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## Nata

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### Client:

LumCAT: 1-0927-M

Luminaire: 92.70.127.00

Report No: nt0100

Test No: NATA07

LampCAT: LUMINUS CLM-9-AA40

Lamp flux(lm): 1234.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 220.5000

Current(A): 0.1000

Power (W): 12.1400

PF: 0.5470

Ballast type: AC

Width(mm): 0

Height(mm): 0

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## Photometric Results

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Lumens(lm): 991.57, Efficiency(%): 80.35% , Luminous Efficacy(lm/W): 81.68

Central intensity(cd): 4260.337, Maximum intensity(cd): 4260.337

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

Beam Angle(50%Imax): [C0/180]Total=27.4

[C90/270]Total=27.4

Field angle(10%Imax): [C0/180]Total=46.0

[C90/270]Total=46.0

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(%): 80.35%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.633%

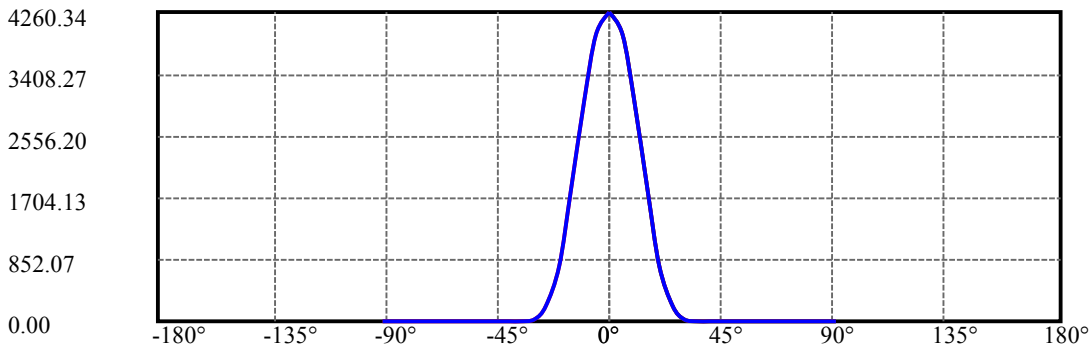
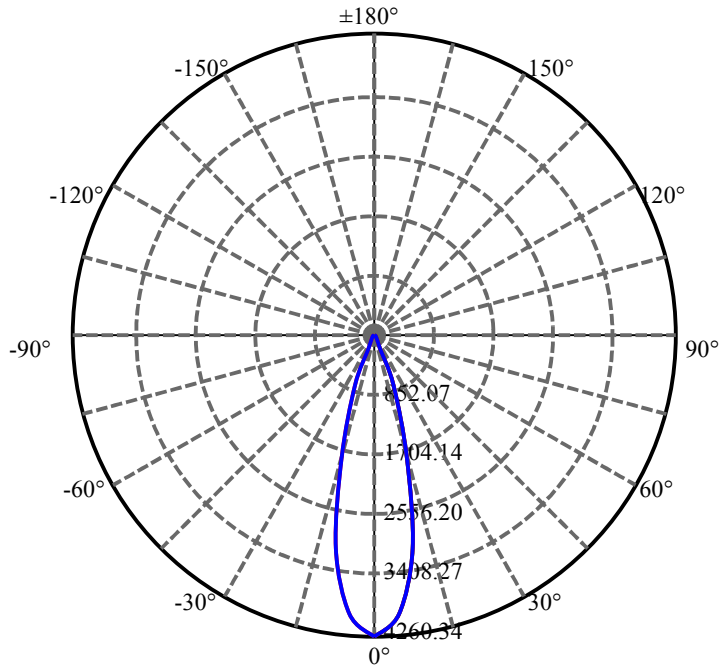
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4260.337	0.000	0	.000%	.000%
5.0	3954.539	98.207	98.207	7.958%	9.904%
10.0	3055.417	250.768	348.975	20.322%	35.194%
15.0	1794.162	287.674	636.648	23.312%	64.206%
20.0	758.741	210.395	847.043	17.050%	85.424%
25.0	203.763	100.949	947.992	8.181%	95.605%
30.0	37.384	30.517	978.51	2.473%	98.682%
35.0	3.028	5.951	984.46	.482%	99.283%
40.0	2.204	0.873	985.333	.071%	99.371%
45.0	1.752	0.732	986.066	.059%	99.445%
50.0	1.485	0.654	986.72	.053%	99.510%
55.0	1.346	0.615	987.335	.050%	99.573%
60.0	1.253	0.601	987.936	.049%	99.633%
65.0	1.183	0.592	988.528	.048%	99.693%
70.0	1.160	0.593	989.122	.048%	99.753%
75.0	1.148	0.603	989.725	.049%	99.814%
80.0	1.143	0.613	990.338	.050%	99.875%
85.0	1.125	0.616	990.954	.050%	99.938%
90.0	1.137	0.619	991.574	.050%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	978.51	79.30%	98.68%
0-40	985.33	79.85%	99.37%
0-60	987.94	80.06%	99.63%
0-90	990.95	80.30%	99.94%
0-120	990.95	80.30%	99.94%
0-180	991.57	80.35%	100.00%
60-90	3.62	0.29%	0.36%
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%
0-18.72	793.26	64.28%	80.00%

