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Nata

LumCAT: 3-1941-M

Luminaire:

Report No: NATA0100

Voltage(V): 34.1500

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.4900

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

Photometric Results

Lumens(lm): 2309.29

Efficiency(%): 90.24%

Lumens(lm)/Power(W): 112.70

Central intensity(cd): 2921.906

Maximum intensity(cd): 2921.906

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=56.9

[C90/270]Total=56.9

Field angle(10%Imax): [C0/180]Total=74.7

[C90/270]Total=74.7

Maximum s/h(1/2): C0_180=0.92 C90_270=0.92

Maximum s/h(1/4): C0_180=0.84 C90_270=0.84

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.24%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.504%

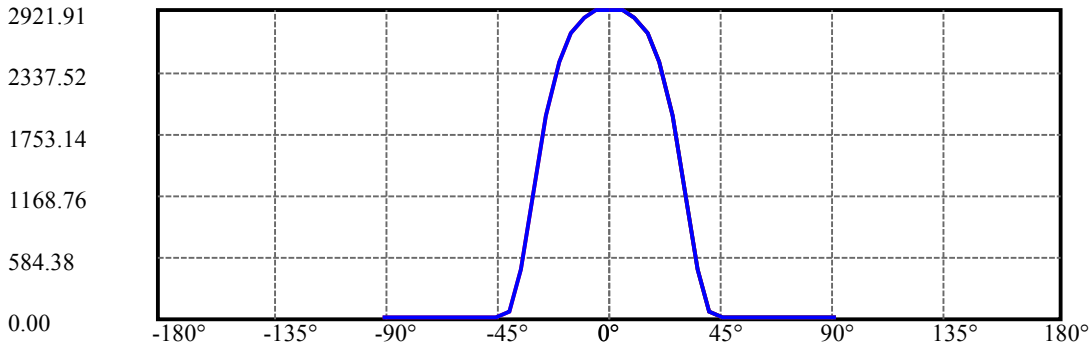
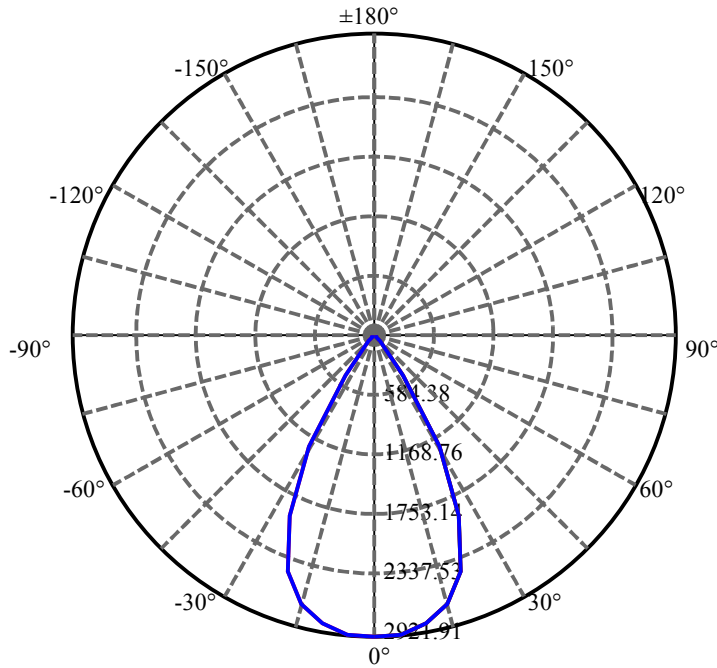
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2921.906	0.000	0	.000%	.000%
5.0	2915.578	69.785	69.785	2.727%	3.022%
10.0	2841.609	205.953	275.738	8.048%	11.940%
15.0	2697.398	328.570	604.308	12.840%	26.169%
20.0	2429.367	422.518	1026.826	16.511%	44.465%
25.0	1929.867	457.203	1484.029	17.866%	64.263%
30.0	1249.840	402.395	1886.424	15.725%	81.688%
35.0	479.946	254.723	2141.147	9.954%	92.719%
40.0	79.798	93.389	2234.536	3.649%	96.763%
45.0	23.660	19.156	2253.692	.749%	97.592%
50.0	16.706	8.157	2261.849	.319%	97.945%
55.0	14.112	6.701	2268.549	.262%	98.236%
60.0	12.713	6.200	2274.75	.242%	98.504%
65.0	11.672	5.928	2280.678	.232%	98.761%
70.0	10.997	5.740	2286.418	.224%	99.009%
75.0	10.603	5.646	2292.063	.221%	99.254%
80.0	10.575	5.667	2297.73	.221%	99.499%
85.0	10.688	5.778	2303.508	.226%	99.749%
90.0	10.448	5.787	2309.295	.226%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1886.42	73.72%	81.69%
0-40	2234.54	87.32%	96.76%
0-60	2274.75	88.89%	98.50%
0-90	2303.51	90.02%	99.75%
0-120	2303.51	90.02%	99.75%
0-180	2309.29	90.24%	100.00%
60-90	34.96	1.37%	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%
0-29.52	1847.44	72.19%	80.00%

