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## Nata

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LumCAT: 2-1777-L

Luminaire:

Report No: NATA0100

Voltage(V): 34.3400

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.6580

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): 2501.00

Efficiency(%): 97.74%

Lumens(lm)/Power(W): 121.07

Central intensity(cd): 12611.250

Maximum intensity(cd): 12611.250

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

Beam Angle(50%Imax): [C0/180]Total=18.4

[C90/270]Total=18.4

Field angle(10%Imax): [C0/180]Total=43.5

[C90/270]Total=43.5

Maximum s/h(1/2): C0\_180=0.32 C90\_270=0.32

Maximum s/h(1/4): C0\_180=0.34 C90\_270=0.34

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 97.74%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.367%

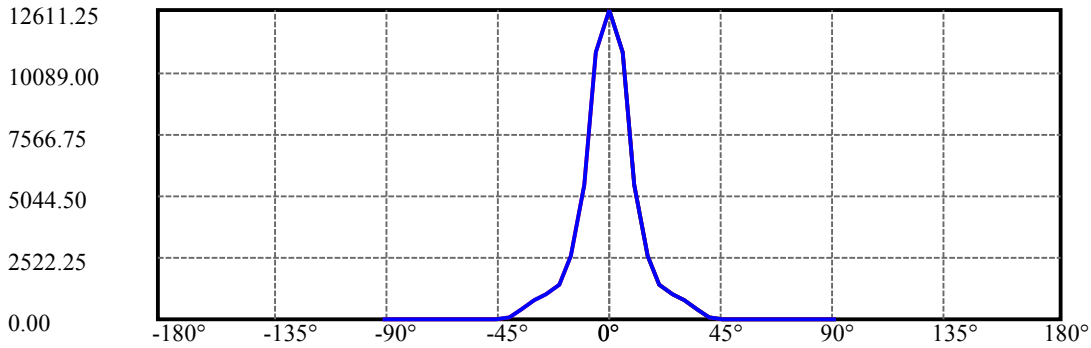
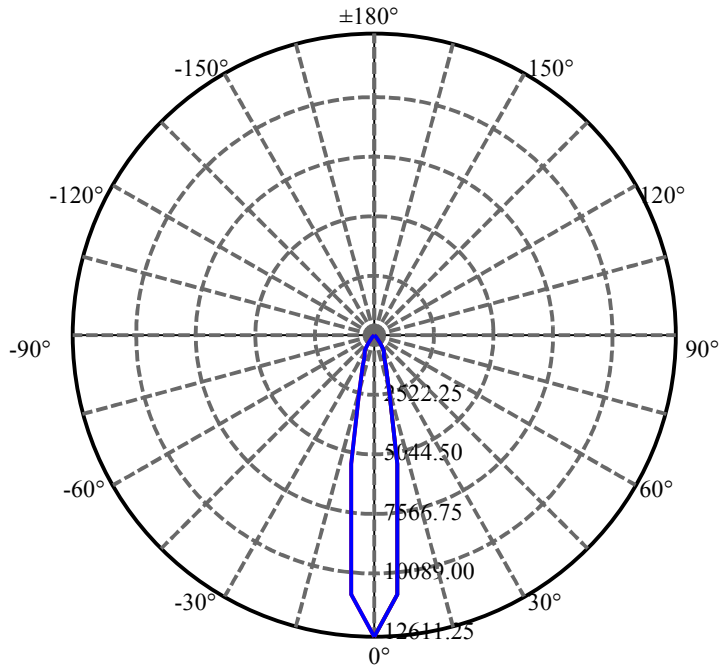
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	12611.250	0.000	0	.000%	.000%
5.0	10882.898	280.866	280.866	10.976%	11.230%
10.0	5465.391	584.830	865.696	22.854%	34.614%
15.0	2581.734	477.350	1343.046	18.654%	53.700%
20.0	1402.186	328.331	1671.377	12.831%	66.828%
25.0	1004.295	252.395	1923.772	9.863%	76.920%
30.0	781.249	225.962	2149.734	8.830%	85.955%
35.0	400.781	174.062	2323.796	6.802%	92.915%
40.0	107.712	84.838	2408.635	3.315%	96.307%
45.0	27.675	25.068	2433.703	.980%	97.309%
50.0	21.466	9.930	2443.632	.388%	97.706%
55.0	17.866	8.552	2452.185	.334%	98.048%
60.0	16.566	7.959	2460.143	.311%	98.367%
65.0	15.082	7.694	2467.837	.301%	98.674%
70.0	13.380	7.207	2475.044	.282%	98.962%
75.0	12.607	6.793	2481.837	.265%	99.234%
80.0	12.059	6.600	2488.436	.258%	99.498%
85.0	11.475	6.395	2494.831	.250%	99.754%
90.0	11.039	6.165	2500.996	.241%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2149.73	84.01%	85.96%
0-40	2408.63	94.13%	96.31%
0-60	2460.14	96.14%	98.37%
0-90	2494.83	97.49%	99.75%
0-120	2494.83	97.49%	99.75%
0-180	2501.00	97.74%	100.00%
60-90	42.65	1.67%	1.71%
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%
0-26.70	2000.80	78.19%	80.00%