ZONAL LUMEN SUMMARY

0-10	348.97
10-20	498.07
20-30	131.47
30-40	6.82
40-50	1.39
50-60	1.22
60-70	1.19
70-80	1.22
80-90	0.62
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: —————

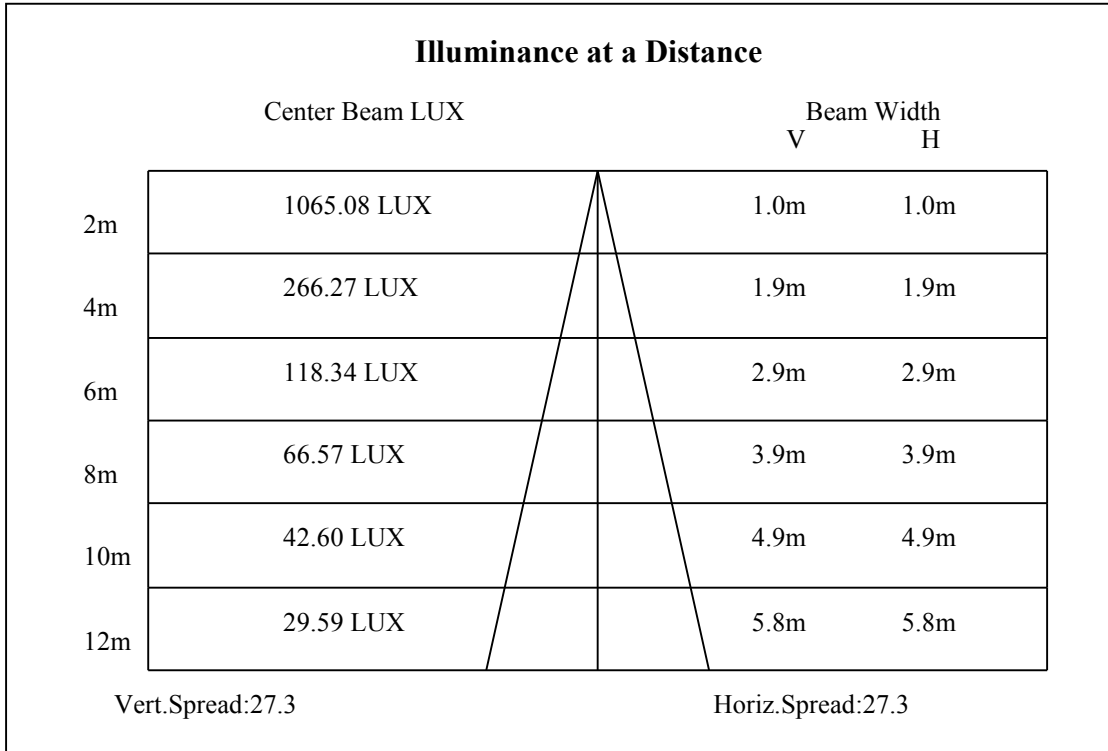
