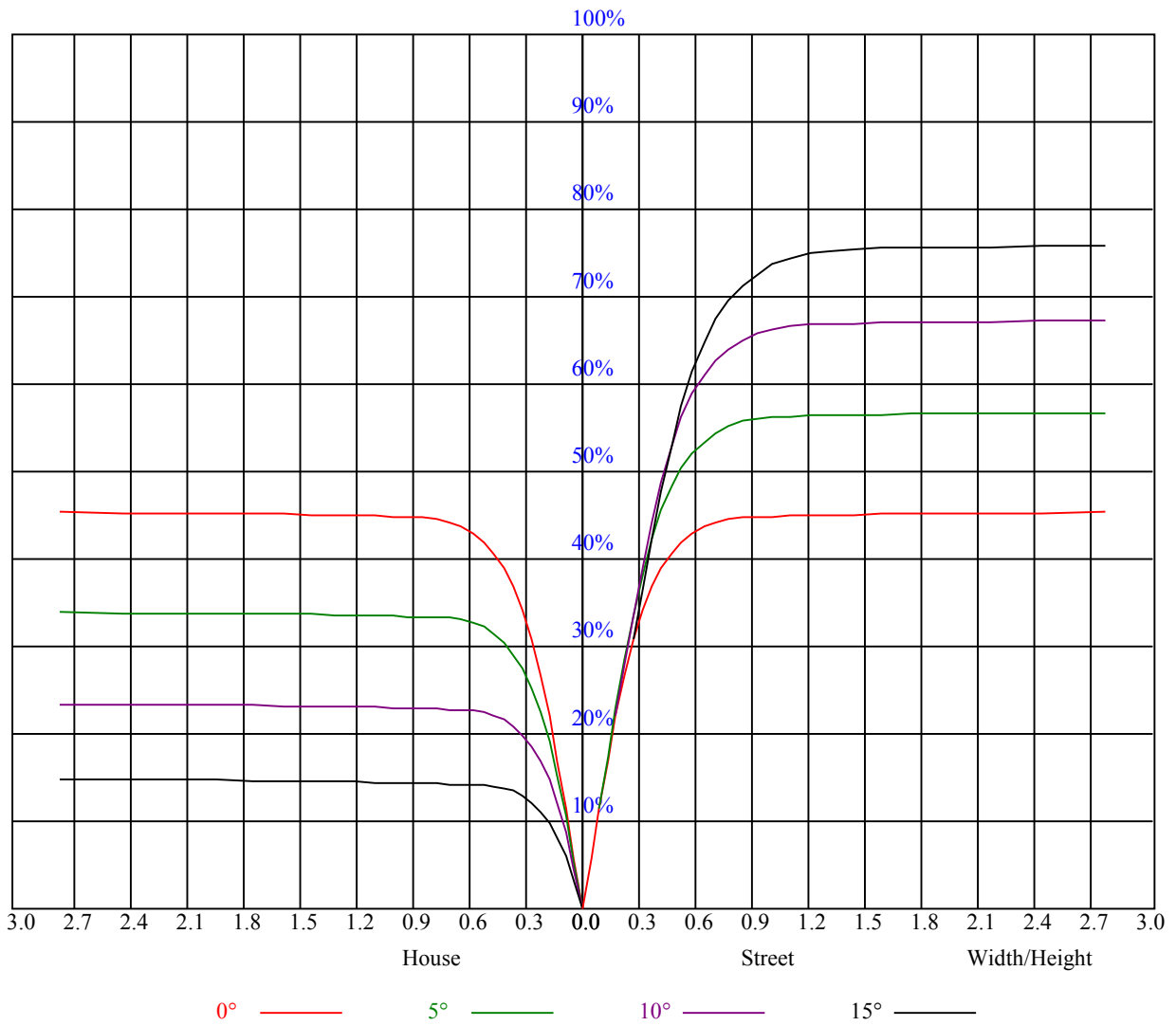
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.03	1.00	0.99	1.01	0.99	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.87
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.90	0.87	0.89	0.87	0.86	0.87	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.81	0.83	0.81	0.80	0.78
4	0.87	0.82	0.79	0.86	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	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	0.70	0.78	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.62
9	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.59
10	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.57



Nata 3-1944-M

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	4993.88	4958.44	4752.56	4132.69	2858.63	1378.69	918.00	637.88	288.56
45.0	4951.13	4917.38	4662.56	3971.81	2529.00	1256.63	869.63	532.13	75.94
90.0	4951.69	4900.50	4439.81	3360.38	1956.38	1030.33	808.37	355.56	28.91
135.0	4960.13	4968.00	4496.63	3533.06	1962.56	1031.63	822.94	356.63	29.53
180.0	4993.88	4913.44	4328.44	3109.50	1559.25	939.43	729.84	209.59	25.31
225.0	4951.13	4952.81	4388.06	3381.75	1821.38	993.32	802.07	302.51	27.90
270.0	4951.69	4992.75	4666.50	3808.13	2439.00	1183.50	853.88	516.94	51.08
315.0	4960.13	4965.19	4609.13	3756.38	2314.13	1098.11	853.54	481.16	55.86
360.0	4993.88	4958.44	4752.56	4132.69	2858.63	1378.69	918.00	637.88	288.56

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	23.96	17.44	15.19	13.67	12.49	11.76	11.25	10.86	10.63
45.0	21.15	16.48	14.51	13.11	12.09	11.42	11.03	10.74	10.52
90.0	17.66	15.47	13.73	12.54	11.76	11.19	10.80	10.58	10.46
135.0	18.00	15.30	13.56	12.49	11.64	11.19	10.80	10.63	10.46
180.0	16.82	14.79	13.28	12.32	11.64	11.14	10.86	10.63	10.58
225.0	18.00	15.30	13.56	12.49	11.70	11.14	10.80	10.63	10.46
270.0	21.38	16.88	14.74	13.22	12.26	11.59	11.03	10.69	10.52
315.0	20.59	16.71	14.79	13.39	12.38	11.64	11.08	10.74	10.52
360.0	23.96	17.44	15.19	13.67	12.49	11.76	11.25	10.86	10.63

C/γ(°)	90.0
0.0	10.46
45.0	10.41
90.0	10.35
135.0	10.41
180.0	10.46
225.0	10.41
270.0	10.35
315.0	10.41
360.0	10.46