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Nata

LumCAT: 1-0928-M	
Luminaire: 92.70.132.00	
Report No: NATA0100	Voltage(V): 35.5700
Test No: GC2019091904	Current(A): 0.2970
LampCAT: LUMILEDS LUXEON 1203	Power (W): 10.5000
Lamp flux(lm): 1329.6	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): 1077.88
Efficiency(%): 81.07%
Lumens(lm)/Power(W): 102.66
Central intensity(cd): 3442.640
Maximum intensity(cd): 3442.640
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.0
 [C90/270]Total=34.0
Field angle(10%Imax): [C0/180]Total=49.1
 [C90/270]Total=49.1
Maximum s/h(1/2): C0_180=0.57 C90_270=0.57
Maximum s/h(1/4): C0_180=0.53 C90_270=0.53
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.07%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.550%

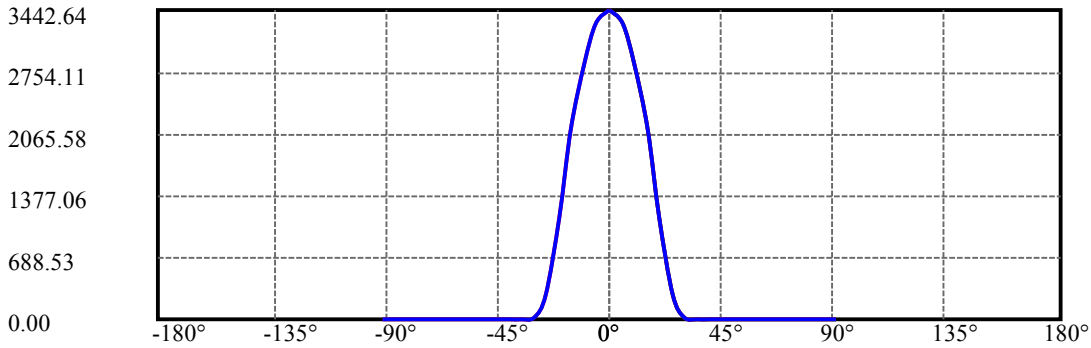
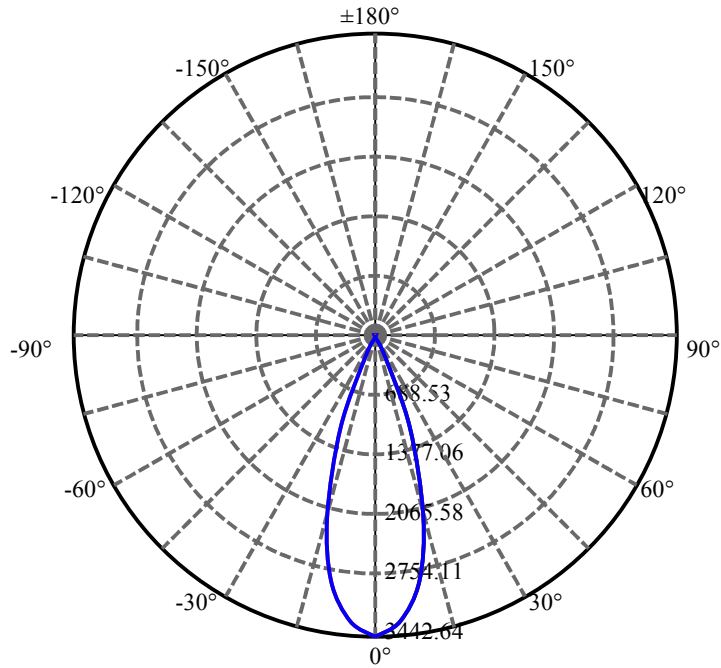
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3442.641	0.000	0	.000%	.000%
5.0	3284.438	80.420	80.42	6.048%	7.461%
10.0	2853.070	219.558	299.978	16.513%	27.830%
15.0	2125.898	295.349	595.327	22.213%	55.231%
20.0	1125.626	267.971	863.299	20.154%	80.092%
25.0	269.768	146.351	1009.65	11.007%	93.670%
30.0	20.138	36.688	1046.337	2.759%	97.074%
35.0	8.508	4.218	1050.556	.317%	97.465%
40.0	6.553	2.513	1053.068	.189%	97.698%
45.0	5.738	2.276	1055.344	.171%	97.909%
50.0	5.379	2.246	1057.59	.169%	98.118%
55.0	5.168	2.293	1059.884	.172%	98.331%
60.0	5.084	2.370	1062.253	.178%	98.550%
65.0	5.006	2.453	1064.706	.184%	98.778%
70.0	4.985	2.530	1067.236	.190%	99.013%
75.0	4.964	2.601	1069.837	.196%	99.254%
80.0	4.950	2.653	1072.489	.200%	99.500%
85.0	4.943	2.688	1075.177	.202%	99.749%
90.0	4.922	2.701	1077.879	.203%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1046.34	78.69%	97.07%
0-40	1053.07	79.20%	97.70%
0-60	1062.25	79.89%	98.55%
0-90	1075.18	80.86%	99.75%
0-120	1075.18	80.86%	99.75%
0-180	1077.88	81.07%	100.00%
60-90	15.29	1.15%	1.42%
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%
0-19.98	862.30	64.85%	80.00%