C90/C270: —————

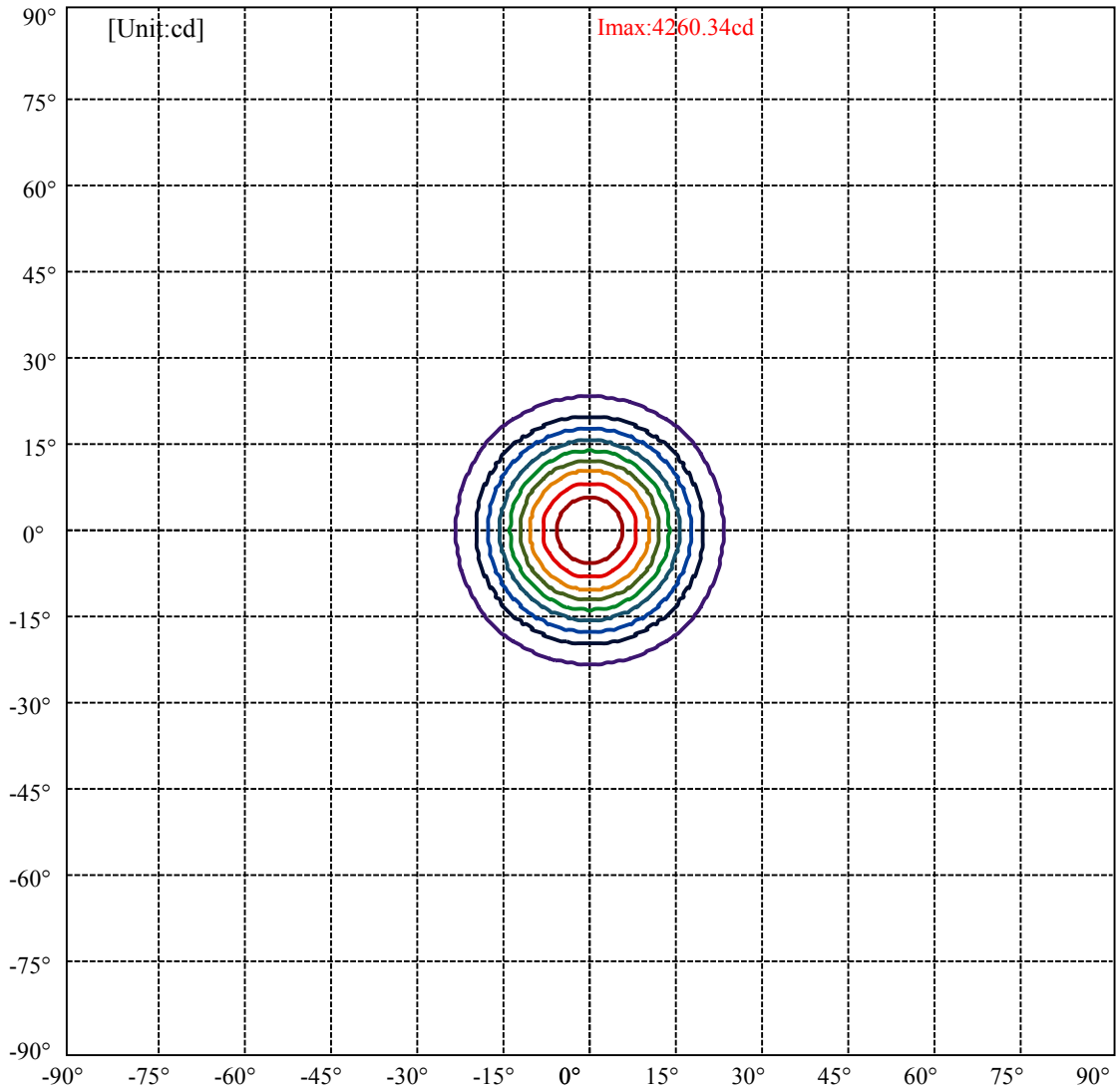
Field angle(10%Imax):C0/180Left:23.0 Right:23.0

:C90/270Left:23.0 Right:23.0

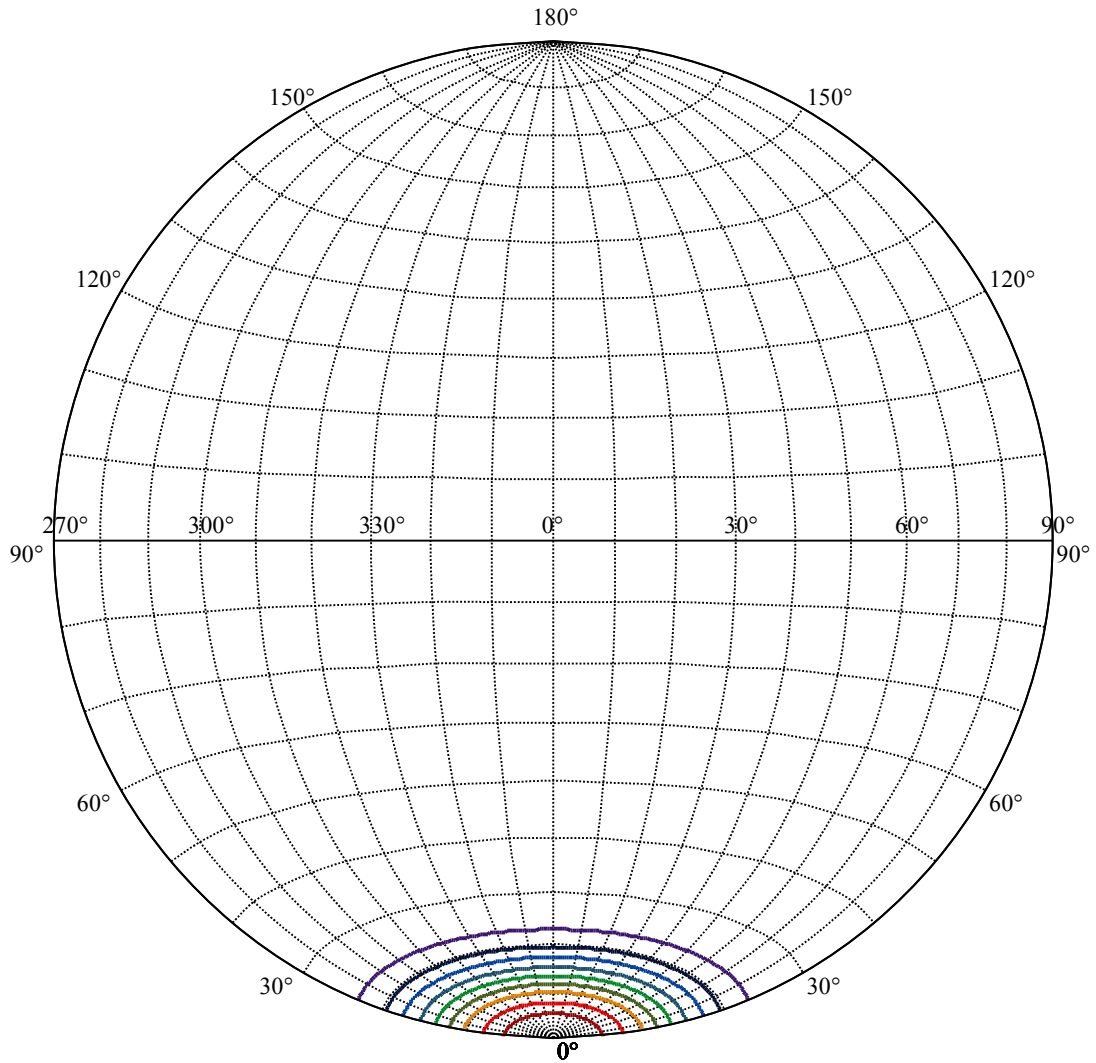
Beam Angle(50%Imax):C0/180Left:13.7 Right:13.7

