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## Nata

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LumCAT: 3-1943-M

Luminaire:

Report No: NATA0100

Voltage(V): 34.1900

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.5000

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): 2346.39

Efficiency(%): 91.69%

Lumens(lm)/Power(W): 114.46

Central intensity(cd): 7814.602

Maximum intensity(cd): 7814.602

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

Beam Angle(50%Imax): [C0/180]Total=27.0

[C90/270]Total=27.0

Field angle(10%Imax): [C0/180]Total=60.9

[C90/270]Total=60.9

Maximum s/h(1/2): C0\_180=0.46 C90\_270=0.46

Maximum s/h(1/4): C0\_180=0.45 C90\_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.69%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.526%

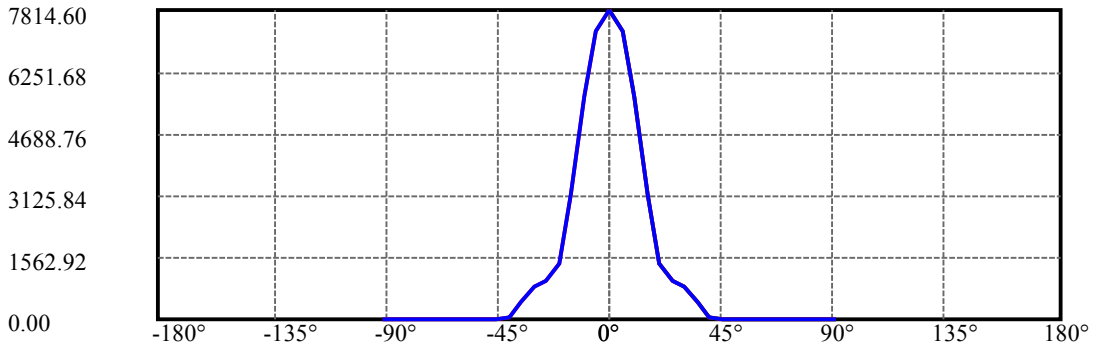
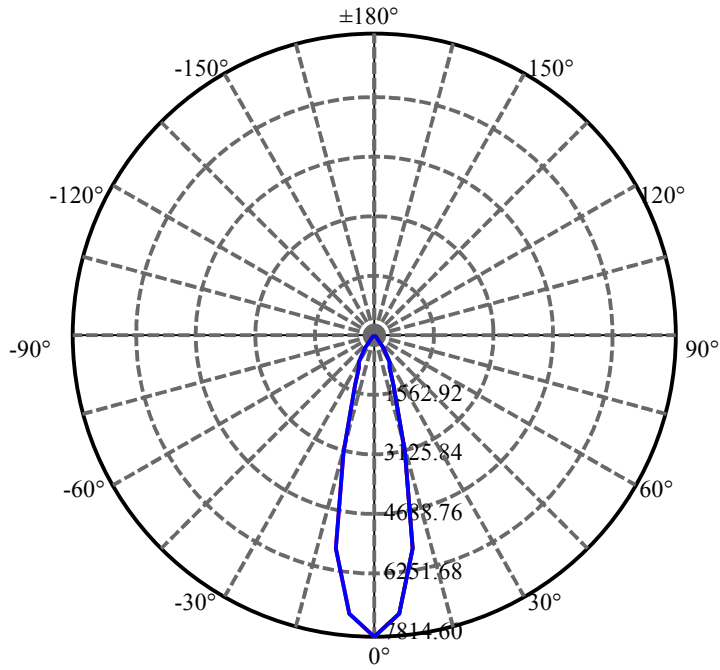
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7814.602	0.000	0	.000%	.000%
5.0	7259.344	180.205	180.205	7.042%	7.680%
10.0	5633.016	461.200	641.405	18.023%	27.336%
15.0	3162.375	521.737	1163.142	20.388%	49.572%
20.0	1400.379	376.035	1539.177	14.695%	65.598%
25.0	958.845	247.439	1786.616	9.669%	76.143%
30.0	814.113	224.369	2010.985	8.768%	85.706%
35.0	434.320	183.841	2194.826	7.184%	93.541%
40.0	59.435	82.379	2277.205	3.219%	97.051%
45.0	19.835	14.678	2291.882	.574%	97.677%
50.0	15.989	7.239	2299.121	.283%	97.986%
55.0	13.978	6.516	2305.637	.255%	98.263%
60.0	12.698	6.166	2311.803	.241%	98.526%
65.0	11.791	5.954	2317.757	.233%	98.780%
70.0	11.201	5.822	2323.579	.228%	99.028%
75.0	10.800	5.751	2329.329	.225%	99.273%
80.0	10.547	5.712	2335.041	.223%	99.516%
85.0	10.385	5.688	2340.729	.222%	99.759%
90.0	10.287	5.660	2346.389	.221%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2010.98	78.58%	85.71%
0-40	2277.20	88.99%	97.05%
0-60	2311.80	90.34%	98.53%
0-90	2340.73	91.47%	99.76%
0-120	2340.73	91.47%	99.76%
0-180	2346.39	91.69%	100.00%
60-90	35.09	1.37%	1.50%
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%
0-27.02	1877.11	73.35%	80.00%