ZONAL LUMEN SUMMARY

0-10	299.98
10-20	563.32
20-30	183.04
30-40	6.73
40-50	4.52
50-60	4.66
60-70	4.98
70-80	5.25
80-90	2.69
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: ———

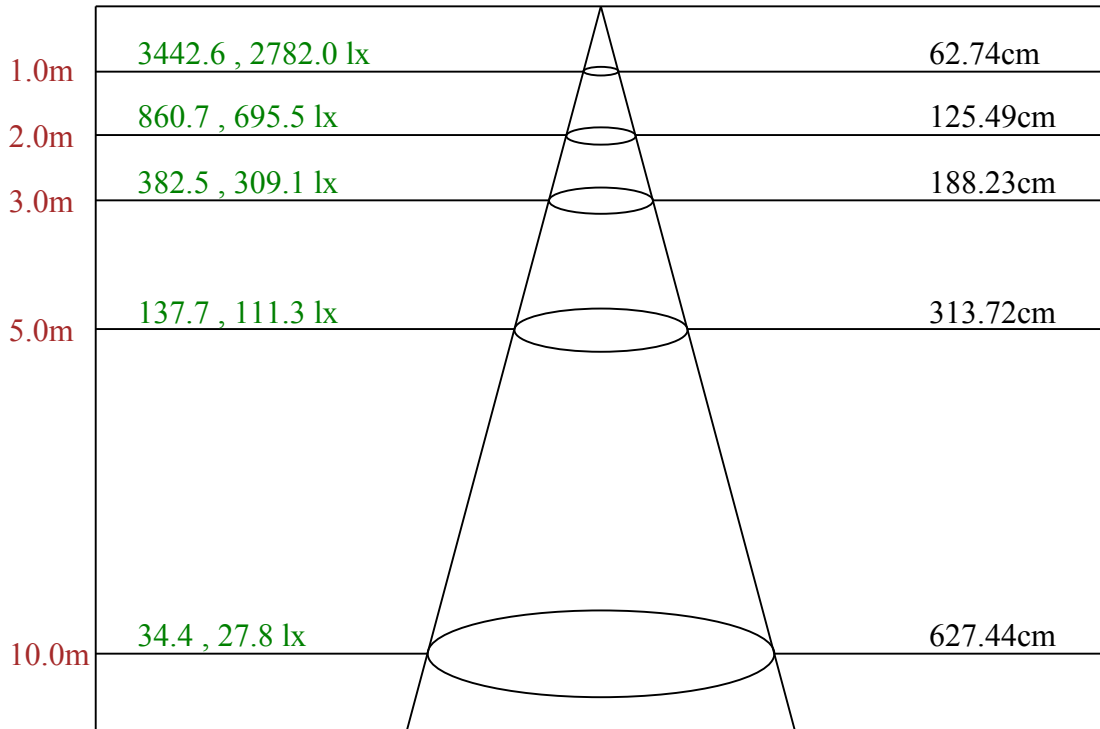
C90/C270: ———

Field angle(10%Imax):C0/180Left:24.6 Right:24.6

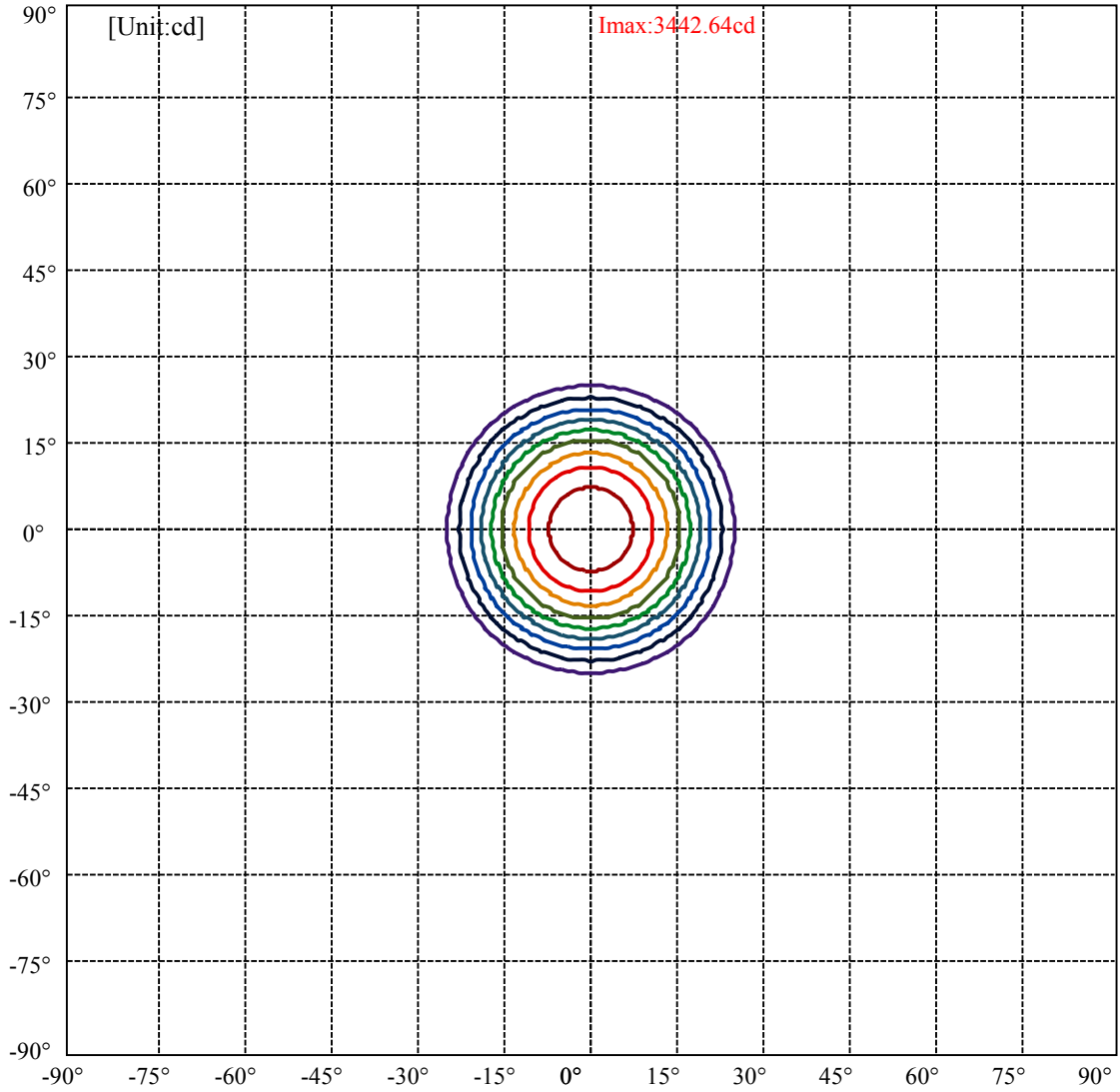
:C90/270Left:24.6 Right:24.6