:C90/270Left:13.7 Right:13.7





(10%Imax)	426.034	—
(20%Imax)	852.067	—
(30%Imax)	1278.1	—
(40%Imax)	1704.13	—
(50%Imax)	2130.17	—
(60%Imax)	2556.2	—
(70%Imax)	2982.24	—
(80%Imax)	3408.27	—
(90%Imax)	3834.3	—



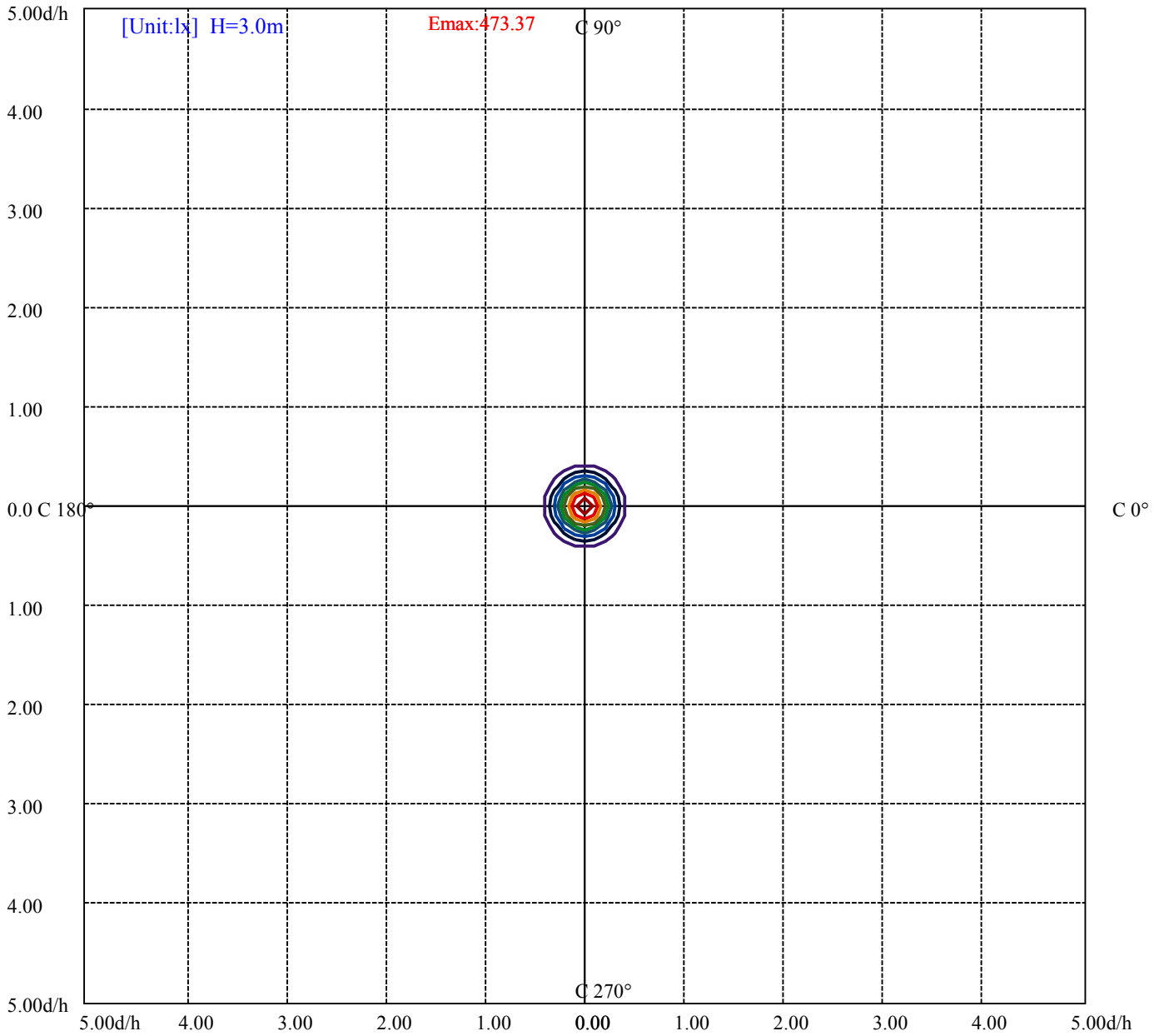
House

[Unit:cd]