## ZONAL LUMEN SUMMARY

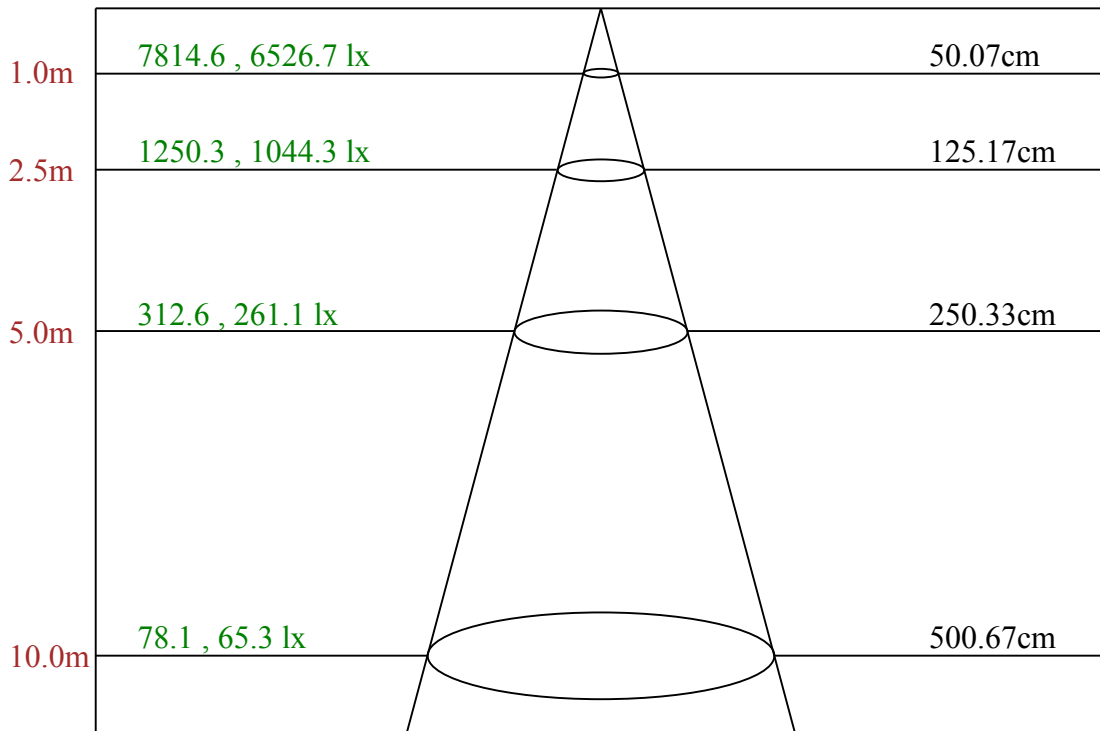
0-10	641.41
10-20	897.77
20-30	471.81
30-40	266.22
40-50	21.92
50-60	12.68
60-70	11.78
70-80	11.46
80-90	5.69
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