ZONAL LUMEN SUMMARY

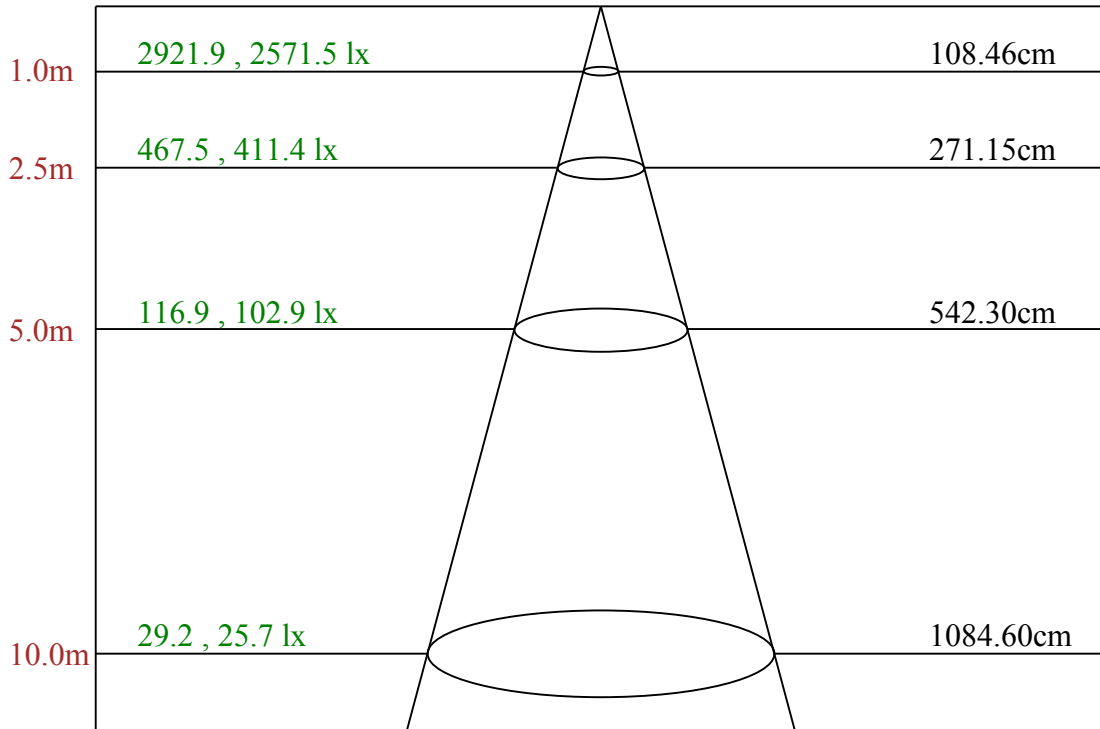
0-10	275.74
10-20	751.09
20-30	859.60
30-40	348.11
40-50	27.31
50-60	12.90
60-70	11.67
70-80	11.31
80-90	5.78
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