Road

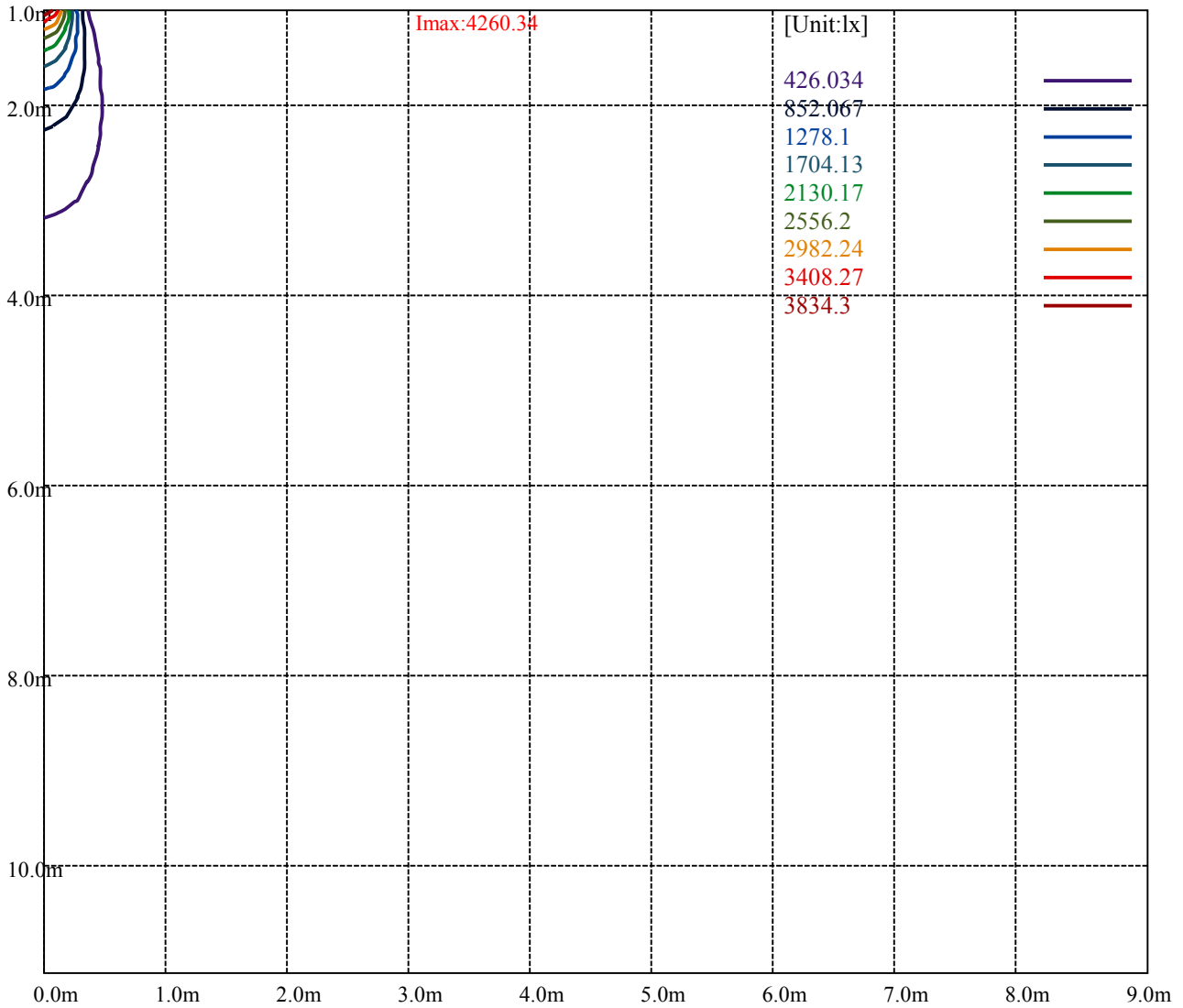
**Imax:4260.34**

(10%Imax)	426.034	—
(20%Imax)	852.067	—
(30%Imax)	1278.1	—
(40%Imax)	1704.13	—
(50%Imax)	2130.17	—
(60%Imax)	2556.2	—
(70%Imax)	2982.24	—
(80%Imax)	3408.27	—
(90%Imax)	3834.3	—



(10%Emax) 47.337	—
(20%Emax) 94.674	—
(30%Emax) 142.0111	—
(40%Emax) 189.3478	—
(50%Emax) 236.6844	—
(60%Emax) 284.0222	—
(70%Emax) 331.3589	—
(80%Emax) 378.6956	—
(90%Emax) 426.0322	—