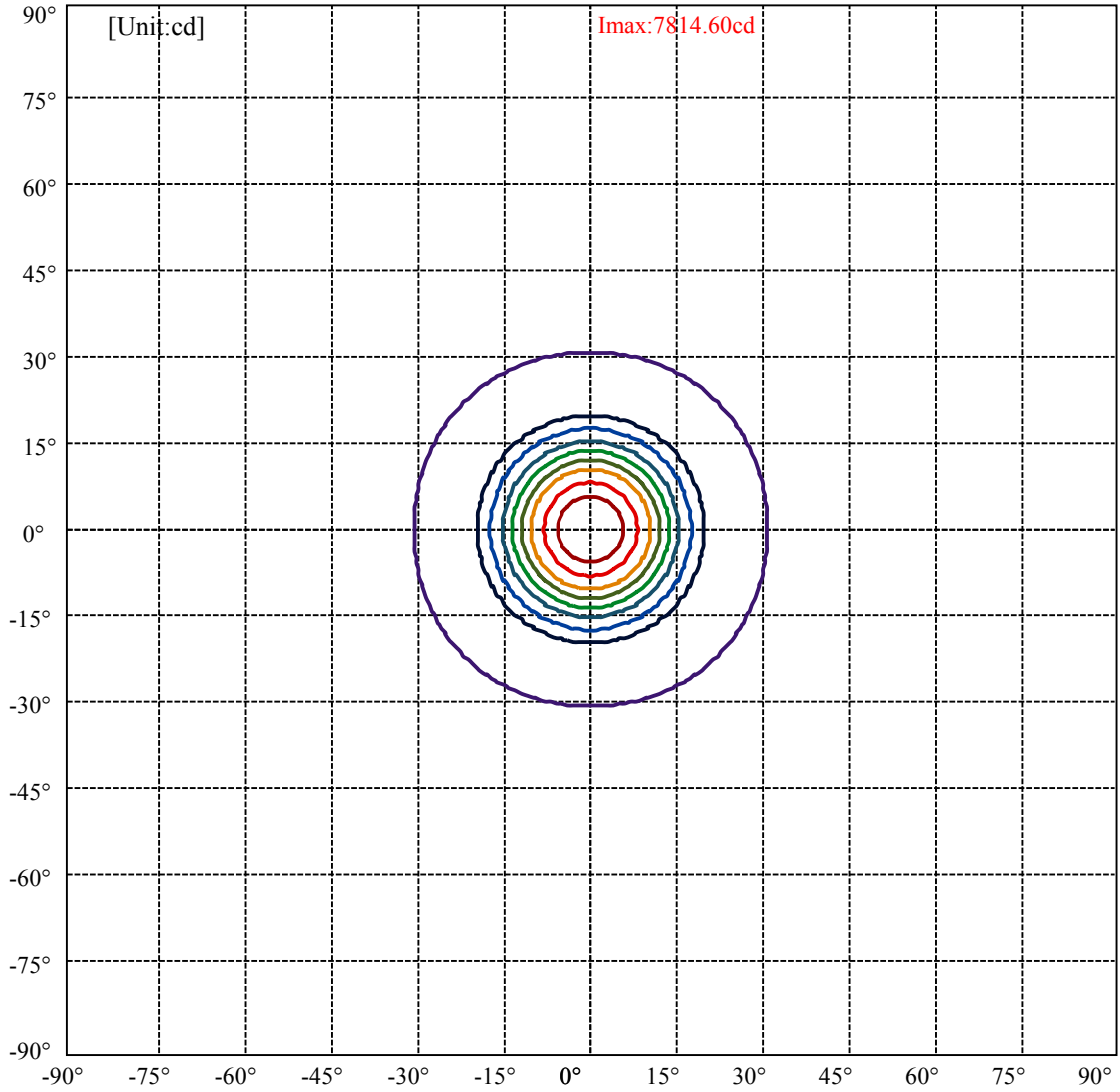
C0(Max): —————  
 C0/C180: —————  
 C90/C270: —————