ZONAL LUMEN SUMMARY

0-10	865.70
10-20	805.68
20-30	478.36
30-40	258.90
40-50	35.00
50-60	16.51
60-70	14.90
70-80	13.39
80-90	6.39
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



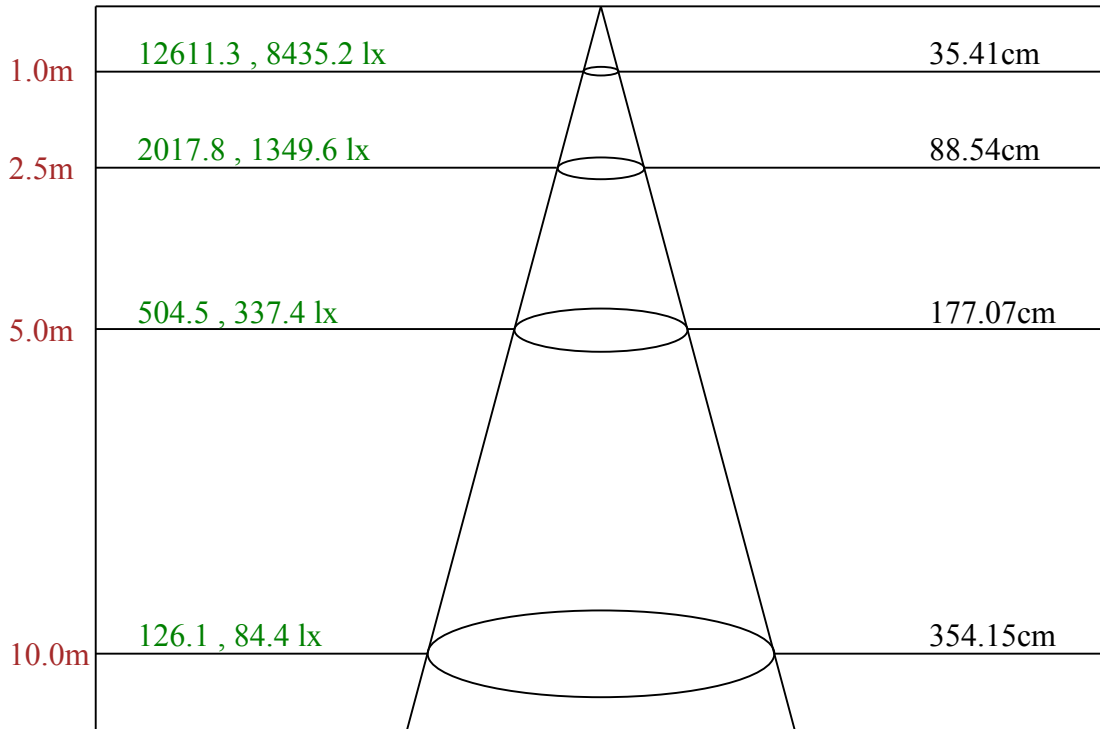
C0(Max): —————

C0/C180: —————