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

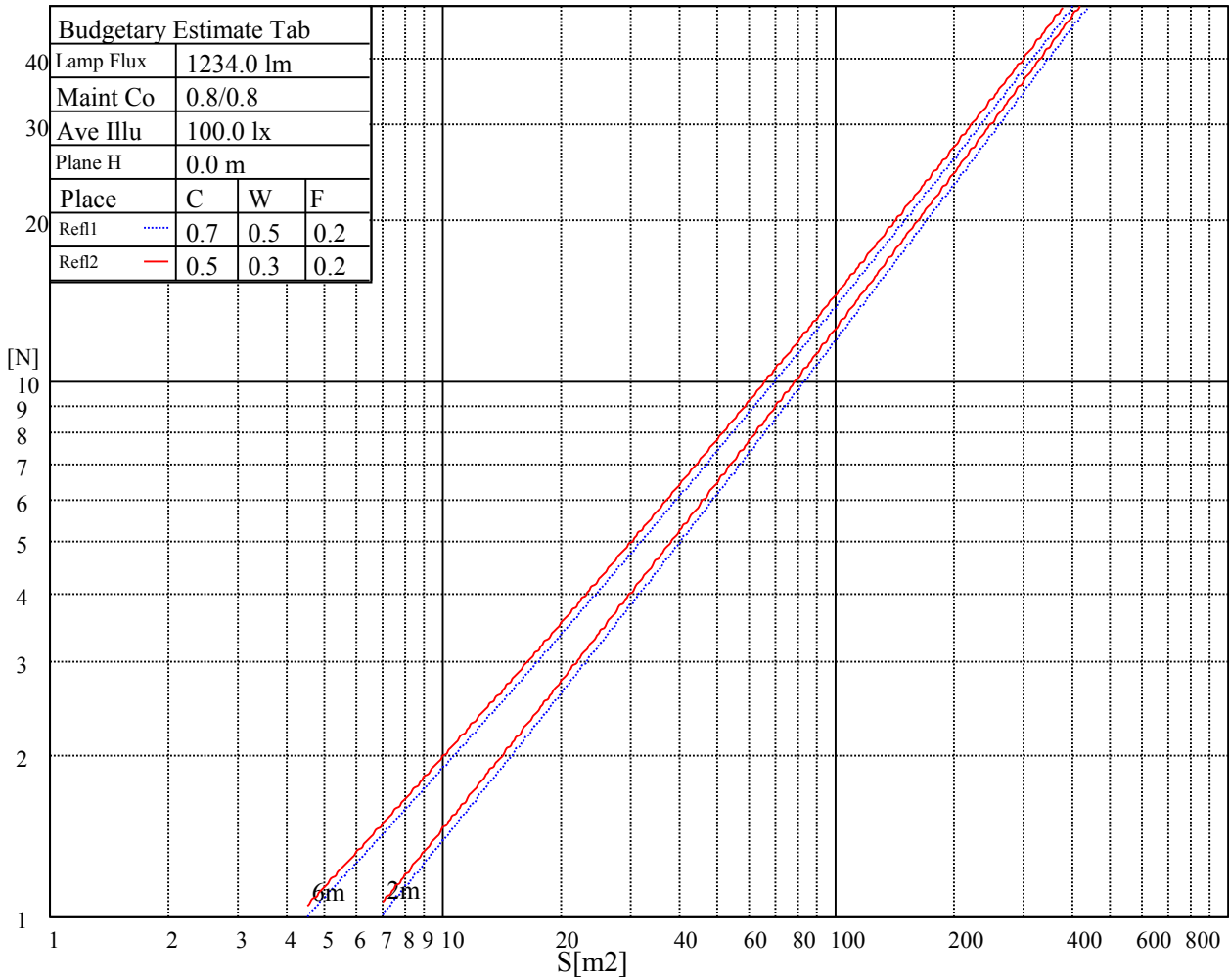
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