Field angle(10%Imax):C0/180Left:30.4 Right:30.4  
 :C90/270Left:30.4 Right:30.4

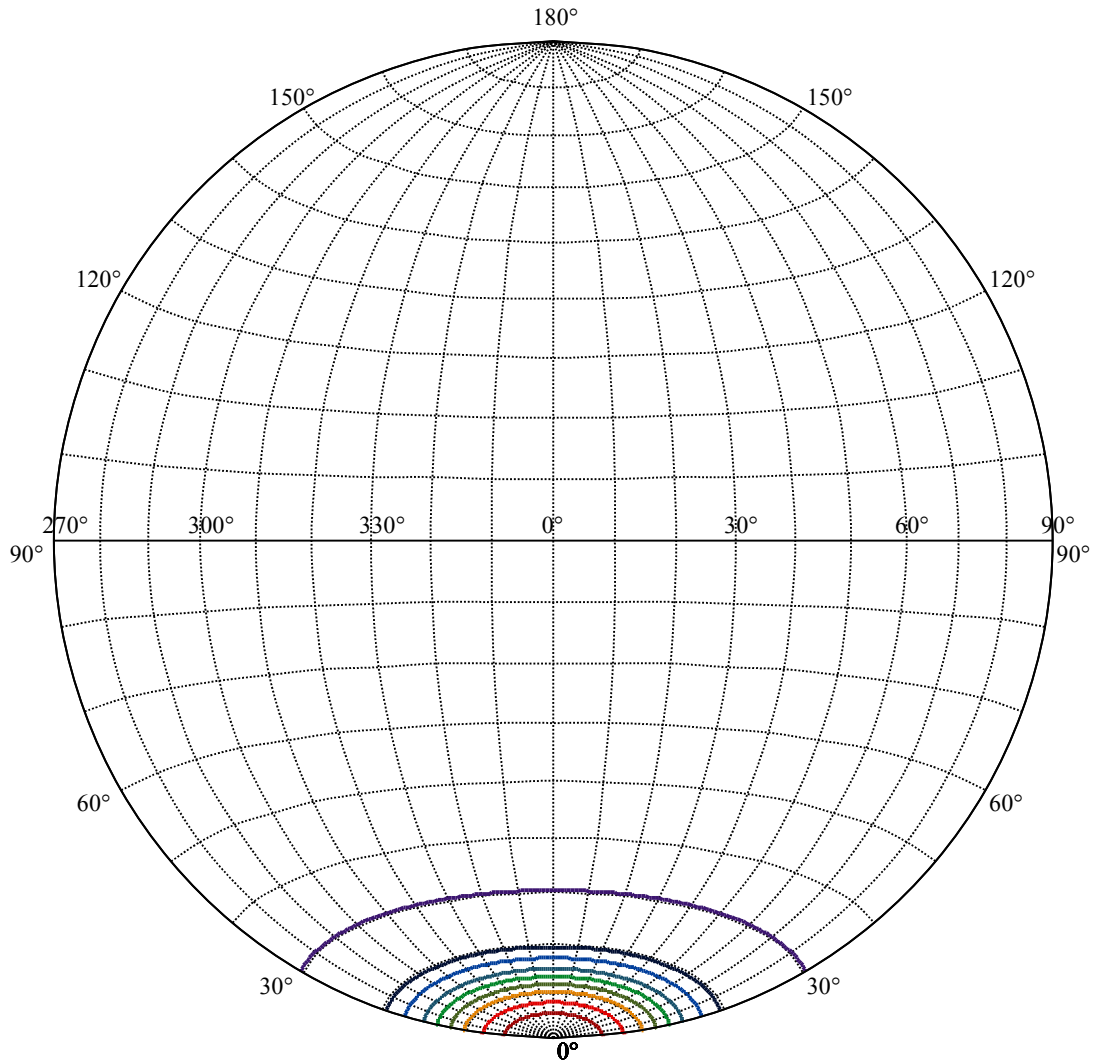
Beam Angle(50%Imax):C0/180Left:13.5 Right:13.5  
 :C90/270Left:13.5 Right:13.5



Max , Ave      Beam angle of C0 plane 28.11



(10%Imax) 781.46	—
(20%Imax) 1562.92	—
(30%Imax) 2344.38	—
(40%Imax) 3125.84	—
(50%Imax) 3907.3	—
(60%Imax) 4688.76	—
(70%Imax) 5470.22	—
(80%Imax) 6251.68	—
(90%Imax) 7033.14	—