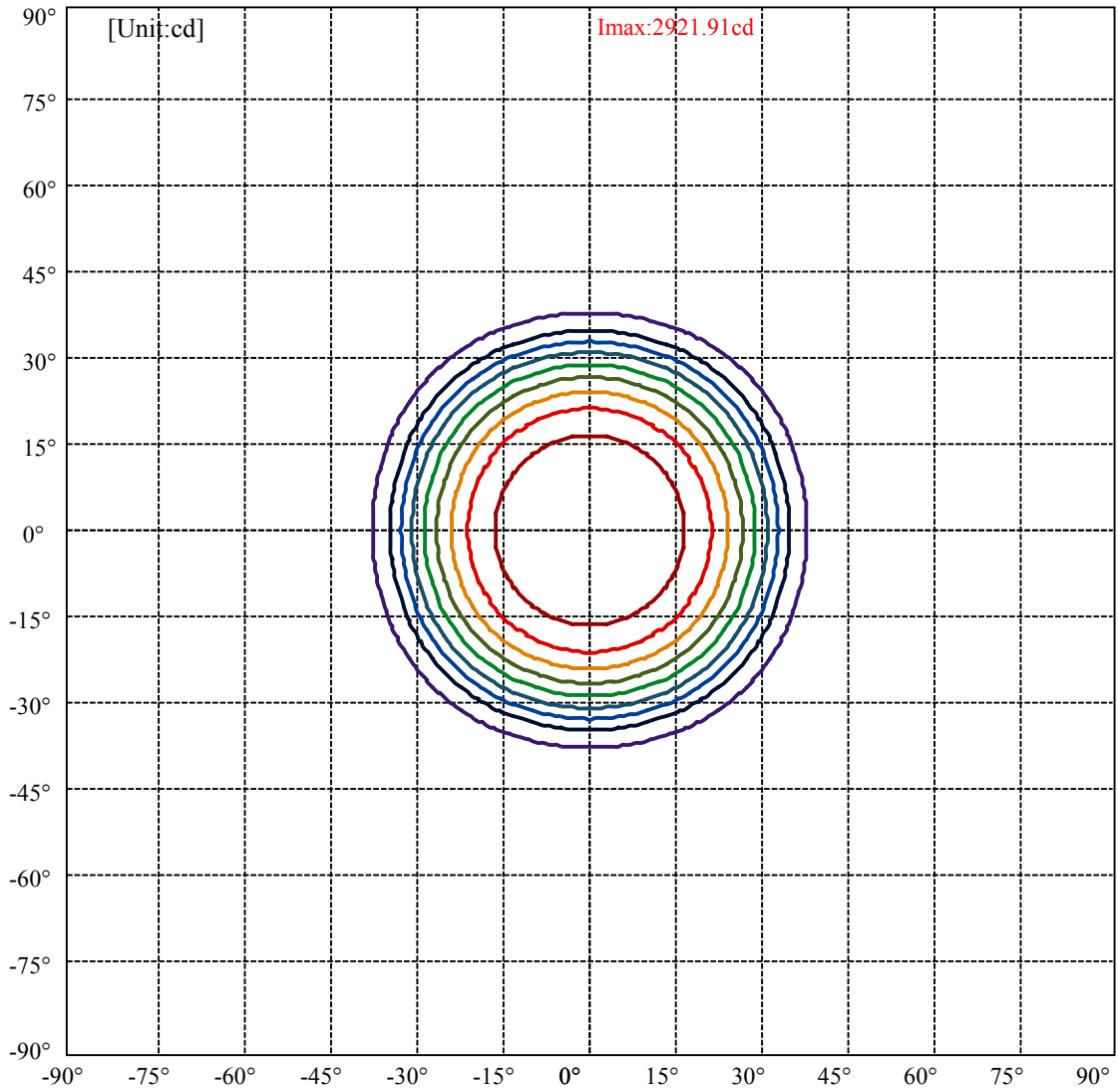
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.3 Right:37.3
:C90/270Left:37.3 Right:37.3