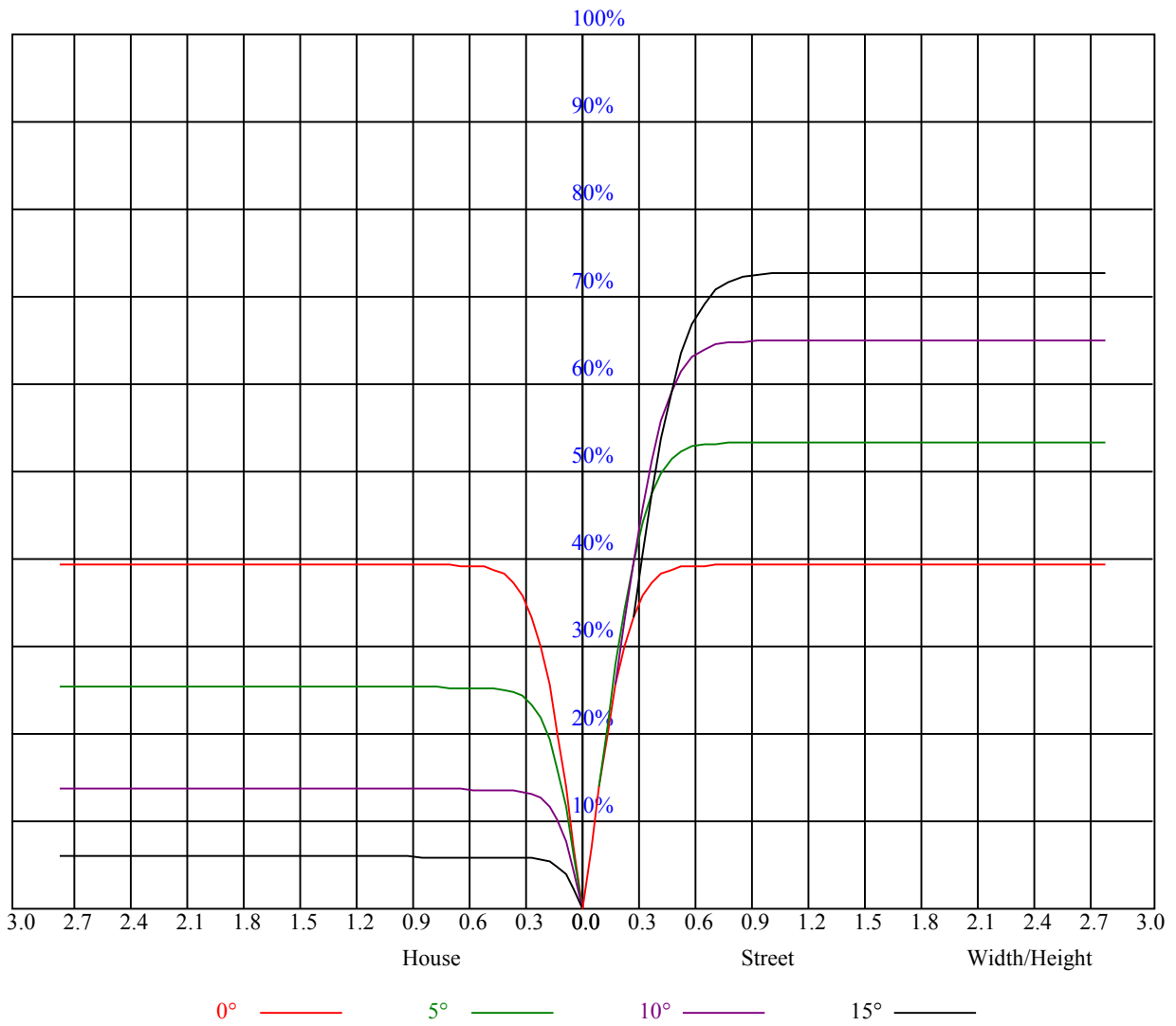
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