Beam Angle(50%Imax):C0/180Left:17.0 Right:17.0

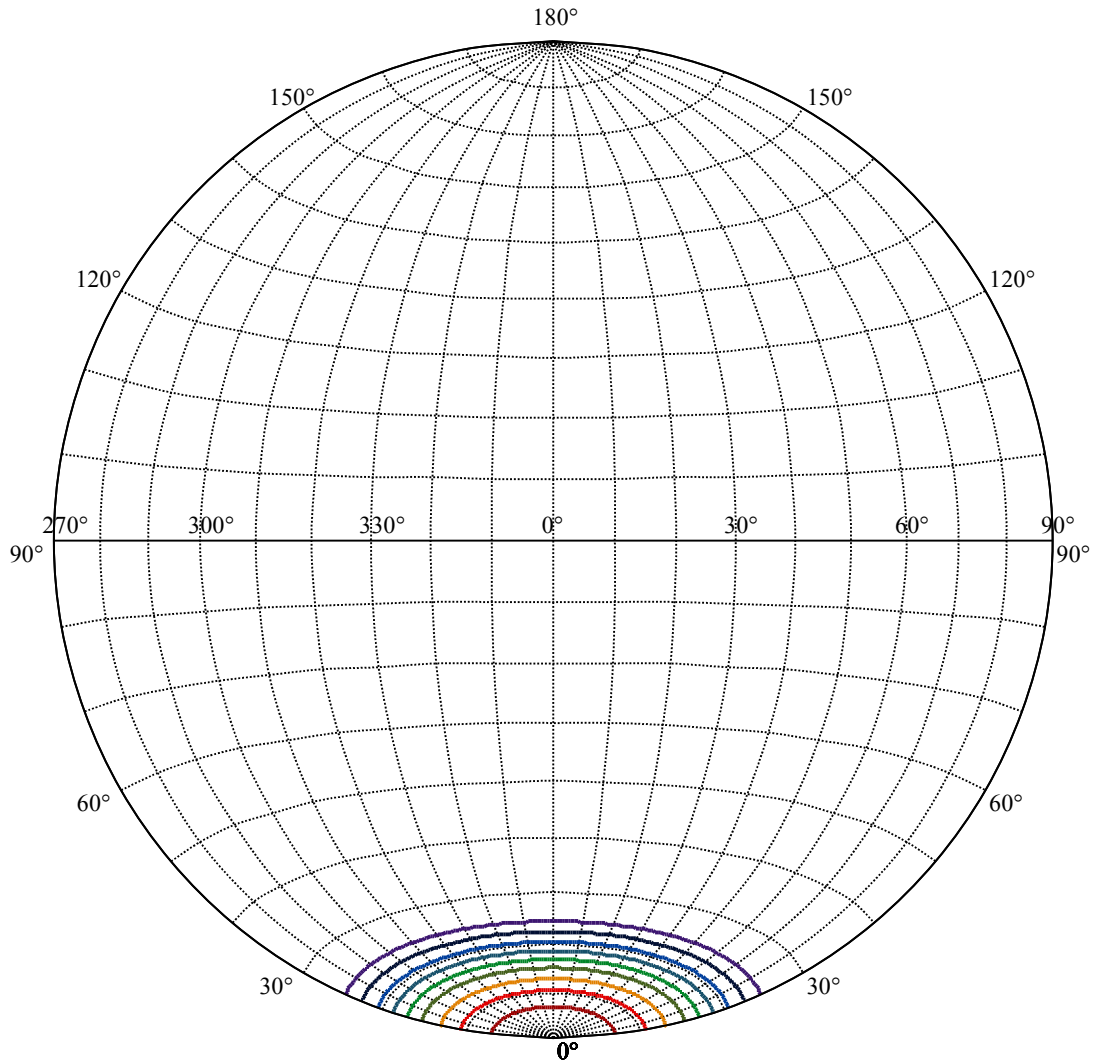
:C90/270Left:17.0 Right:17.0



Max , Ave Beam angle of C0 plane 34.84



(10%Imax) 344.264	—
(20%Imax) 688.528	—
(30%Imax) 1032.79	—
(40%Imax) 1377.06	—
(50%Imax) 1721.32	—
(60%Imax) 2065.58	—
(70%Imax) 2409.85	—
(80%Imax) 2754.11	—
(90%Imax) 3098.38	—