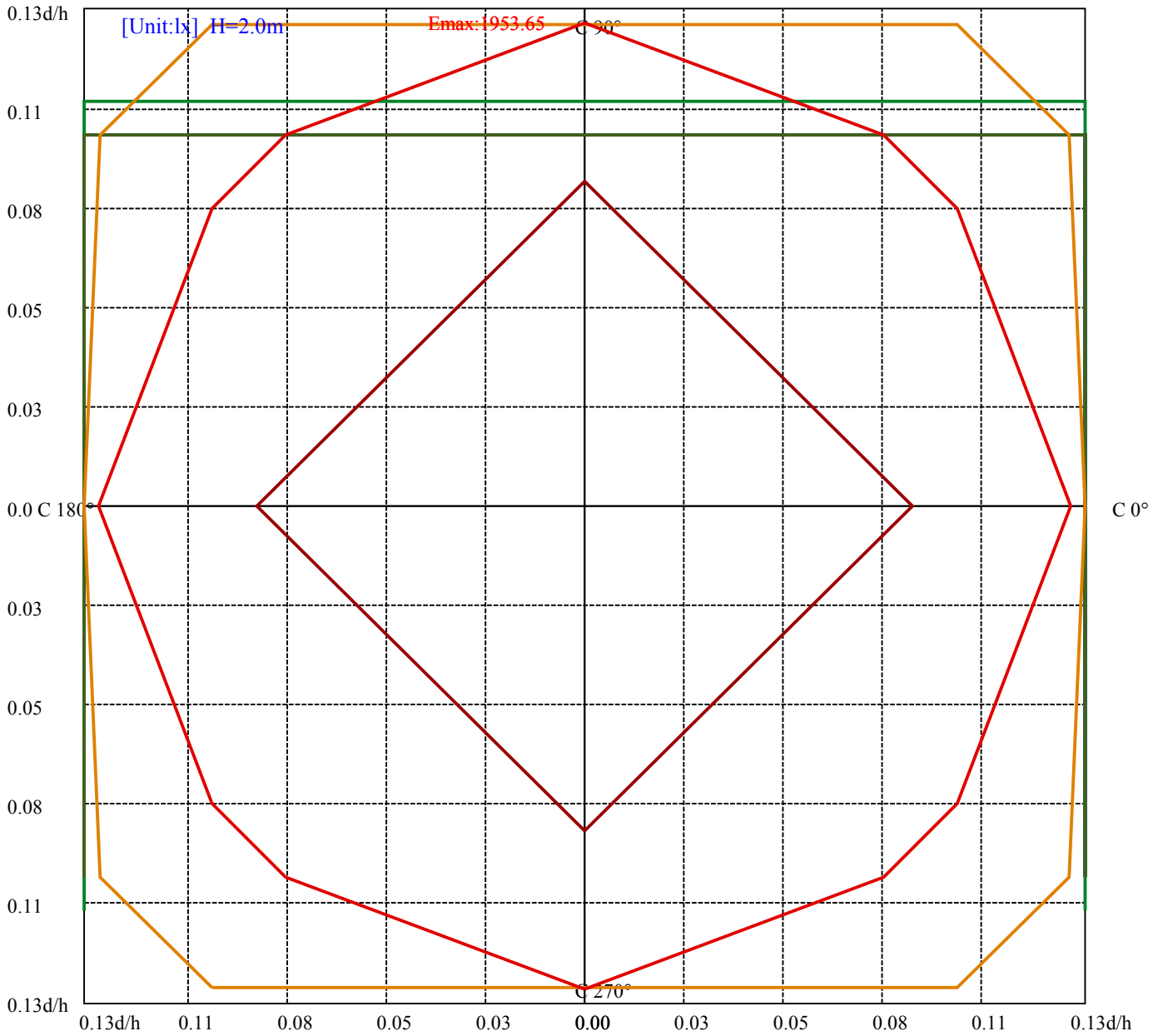
House

[Unit:cd]