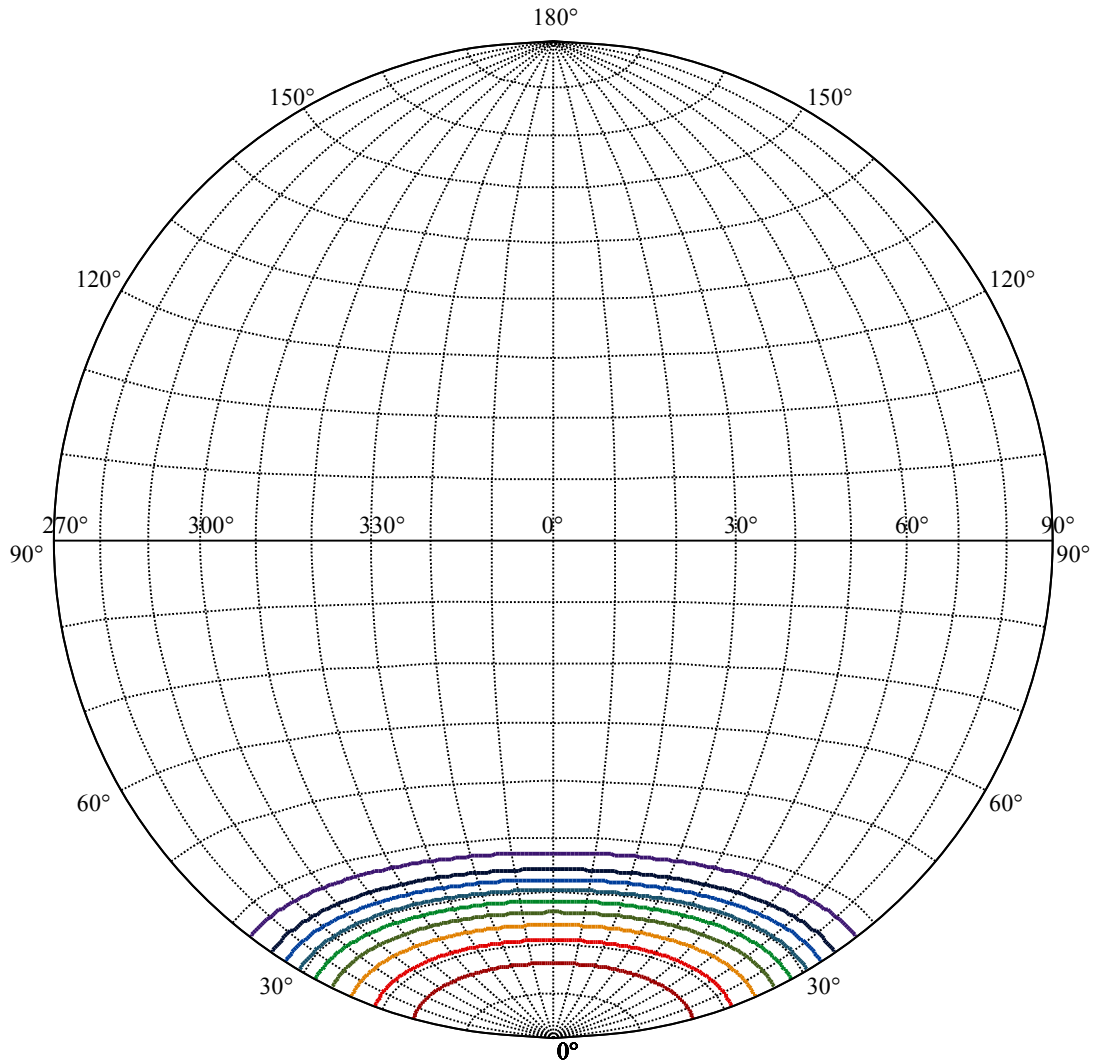
Beam Angle(50%Imax):C0/180Left:28.4 Right:28.4
:C90/270Left:28.4 Right:28.4