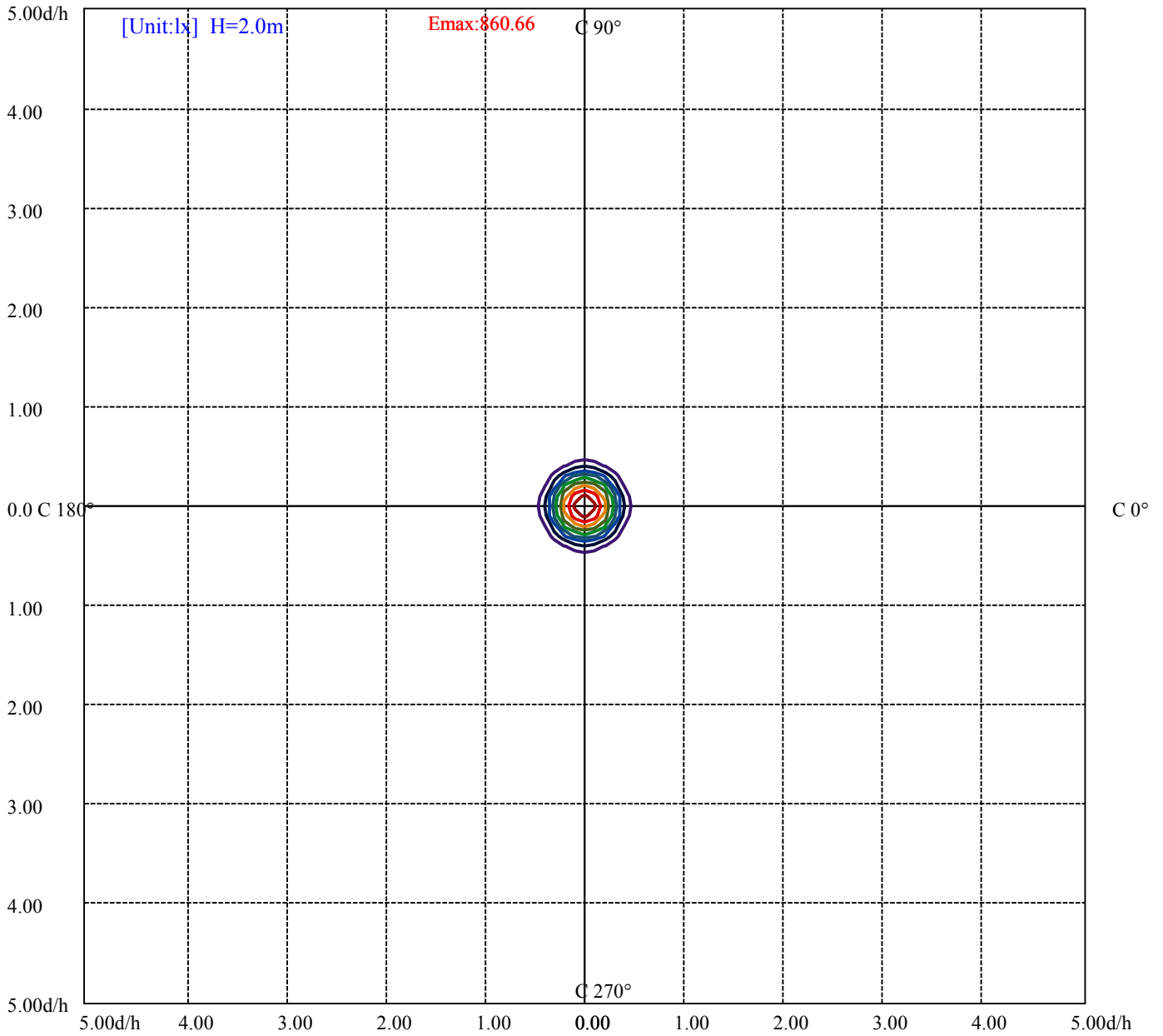
House

[Unit:cd]