Road

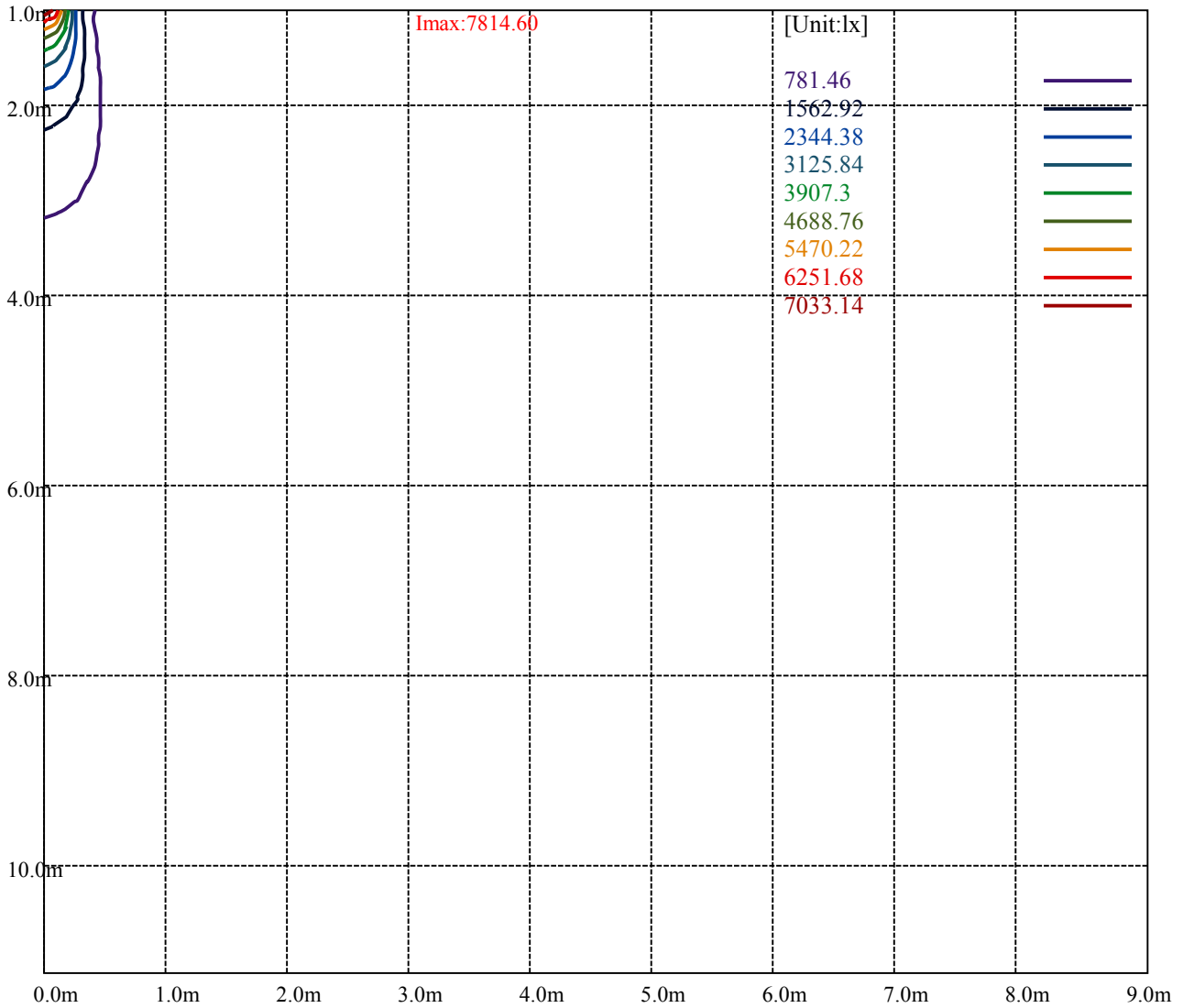
**Imax:7814.60**

(10%Imax) 781.46	—
(20%Imax) 1562.92	—
(30%Imax) 2344.38	—
(40%Imax) 3125.84	—
(50%Imax) 3907.3	—
(60%Imax) 4688.76	—
(70%Imax) 5470.22	—
(80%Imax) 6251.68	—
(90%Imax) 7033.14	—



- (10%Emax) 195.3645
- (20%Emax) 390.73
- (30%Emax) 586.095
- (40%Emax) 781.4575
- (50%Emax) 976.8225
- (60%Emax) 1172.188
- (70%Emax) 1367.552
- (80%Emax) 1562.917
- (90%Emax) 1758.282