Max , Ave Beam angle of C0 plane 56.94



(10%Imax) 292.191	—
(20%Imax) 584.381	—
(30%Imax) 876.572	—
(40%Imax) 1168.76	—
(50%Imax) 1460.95	—
(60%Imax) 1753.14	—
(70%Imax) 2045.33	—
(80%Imax) 2337.52	—
(90%Imax) 2629.72	—



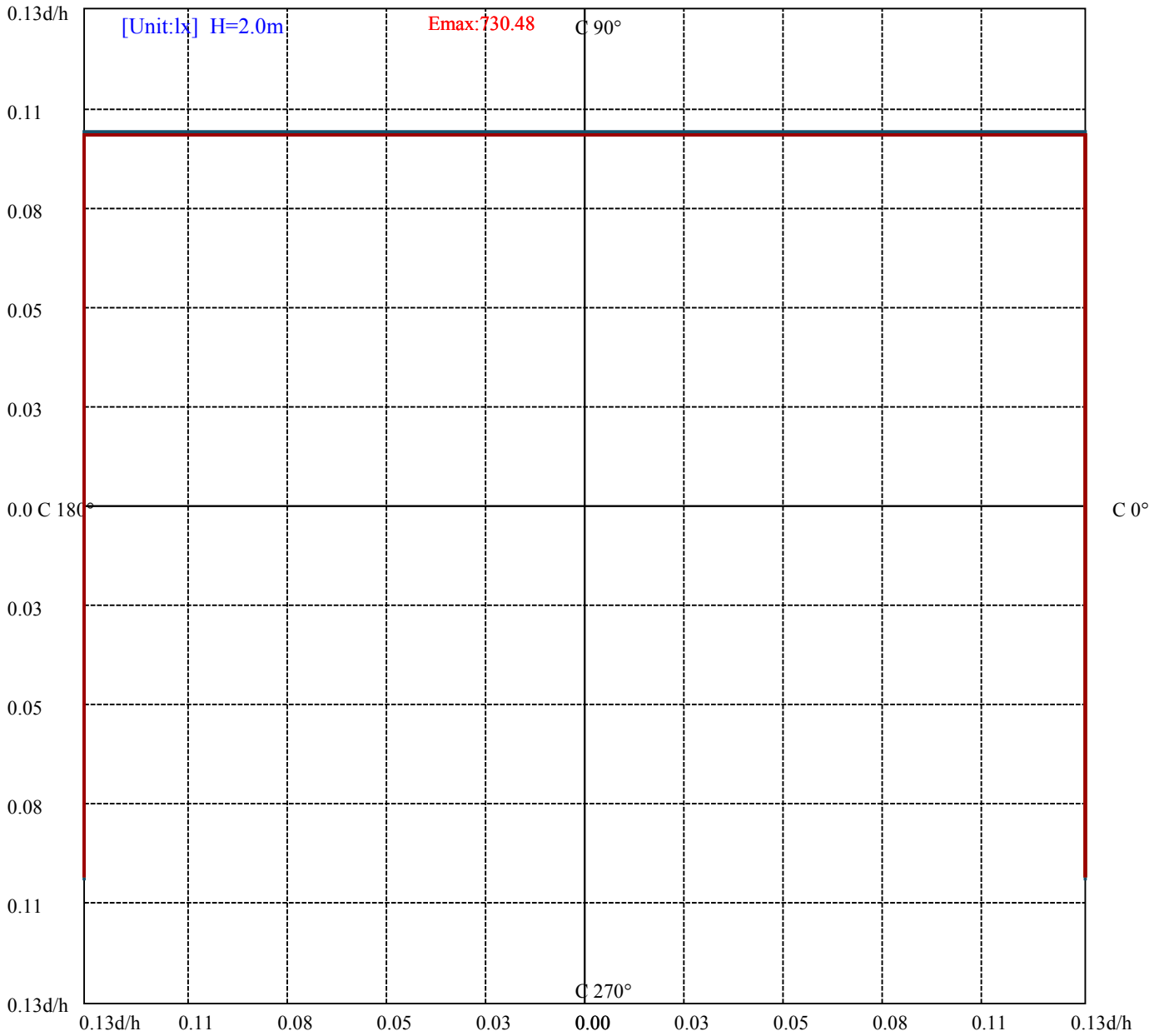
House

[Unit:cd]