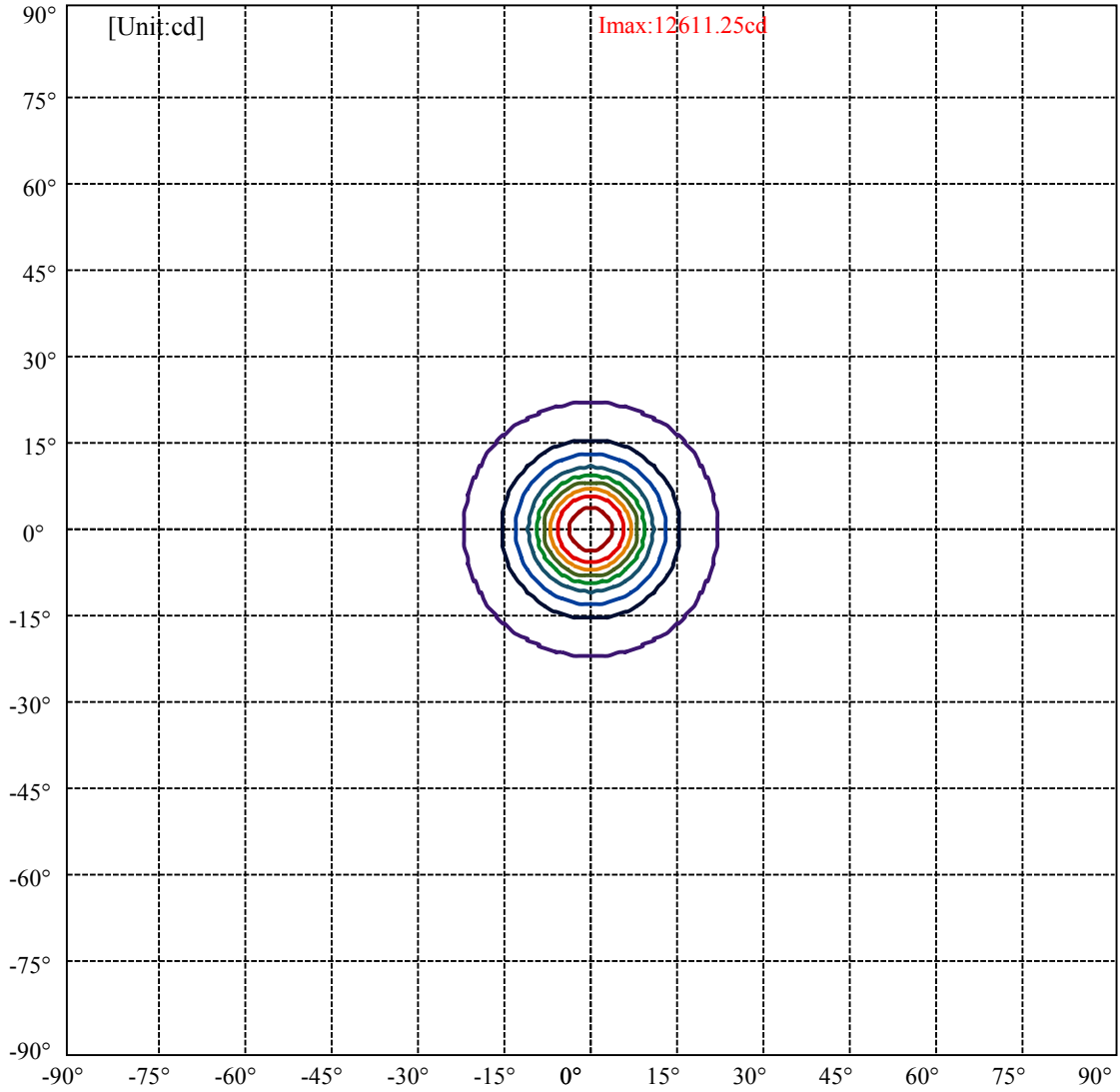
C90/C270: —————

Field angle(10%Imax):C0/180Left:21.8 Right:21.8  
:C90/270Left:21.8 Right:21.8

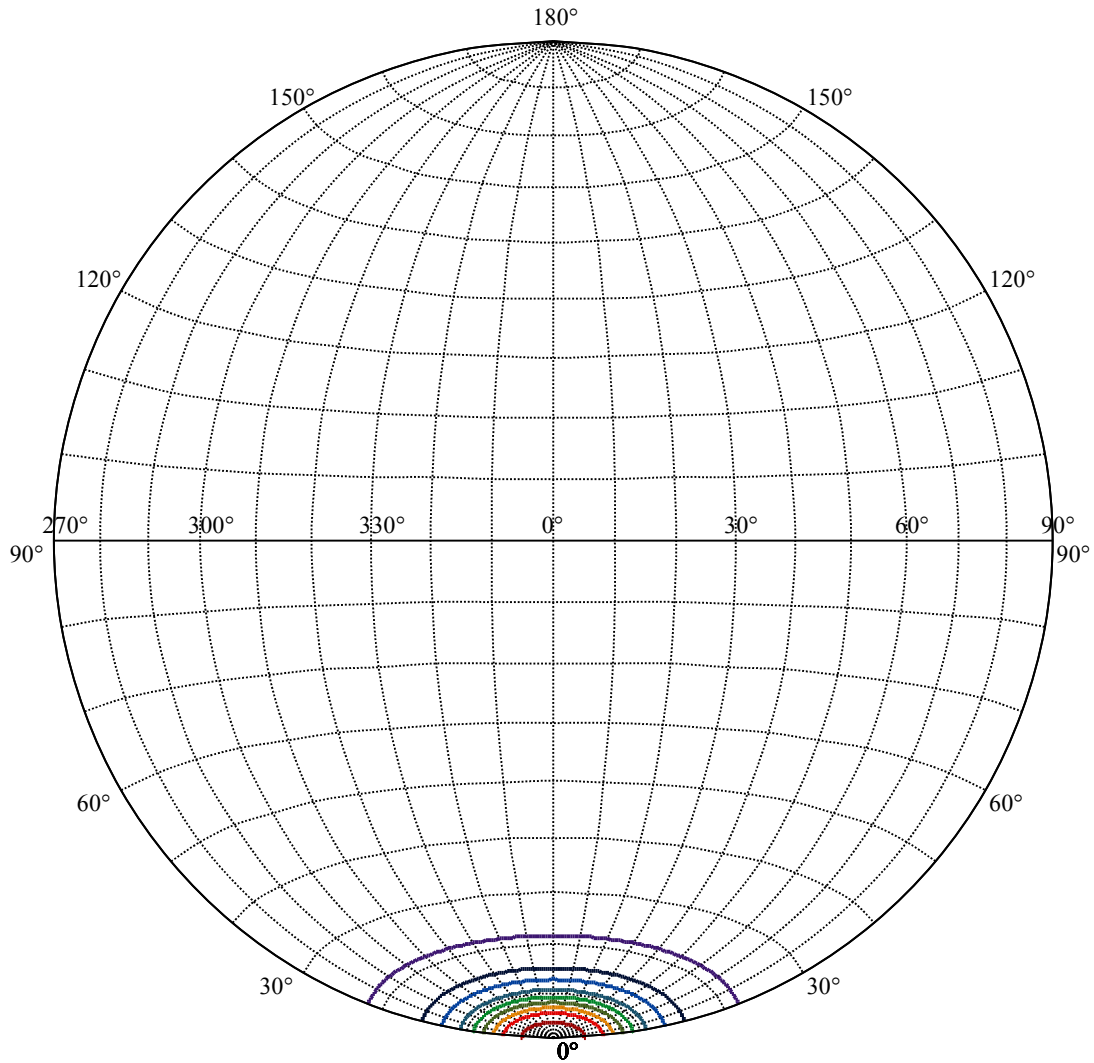
Beam Angle(50%Imax):C0/180Left:9.2 Right:9.2  
:C90/270Left:9.2 Right:9.2