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

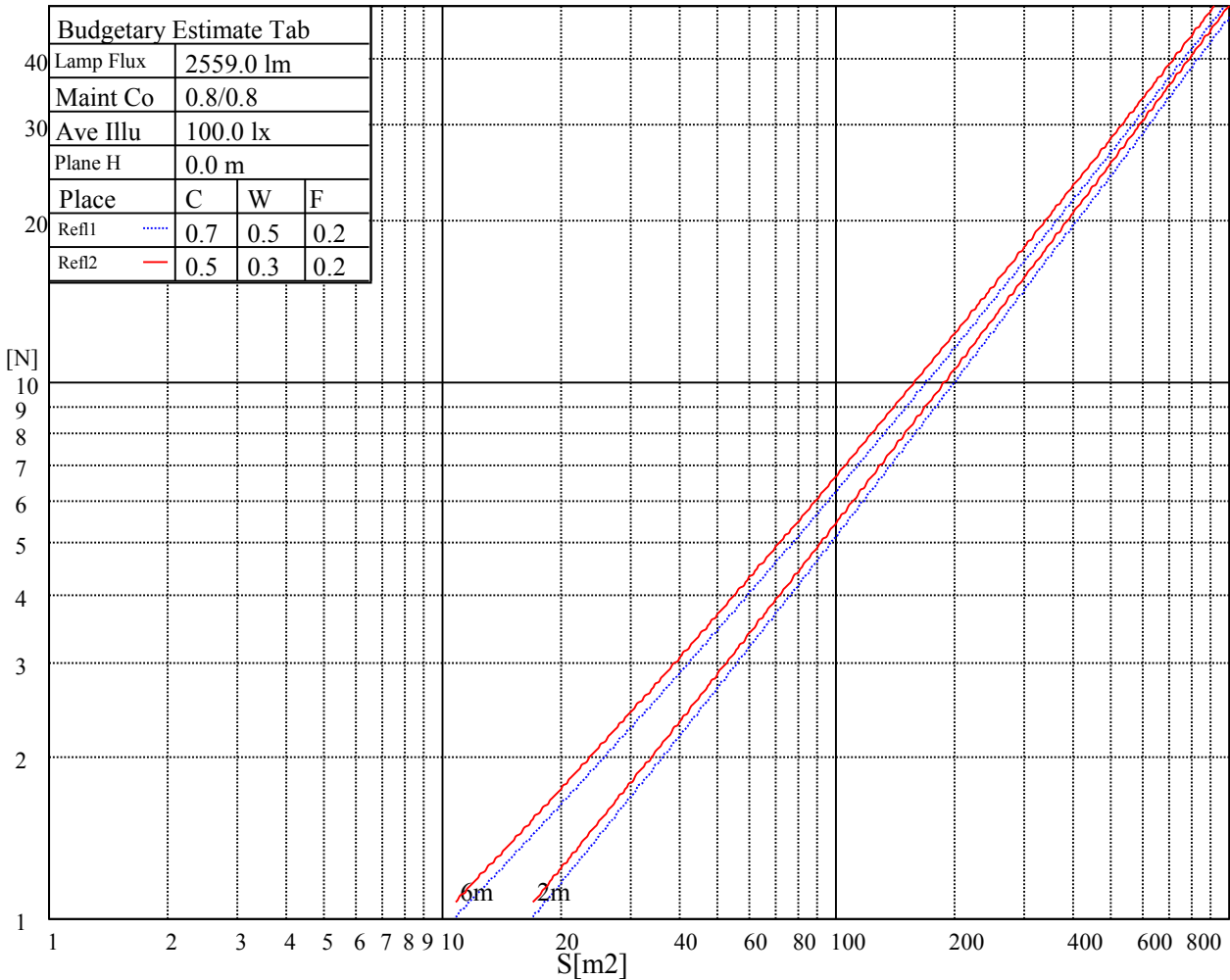
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