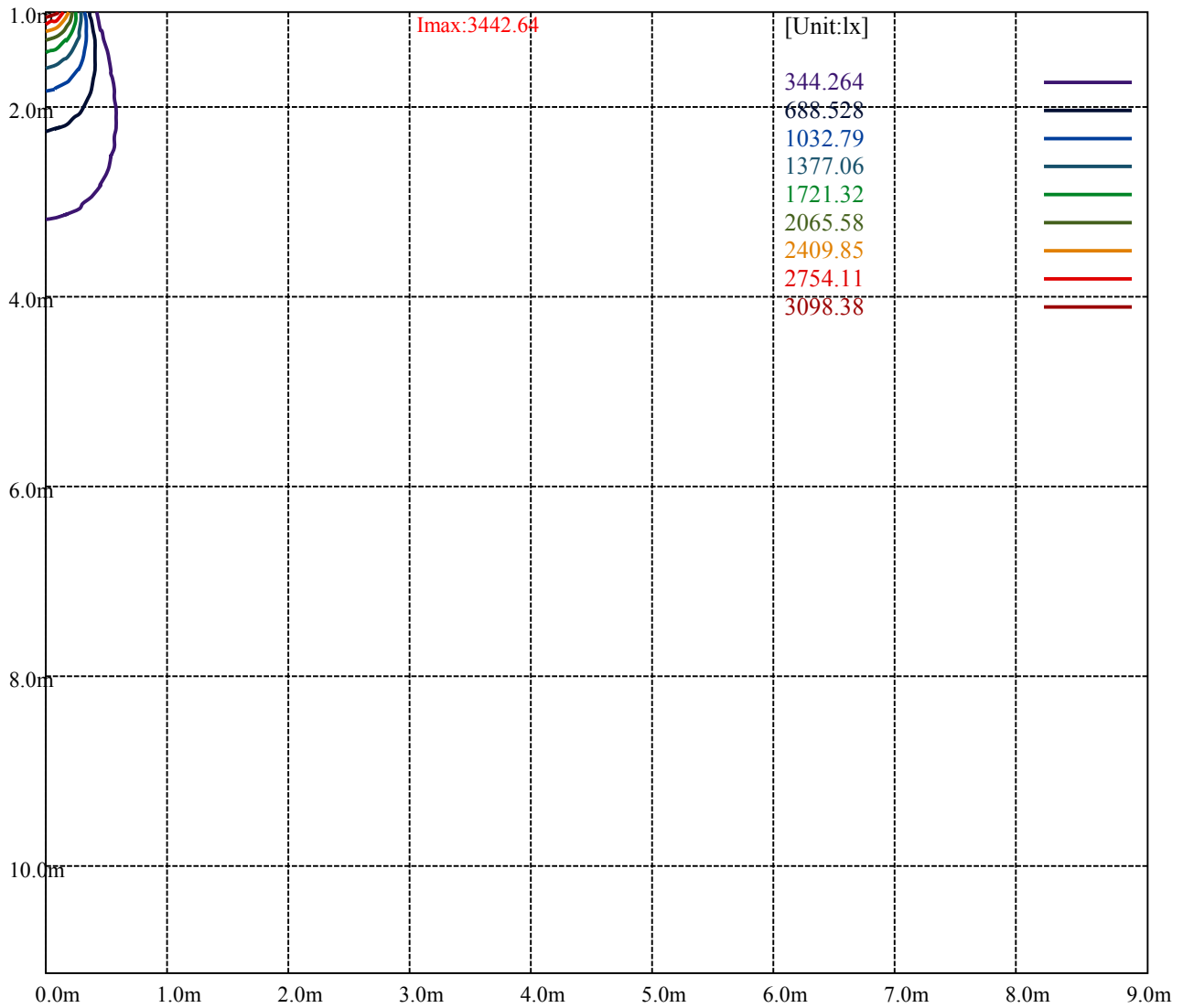
Road

Imax:3442.64

(10%Imax) 344.264	—
(20%Imax) 688.528	—
(30%Imax) 1032.79	—
(40%Imax) 1377.06	—
(50%Imax) 1721.32	—
(60%Imax) 2065.58	—
(70%Imax) 2409.85	—
(80%Imax) 2754.11	—
(90%Imax) 3098.38	—



(10%Emax) 86.066	—
