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Nata

LumCAT: 1-0812-S
Luminaire: 92.70.208.00
Report No: NATA0100
Test No: GC20191010011
LampCAT: LUMILEDS LUXEON 5050
Lamp flux(lm): 440.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 25.0800
Current(A): 0.1980
Power (W): 4.9600
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 376.22
Efficiency(%): 85.50%
Lumens(lm)/Power(W): 75.85
Central intensity(cd): 265.106
Maximum intensity(cd): 267.638
Angle of maximum intensity: C=0.0 γ =5.0
Beam Angle(50%Imax): [C0/180]Total=74.3
 [C90/270]Total=74.3
Field angle(10%Imax): [C0/180]Total=92.3
 [C90/270]Total=92.2
Maximum s/h(1/2): C0_180=1.16 C90_270=1.16
Maximum s/h(1/4): C0_180=1.06 C90_270=1.06
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 85.50%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.888%

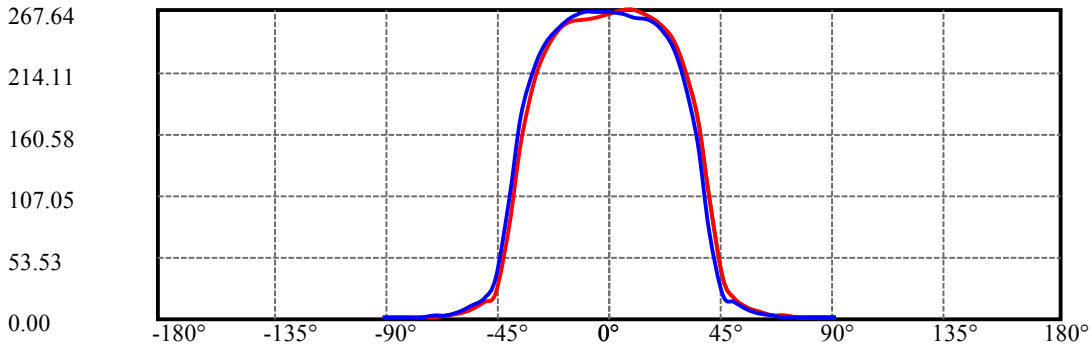
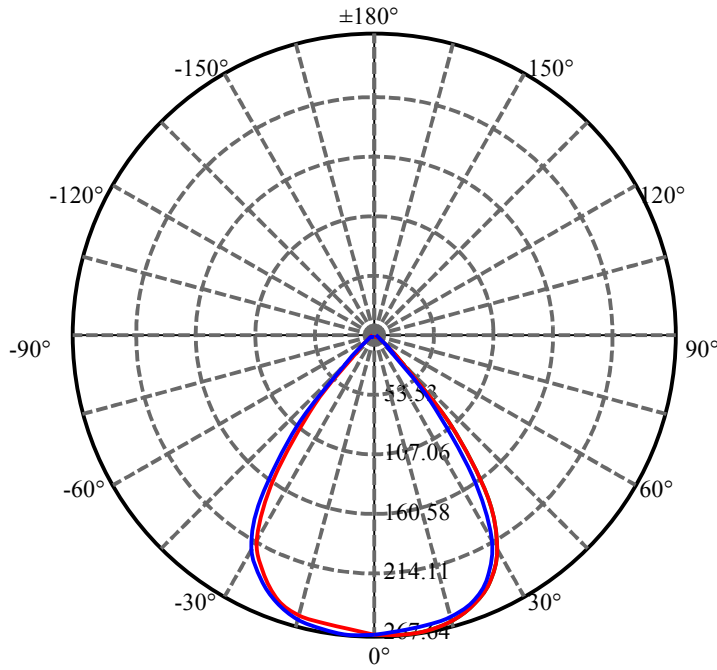
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	265.402	0.000	0	.000%	.000%
5.0	265.233	6.344	6.344	1.442%	1.686%
10.0	263.918	18.929	25.273	4.302%	6.718%
15.0	261.120	31.145	56.418	7.078%	14.996%
20.0	254.468	42.492	98.909	9.657%	26.290%
25.0	240.701	51.934	150.844	11.803%	40.094%
30.0	220.781	58.401	209.245	13.273%	55.617%
35.0	183.312	59.506	268.75	13.524%	71.434%
40.0	114.166	49.632	318.382	11.280%	84.626%
45.0	36.879	27.967	346.349	6.356%	92.060%
50.0	18.766	11.244	357.593	2.555%	95.049%
55.0	11.123	6.499	364.092	1.477%	96.776%
60.0	6.968	4.182	368.274	.950%	97.888%
65.0	4.120	2.696	370.97	.613%	98.604%
70.0	2.531	1.684	372.654	.383%	99.052%
75.0	1.744	1.117	373.771	.254%	99.349%
80.0	1.505	0.869	374.64	.198%	99.580%
85.0	1.434	0.799	375.439	.182%	99.792%
90.0	1.420	0.782	376.221	.178%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	209.24	47.56%	55.62%
0-40	318.38	72.36%	84.63%
0-60	368.27	83.70%	97.89%
0-90	375.44	85.33%	99.79%
0-120	375.44	85.33%	99.79%
0-180	376.22	85.50%	100.00%
60-90	11.35	2.58%	3.02%
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%
0-38.25	300.98	68.40%	80.00%