Max , Ave      Beam angle of C0 plane 20.08



(10%Imax) 1261.13	—
(20%Imax) 2522.25	—
(30%Imax) 3783.38	—
(40%Imax) 5044.5	—
(50%Imax) 6305.63	—
(60%Imax) 7566.75	—
(70%Imax) 8827.88	—
(80%Imax) 10089	—
(90%Imax) 11350.1	—



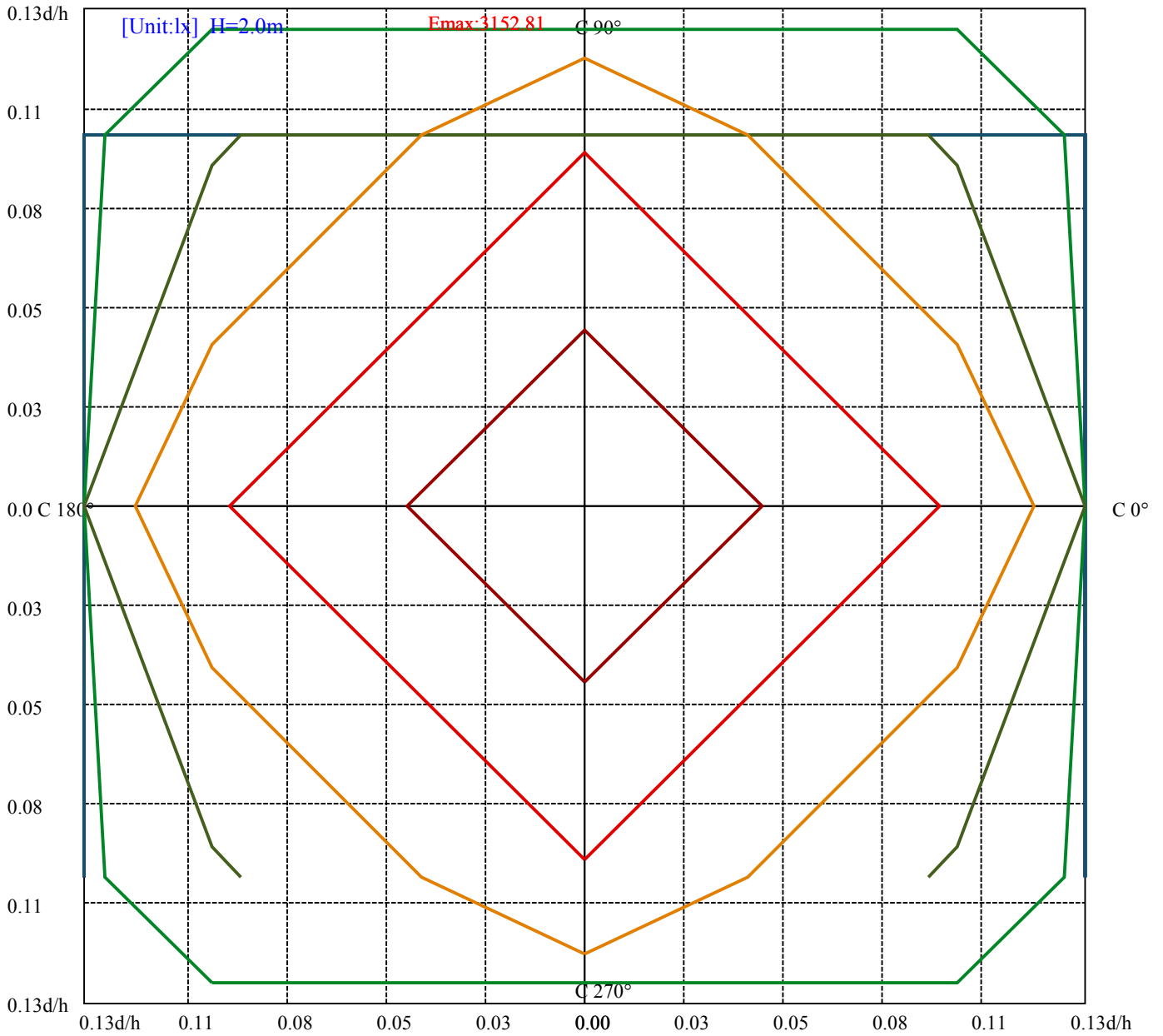
House

[Unit:cd]