(20%Emax) 172.1317	—
(30%Emax) 258.1975	—
(40%Emax) 344.2625	—
(50%Emax) 430.33	—
(60%Emax) 516.395	—
(70%Emax) 602.46	—
(80%Emax) 688.5275	—
(90%Emax) 774.5925	—



Luminance Table

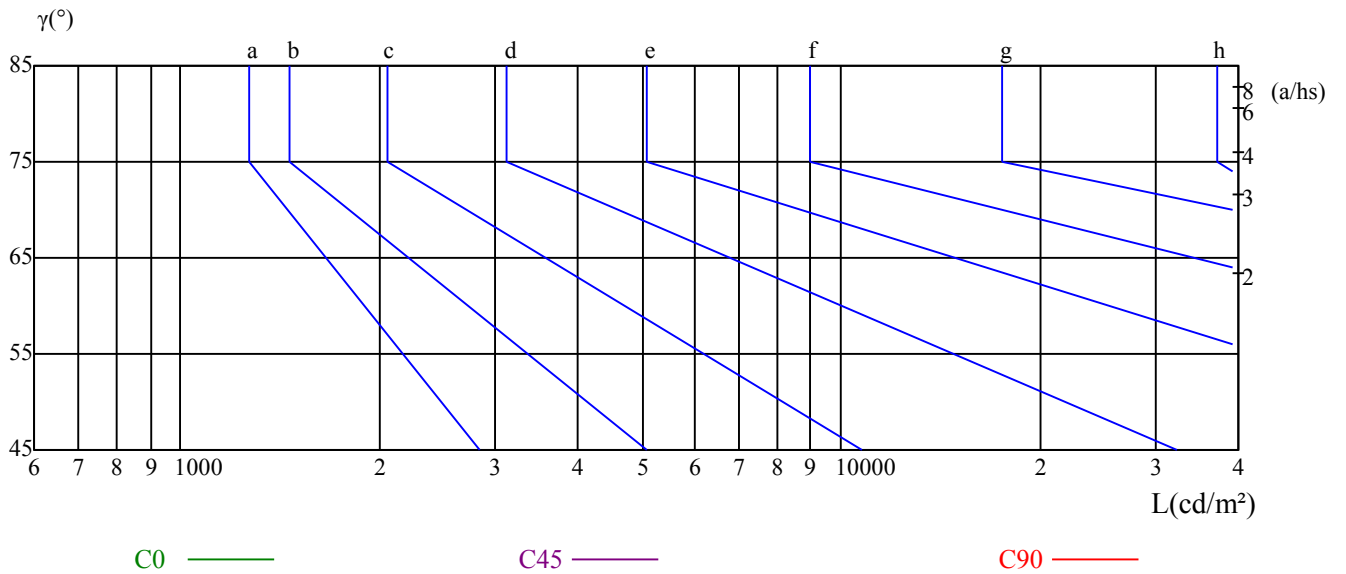
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