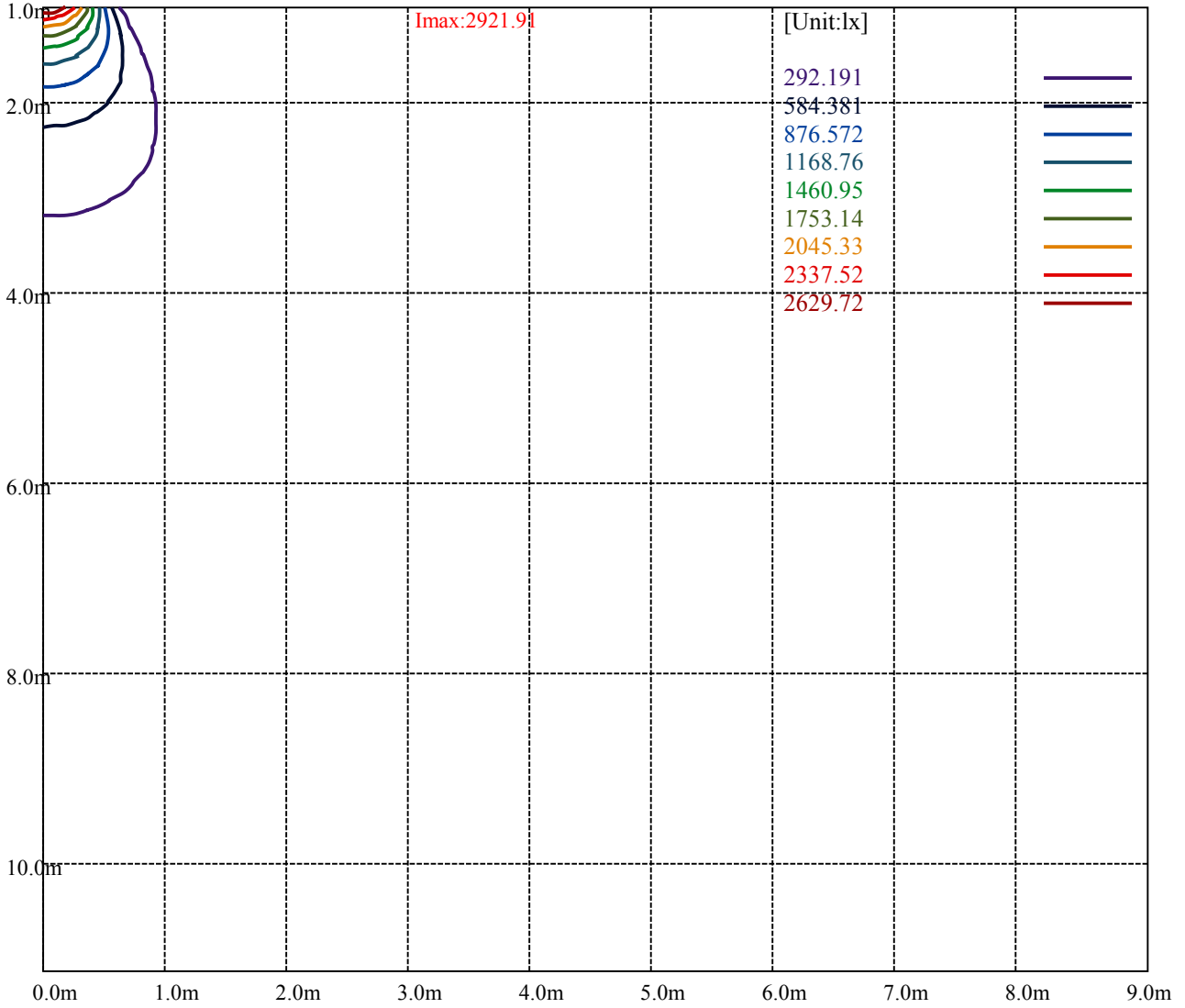
Road

Imax:2921.91

(10%Imax) 292.191	—
(20%Imax) 584.381	—
(30%Imax) 876.572	—
(40%Imax) 1168.76	—
(50%Imax) 1460.95	—
(60%Imax) 1753.14	—
(70%Imax) 2045.33	—
(80%Imax) 2337.52	—
(90%Imax) 2629.72	—



(10%E _{max}) 73.04775	—
(20%E _{max}) 146.0952	—
(30%E _{max}) 219.143	—
(40%E _{max}) 292.19	—
(50%E _{max}) 365.2375	—
(60%E _{max}) 438.285	—
(70%E _{max}) 511.3325	—
(80%E _{max}) 584.38	—
(90%E _{max}) 657.43	—



Luminance Table

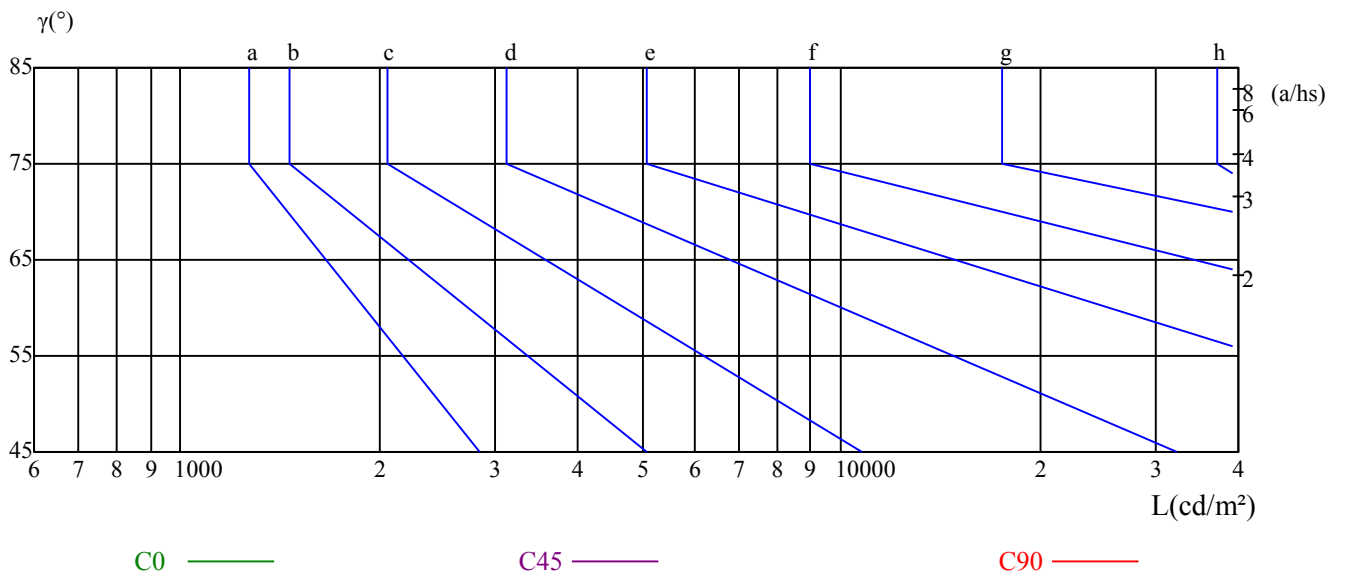
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