Road

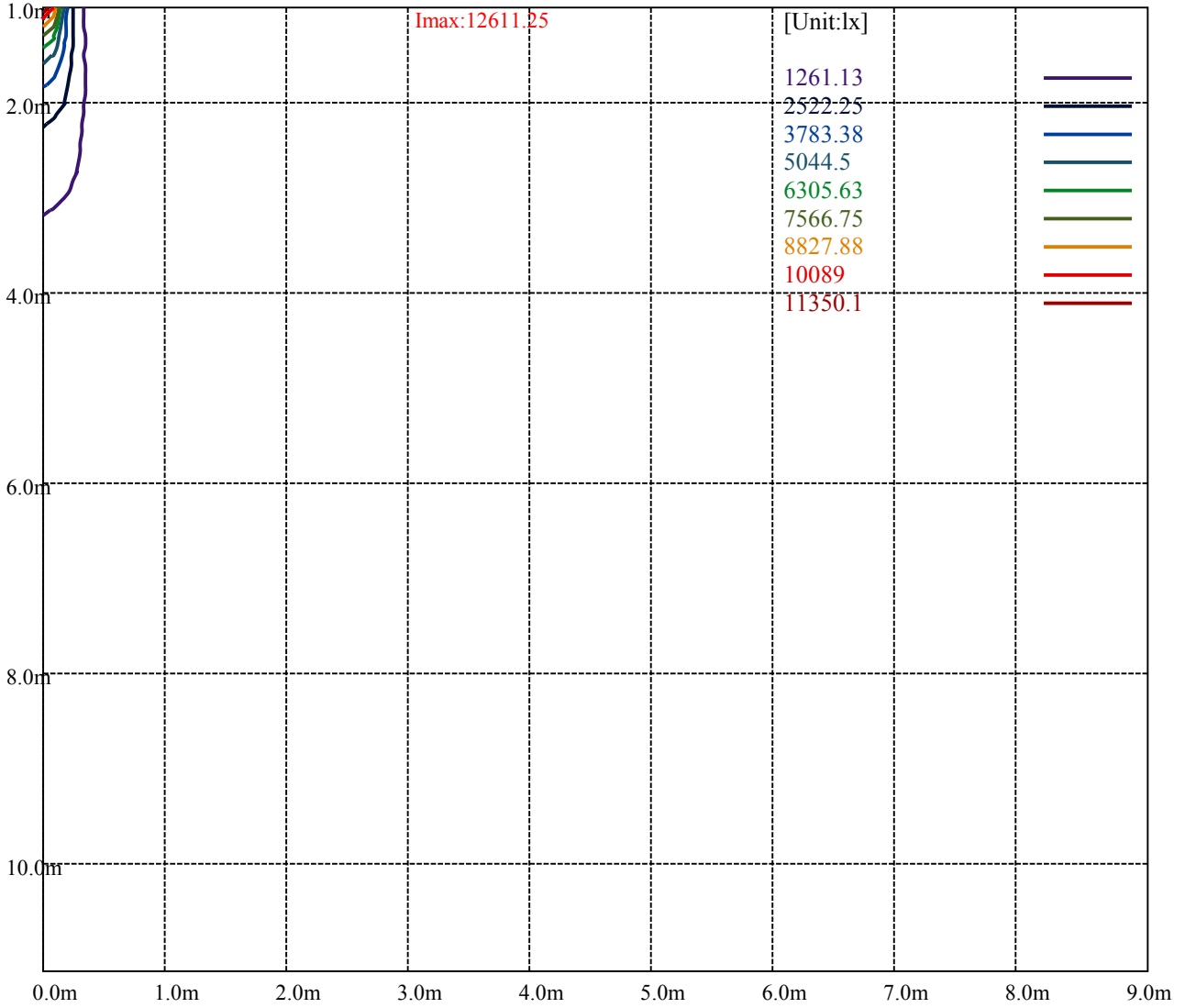
**Imax:12611.25**

(10%Imax)	1261.13	—
(20%Imax)	2522.25	—
(30%Imax)	3783.38	—
(40%Imax)	5044.5	—
(50%Imax)	6305.63	—
(60%Imax)	7566.75	—
(70%Imax)	8827.88	—
(80%Imax)	10089	—
(90%Imax)	11350.1	—



- (10%Emax) 315.28