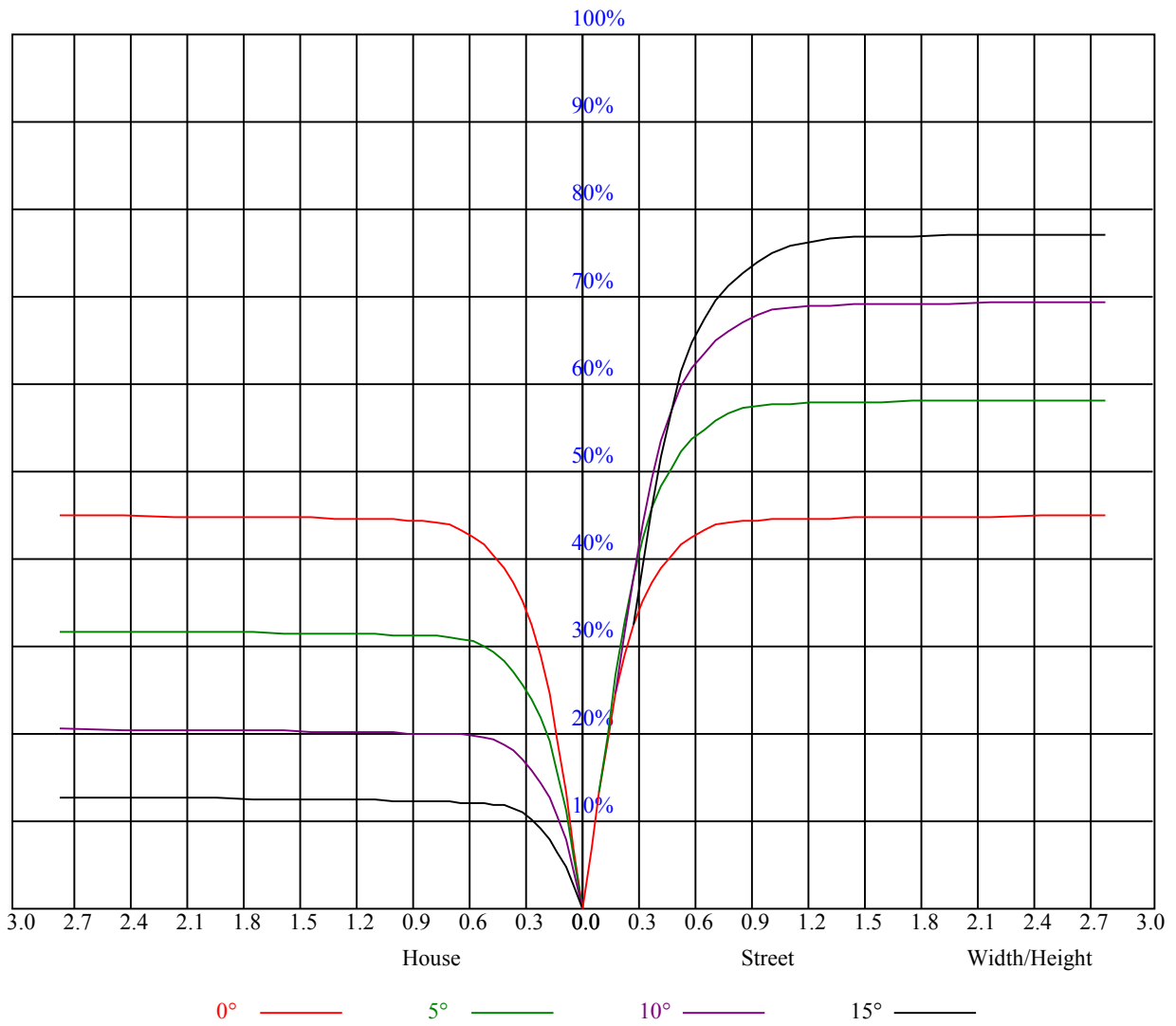
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	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	0.90	0.89	0.87
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.84	0.82	0.81	0.79
4	0.88	0.83	0.80	0.87	0.83	0.80	0.85	0.81	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
5	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.73
6	0.80	0.76	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.72	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
8	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.65	0.63	0.62
10	0.69	0.64	0.62	0.68	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60



Nata 3-1943-M

Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	7804.13	7241.63	5402.81	2676.38	1353.94	934.88	810.00	354.38	30.66
45.0	7833.38	7157.25	5329.13	2635.31	1283.63	902.81	792.56	388.13	29.76
90.0	7795.13	7036.31	5361.19	2733.19	1110.21	909.79	790.37	330.69	31.05
135.0	7823.25	7407.00	6198.19	4002.19	1677.94	1035.00	830.81	542.25	181.29
180.0	7804.13	7300.13	5819.06	3551.06	1538.44	966.09	824.34	518.01	64.01
225.0	7838.44	7393.50	5923.69	3458.81	1557.56	973.46	832.28	530.94	62.61
270.0	7795.13	7474.50	5971.50	3746.81	1578.38	1022.63	844.88	515.81	49.11
315.0	7823.25	7064.44	5058.56	2495.25	1102.95	926.10	787.67	294.36	27.00
360.0	7804.13	7241.63	5402.81	2676.38	1353.94	934.88	810.00	354.38	30.66
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.06	14.74	13.16	12.09	11.31	10.91	10.63	10.46	10.35
45.0	17.89	15.53	13.61	12.49	11.64	11.03	10.74	10.52	10.41
90.0	18.62	15.86	13.95	12.71	11.81	11.19	10.74	10.52	10.35
135.0	22.28	16.99	14.74	13.33	12.21	11.42	10.91	10.58	10.41
180.0	20.93	16.99	14.74	13.22	12.09	11.42	10.91	10.58	10.35
225.0	21.66	16.76	14.63	13.11	12.09	11.48	10.97	10.63	10.52
270.0	21.83	16.14	14.01	12.66	11.81	11.25	10.86	10.63	10.41
315.0	17.44	14.91	12.99	11.98	11.36	10.91	10.63	10.46	10.29
360.0	18.06	14.74	13.16	12.09	11.31	10.91	10.63	10.46	10.35
C/ $\gamma$ (°)	90.0								
0.0	10.24								
45.0	10.29								
90.0	10.29								
135.0	10.29								
180.0	10.24								
225.0	10.35								
270.0	10.29								
315.0	10.29								
360.0	10.24								