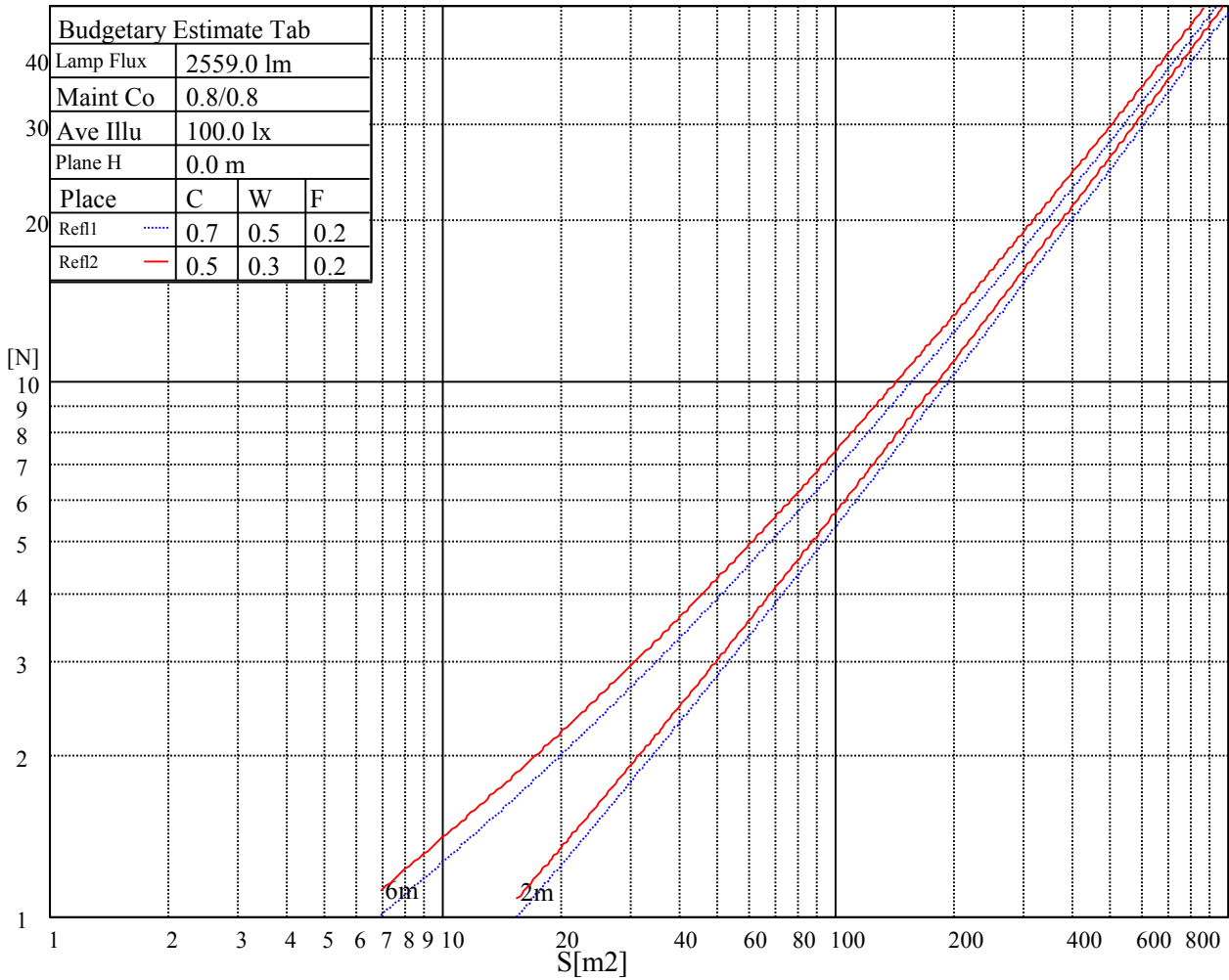
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