- (20%Emax) 630.56
- (30%Emax) 945.84
- (40%Emax) 1261.12
- (50%Emax) 1576.4
- (60%Emax) 1891.68
- (70%Emax) 2206.96
- (80%Emax) 2522.25
- (90%Emax) 2837.525





Luminance Table

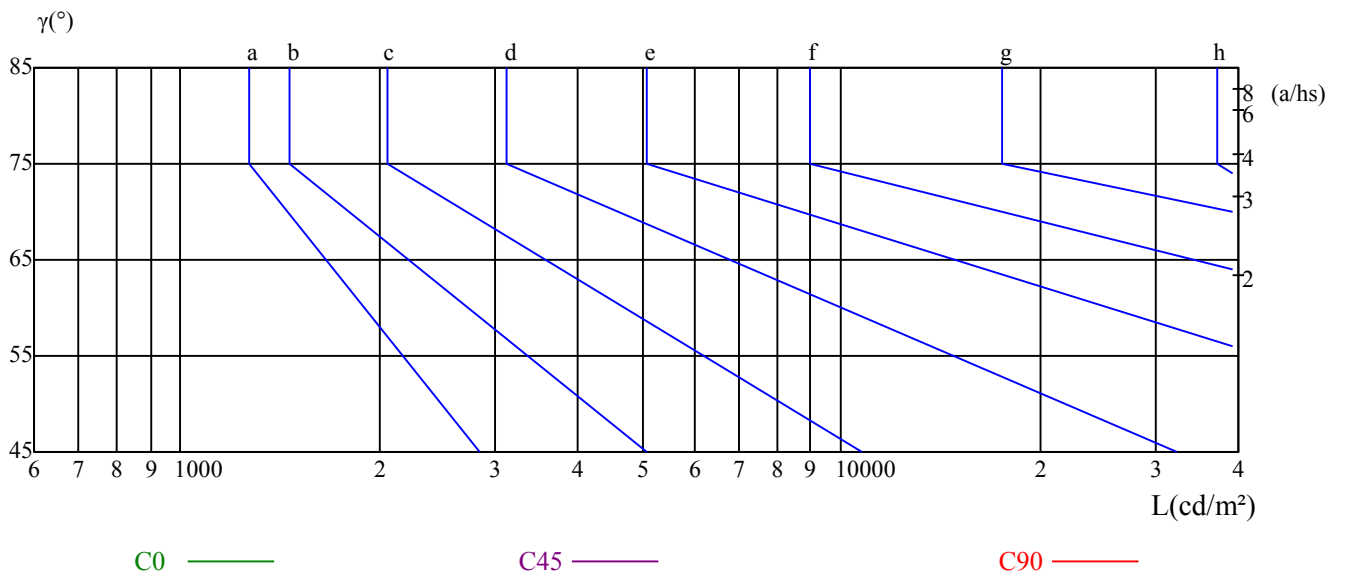
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