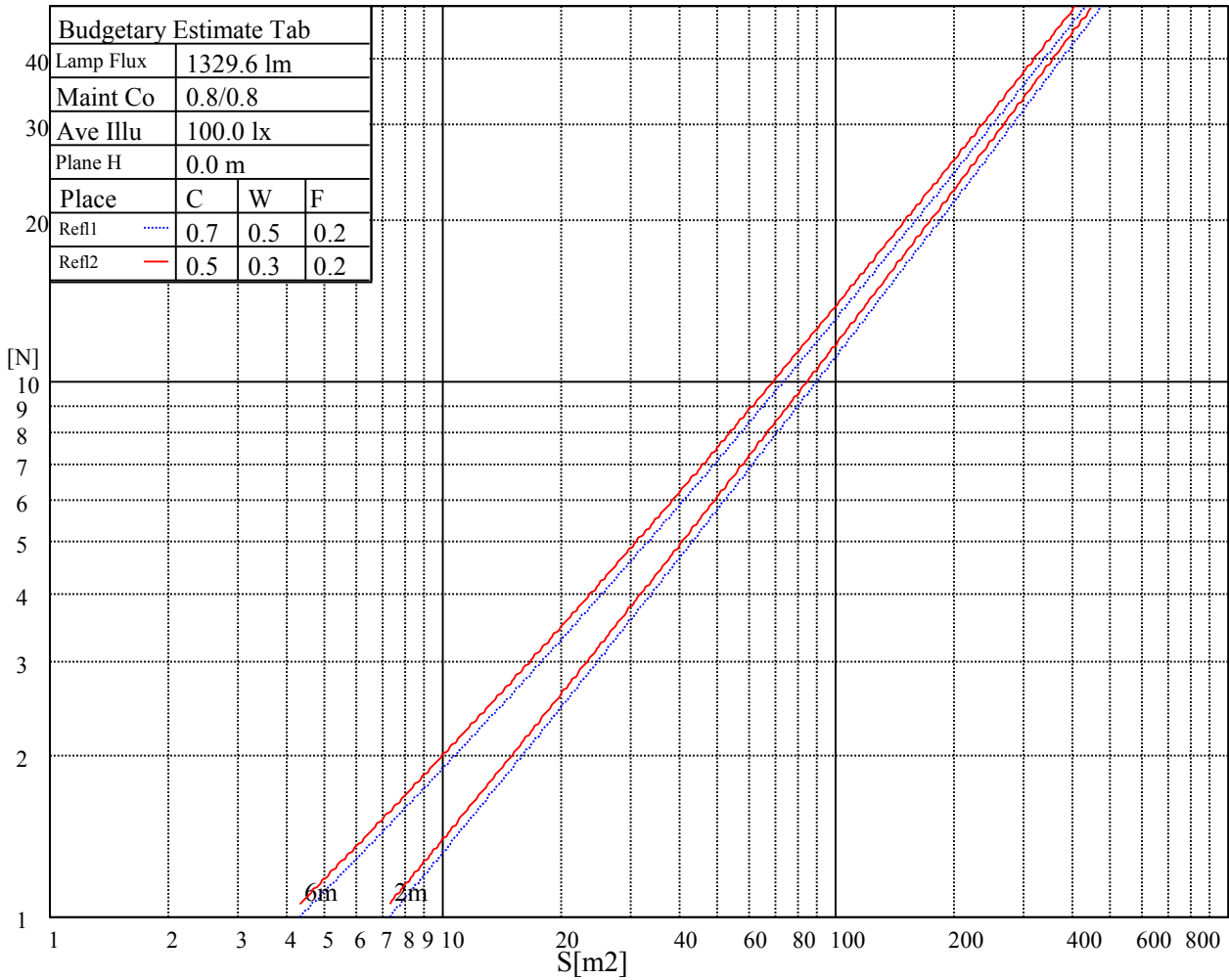
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