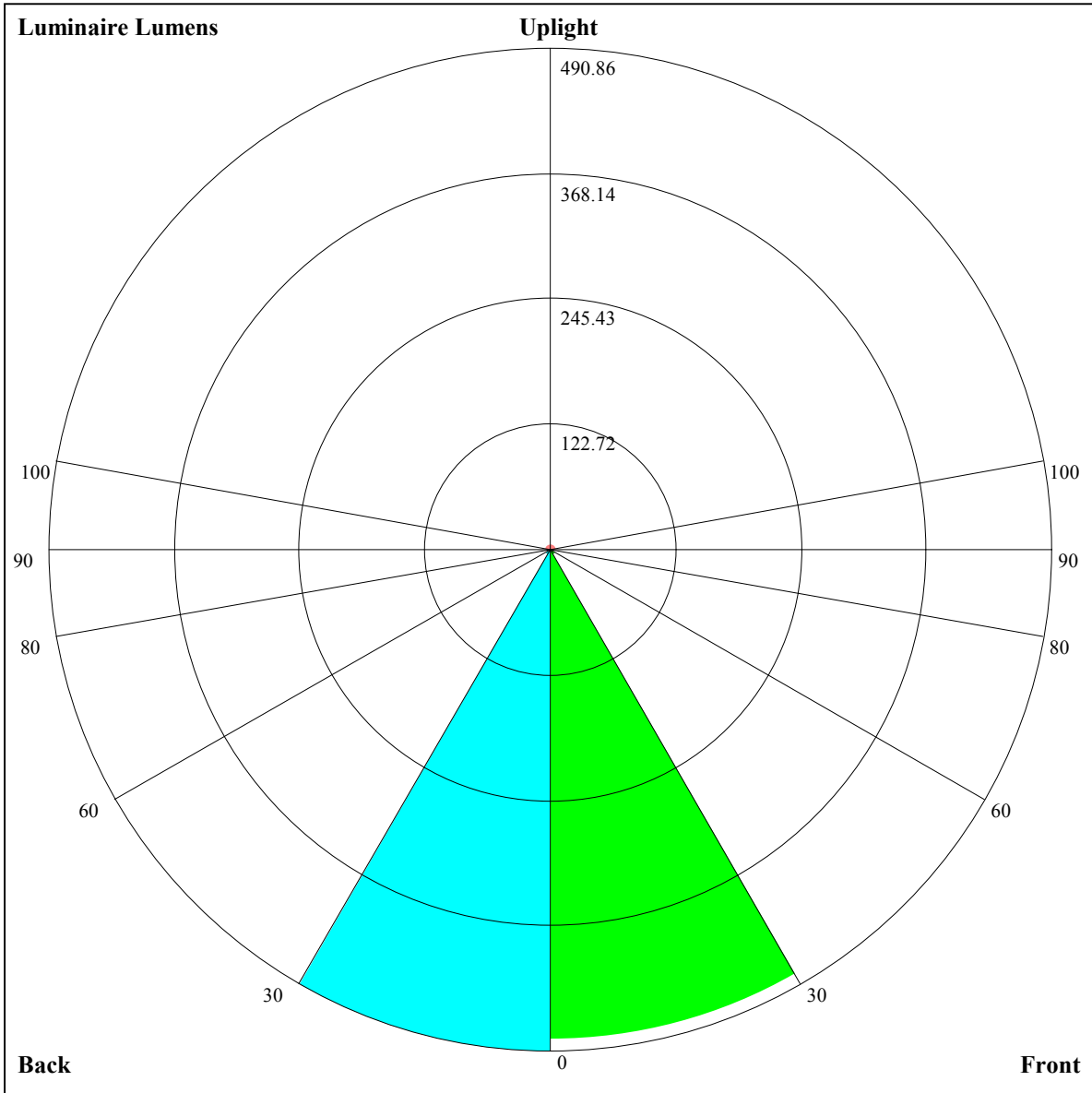
Luminance Limiting Curve





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	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.82	0.82	0.82	0.80
1	0.91	0.89	0.88	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.79	0.78
2	0.87	0.84	0.82	0.85	0.83	0.82	0.83	0.81	0.80	0.81	0.79	0.78	0.79	0.77	0.77	0.75
3	0.83	0.80	0.78	0.82	0.80	0.78	0.80	0.78	0.76	0.78	0.77	0.75	0.77	0.75	0.74	0.73
4	0.80	0.77	0.75	0.79	0.77	0.74	0.78	0.75	0.74	0.76	0.74	0.73	0.75	0.73	0.72	0.71
5	0.77	0.74	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.73	0.71	0.70	0.69
6	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.72	0.70	0.68	0.67
7	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.65
8	0.71	0.67	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.64
9	0.69	0.66	0.63	0.68	0.65	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.62
10	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.61





Luminaire Lumens:

FL=478.92,FM=6.08,FH=1.2,FVH=0.62

BL=490.86,BM=6.04,BH=1.21,BVH=0.62

UL=1.24,UH=5.9

BUG Rating:B1-U1-G0

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	4261.73	3898.39	2773.11	1335.53	612.90	48.58	4.27	2.88	2.18
45.0	4289.57	4021.36	2978.68	1842.72	742.96	295.64	4.55	2.97	2.23
90.0	4187.48	3401.88	2203.28	775.82	223.39	5.61	3.34	2.37	1.86
135.0	4302.56	3860.34	2887.73	1727.64	517.91	234.85	4.50	2.97	2.13
180.0	4261.73	4009.76	3275.66	2059.89	901.66	244.13	4.97	3.02	2.23
225.0	4289.57	4029.25	3106.29	1869.17	762.87	95.13	4.50	2.88	2.04
270.0	4187.48	4314.17	3911.85	2737.84	1584.72	556.89	267.33	4.04	2.69
315.0	4302.56	4101.17	3306.75	2004.67	723.52	149.28	5.61	3.11	2.27
360.0	4261.73	3898.39	2773.11	1335.53	612.90	48.58	4.27	2.88	2.18
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1.81	1.48	1.35	1.25	1.16	1.11	1.11	1.16	1.16
45.0	1.72	1.44	1.39	1.25	1.16	1.11	1.16	1.11	1.16
90.0	1.58	1.35	1.30	1.25	1.21	1.16	1.16	1.16	1.16
135.0	1.72	1.48	1.25	1.21	1.16	1.16	1.16	1.16	1.11
180.0	1.72	1.48	1.35	1.25	1.21	1.21	1.16	1.16	1.07
225.0	1.67	1.44	1.35	1.21	1.16	1.11	1.16	1.16	1.11
270.0	2.00	1.67	1.44	1.30	1.25	1.21	1.11	1.11	1.16
315.0	1.81	1.53	1.35	1.30	1.16	1.21	1.16	1.11	1.07
360.0	1.81	1.48	1.35	1.25	1.16	1.11	1.11	1.16	1.16
C/γ(°)	90.0								
0.0	1.11								
45.0	1.16								
90.0	1.16								
135.0	1.16								
180.0	1.21								
225.0	1.11								
270.0	1.11								
315.0	1.07								
360.0	1.11								