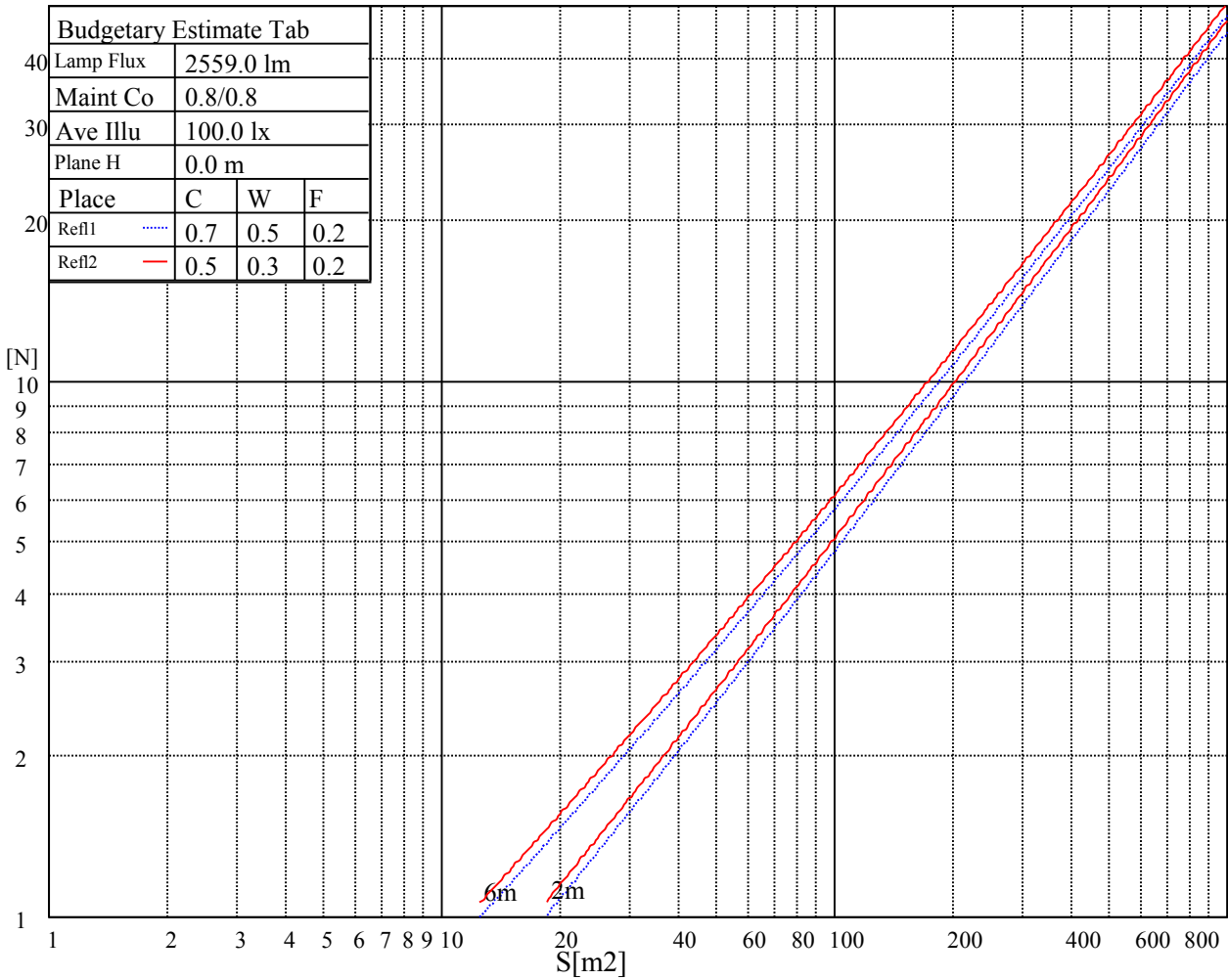
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