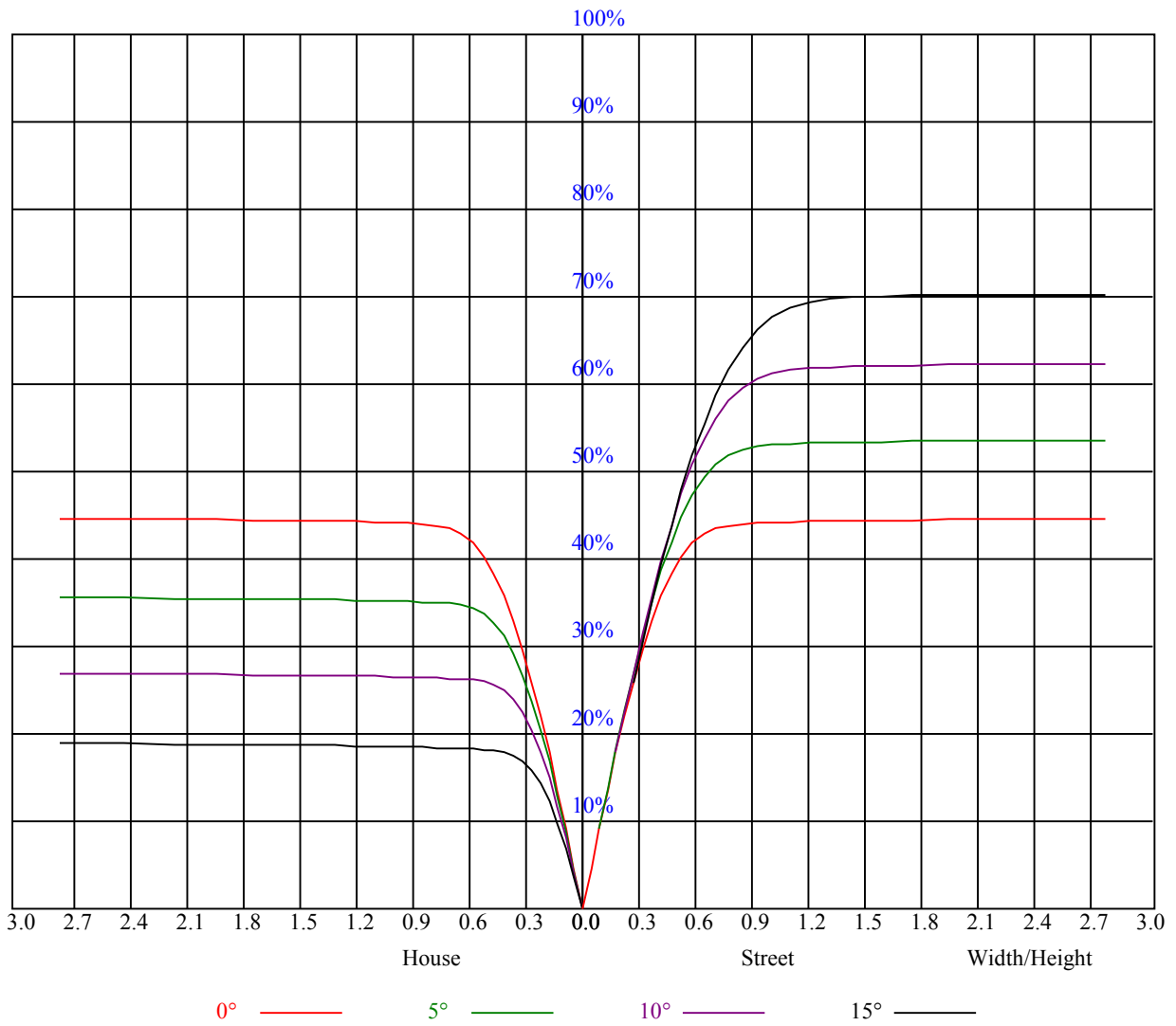
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	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	1.00	0.98	0.96	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.80	0.87	0.83	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.74
4	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.66
6	0.74	0.68	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.62
7	0.70	0.64	0.61	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.59
8	0.66	0.61	0.57	0.65	0.61	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.55
9	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.52
10	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.50



Nata 3-1941-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	2916.00	2898.00	2808.56	2656.69	2384.44	1829.81	1089.00	338.06	44.61
45.0	2922.75	2918.81	2824.31	2669.06	2337.19	1760.06	1018.13	287.44	39.83
90.0	2928.94	2932.31	2848.50	2655.00	2328.19	1788.75	1091.08	312.58	42.47
135.0	2919.94	2935.13	2899.69	2768.63	2514.38	2091.38	1467.00	642.94	170.04
180.0	2916.00	2926.69	2865.94	2716.88	2495.81	2059.31	1319.63	657.79	100.58
225.0	2922.75	2915.44	2858.06	2735.44	2529.56	2097.56	1483.88	666.39	117.79
270.0	2928.94	2906.44	2838.38	2734.88	2511.00	2050.88	1449.56	632.25	79.93
315.0	2919.94	2891.81	2789.44	2642.63	2334.38	1761.19	1080.45	302.12	43.14
360.0	2916.00	2898.00	2808.56	2656.69	2384.44	1829.81	1089.00	338.06	44.61
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	20.19	15.75	13.56	12.26	11.36	10.80	10.46	10.58	10.97
45.0	18.79	15.36	13.39	12.26	11.48	10.91	10.74	10.91	11.36
90.0	19.07	15.24	13.22	12.26	11.42	10.86	10.63	10.63	10.69
135.0	26.04	17.33	14.51	12.88	11.76	11.03	10.58	10.52	10.46
180.0	28.07	18.56	15.13	13.33	12.04	11.14	10.52	10.41	10.35
225.0	30.71	18.56	15.36	13.50	12.15	11.31	10.74	10.58	10.58
270.0	26.49	17.27	14.29	12.88	11.81	11.14	10.63	10.52	10.58
315.0	19.91	15.58	13.44	12.32	11.36	10.80	10.52	10.46	10.52
360.0	20.19	15.75	13.56	12.26	11.36	10.80	10.46	10.58	10.97
C/ γ (°)	90.0								
0.0	10.35								
45.0	10.52								
90.0	10.52								
135.0	10.41								
180.0	10.35								
225.0	10.52								
270.0	10.52								
315.0	10.41								
360.0	10.35								