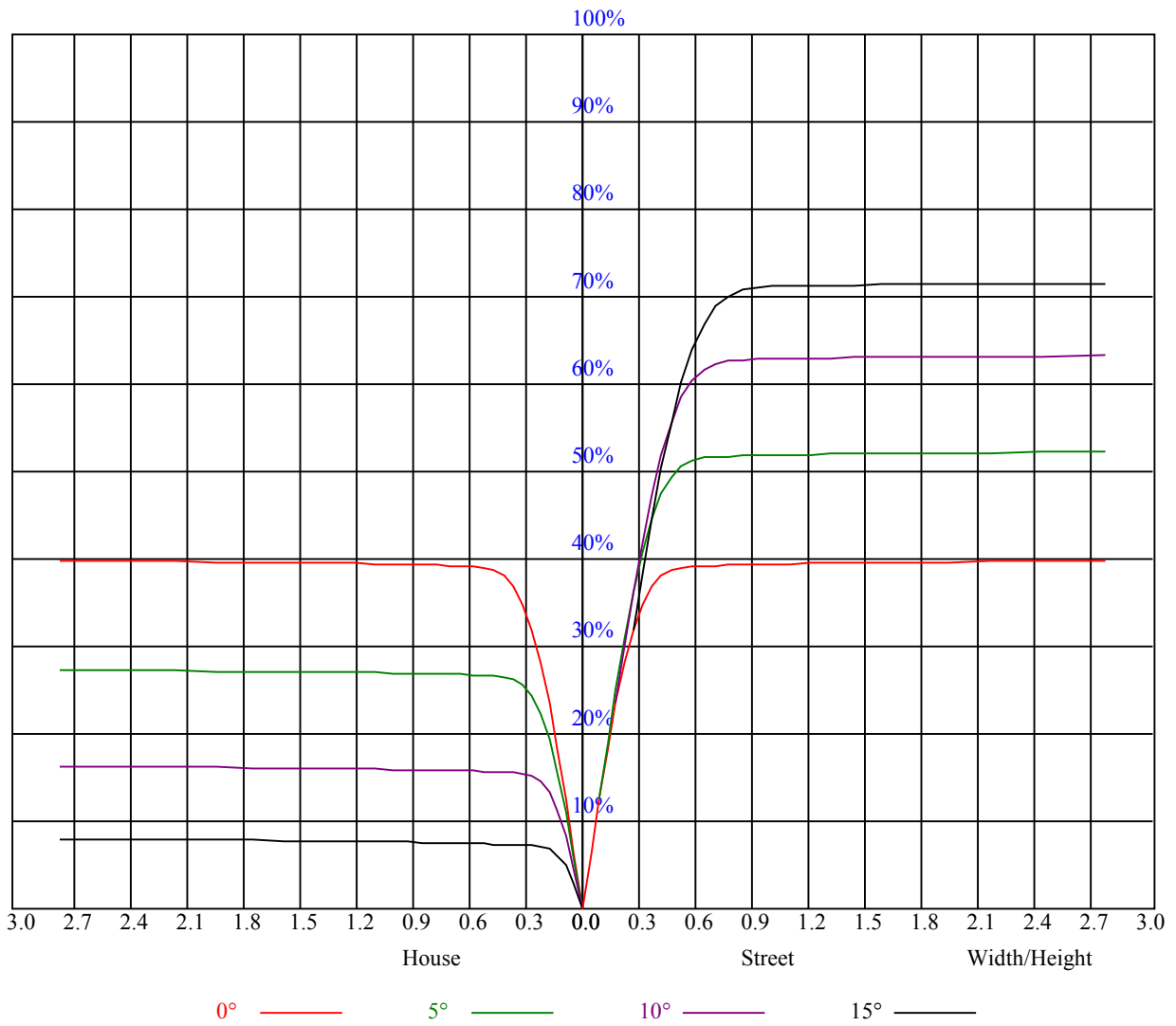
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.97	0.97	0.97	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.81
1	0.91	0.89	0.88	0.89	0.88	0.86	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	0.81	0.83	0.81	0.79	0.80	0.79	0.77	0.78	0.77	0.76	0.75
3	0.83	0.80	0.77	0.82	0.79	0.77	0.80	0.77	0.75	0.78	0.76	0.74	0.76	0.74	0.73	0.72
4	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.71	0.70
5	0.76	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.67
6	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.68	0.66	0.65
7	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.63
8	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61
9	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.60	0.64	0.62	0.60	0.59
10	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.59	0.63	0.60	0.58	0.58



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	3436.31	3404.25	3087.56	2475.56	1645.31	542.25	38.19	10.69	7.20
45.0	3439.13	3363.19	2999.25	2326.50	1467.00	393.19	26.27	9.06	6.81
90.0	3443.06	3200.06	2767.50	1970.44	906.98	144.39	14.18	7.71	6.30
135.0	3452.06	3231.00	2779.31	1986.75	963.00	295.31	13.95	7.76	6.36
180.0	3436.31	3167.44	2593.69	1763.44	727.54	65.64	11.48	7.43	6.19
225.0	3439.13	3226.50	2714.63	1870.88	895.78	111.94	12.77	7.76	6.24
270.0	3443.06	3336.19	2940.75	2328.75	1321.88	303.19	21.71	8.78	6.64
315.0	3452.06	3346.88	2941.88	2284.88	1077.53	302.23	22.56	8.89	6.69
360.0	3436.31	3404.25	3087.56	2475.56	1645.31	542.25	38.19	10.69	7.20
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.02	5.57	5.29	5.18	5.06	5.06	5.01	5.01	5.01
45.0	5.79	5.46	5.18	5.12	5.01	5.01	4.95	4.95	4.95
90.0	5.63	5.29	5.12	5.01	4.95	4.95	4.95	4.95	4.89
135.0	5.68	5.34	5.18	5.06	5.01	4.95	4.95	4.89	4.89
180.0	5.63	5.34	5.18	5.12	5.06	5.06	5.01	5.01	5.01
225.0	5.63	5.29	5.12	5.06	5.01	4.95	4.95	4.95	4.95
270.0	5.74	5.34	5.12	5.06	4.95	4.95	4.95	4.95	4.89
315.0	5.79	5.40	5.18	5.06	5.01	4.95	4.95	4.89	4.95
360.0	6.02	5.57	5.29	5.18	5.06	5.06	5.01	5.01	5.01
C/γ(°)	90.0								
0.0	5.01								
45.0	4.89								
90.0	4.89								
135.0	4.89								
180.0	4.95								
225.0	4.89								
270.0	4.89								
315.0	4.95								
360.0	5.01								