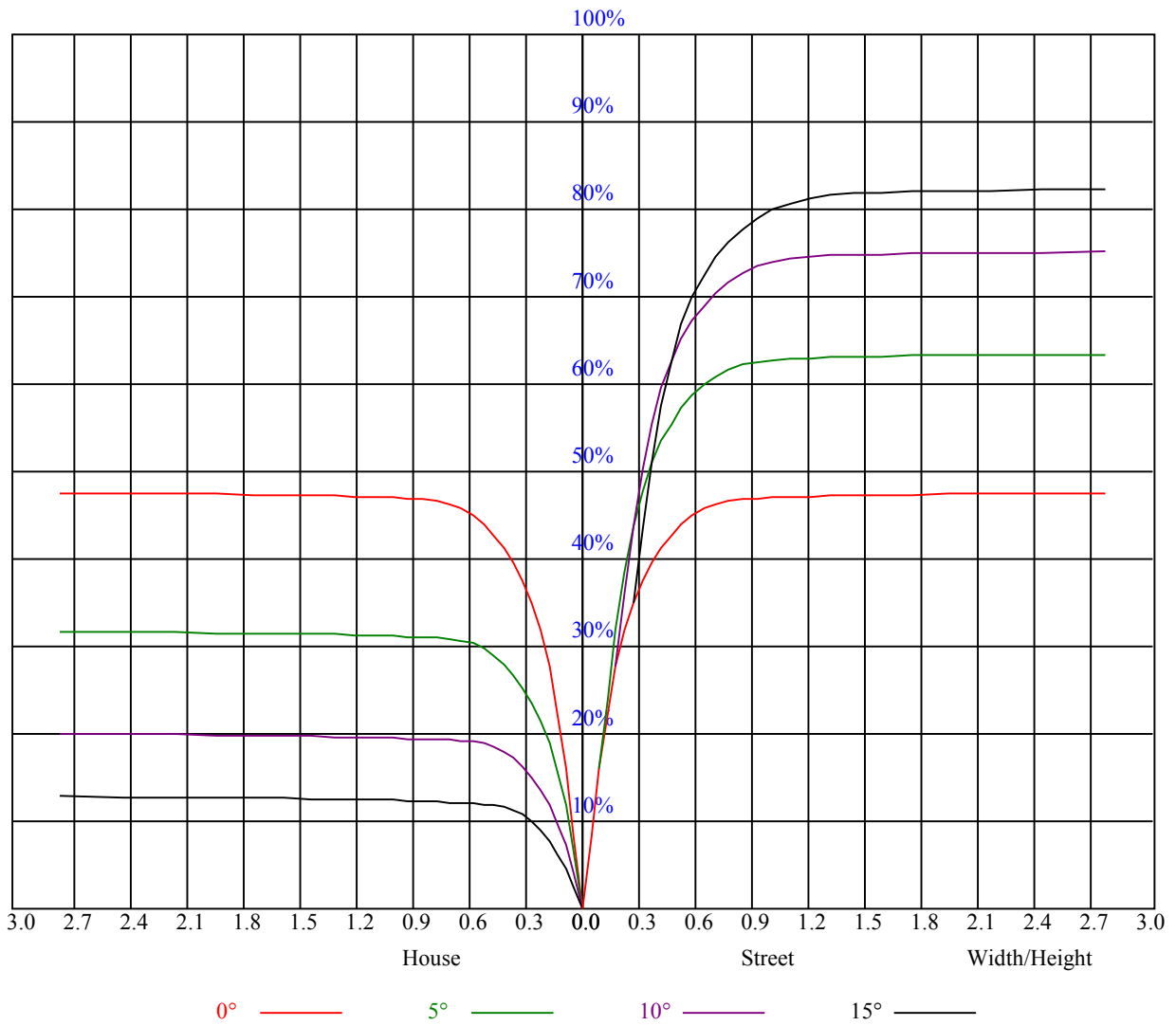
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.16	1.16	1.16	1.14	1.14	1.14	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.98
1	1.09	1.07	1.05	1.07	1.05	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.93
2	1.04	1.00	0.98	1.02	0.99	0.96	0.99	0.96	0.94	0.96	0.94	0.92	0.93	0.92	0.90	0.89
3	0.99	0.95	0.91	0.97	0.94	0.91	0.95	0.92	0.89	0.92	0.90	0.88	0.90	0.88	0.87	0.85
4	0.94	0.90	0.86	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.86	0.84	0.87	0.85	0.83	0.82
5	0.90	0.86	0.82	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.81	0.85	0.82	0.80	0.79
6	0.87	0.82	0.79	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.76
7	0.83	0.79	0.76	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.73
8	0.80	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.71
9	0.78	0.73	0.70	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
10	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.67



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	12611.25	10366.88	4241.25	2868.75	1307.81	968.63	722.81	295.88	32.63
45.0	12628.13	10614.38	4443.75	2042.44	1315.13	977.06	727.31	315.00	38.53
90.0	12616.88	10539.56	4772.81	2118.94	1107.84	879.86	685.07	332.04	60.36
135.0	12588.75	12380.63	7290.00	2970.00	1632.94	1139.06	916.31	566.44	294.75
180.0	12611.25	10776.94	6827.06	3067.88	1747.13	1105.76	911.70	567.96	174.38
225.0	12628.13	11153.81	6489.56	2705.63	1545.75	1091.53	911.93	540.00	144.79
270.0	12616.88	11846.25	5720.63	2868.75	1444.50	928.69	702.56	345.38	80.94
315.0	12588.75	9384.75	3938.06	2011.50	1116.39	943.76	672.30	243.56	35.33
360.0	12611.25	10366.88	4241.25	2868.75	1307.81	968.63	722.81	295.88	32.63

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	21.26	17.10	15.53	15.24	14.34	12.77	11.98	11.53	11.19
45.0	24.69	20.64	17.72	16.76	14.34	13.11	12.26	11.81	11.36
90.0	30.71	24.64	19.58	17.33	14.46	13.50	13.16	12.43	11.48
135.0	29.76	21.60	18.39	16.48	17.21	13.78	12.60	12.04	11.64
180.0	27.00	19.80	16.93	15.86	14.85	13.56	12.43	11.81	11.42
225.0	30.66	23.01	18.28	16.48	15.81	13.44	12.66	12.04	11.64
270.0	33.47	25.20	19.97	18.00	15.53	14.01	13.50	12.94	11.70
315.0	23.85	19.74	16.54	16.37	14.12	12.88	12.26	11.87	11.36
360.0	21.26	17.10	15.53	15.24	14.34	12.77	11.98	11.53	11.19

C/γ(°)	90.0
0.0	10.80
45.0	11.03
90.0	11.03
135.0	11.14
180.0	11.03
225.0	11.25
270.0	11.08
315.0	10.97
360.0	10.80