ZONAL LUMEN SUMMARY

0-10	25.27
10-20	73.64
20-30	110.34
30-40	109.14
40-50	39.21
50-60	10.68
60-70	4.38
70-80	1.99
80-90	0.80
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



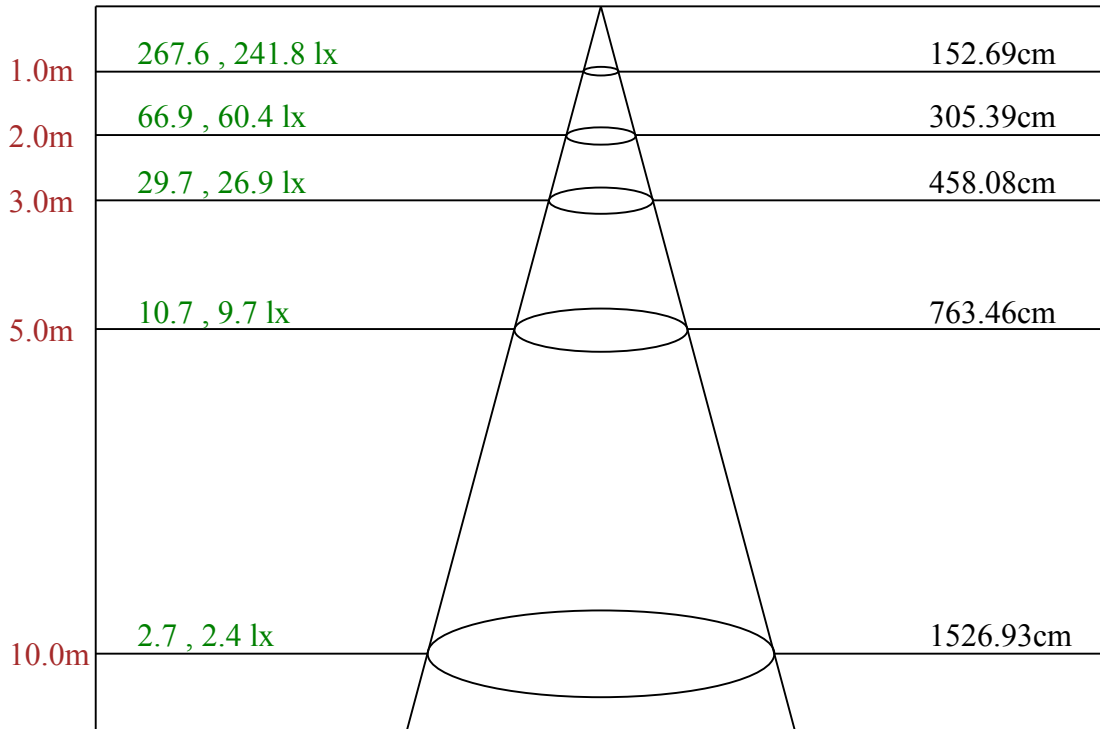
C0(Max): ———

C0/C180: ———

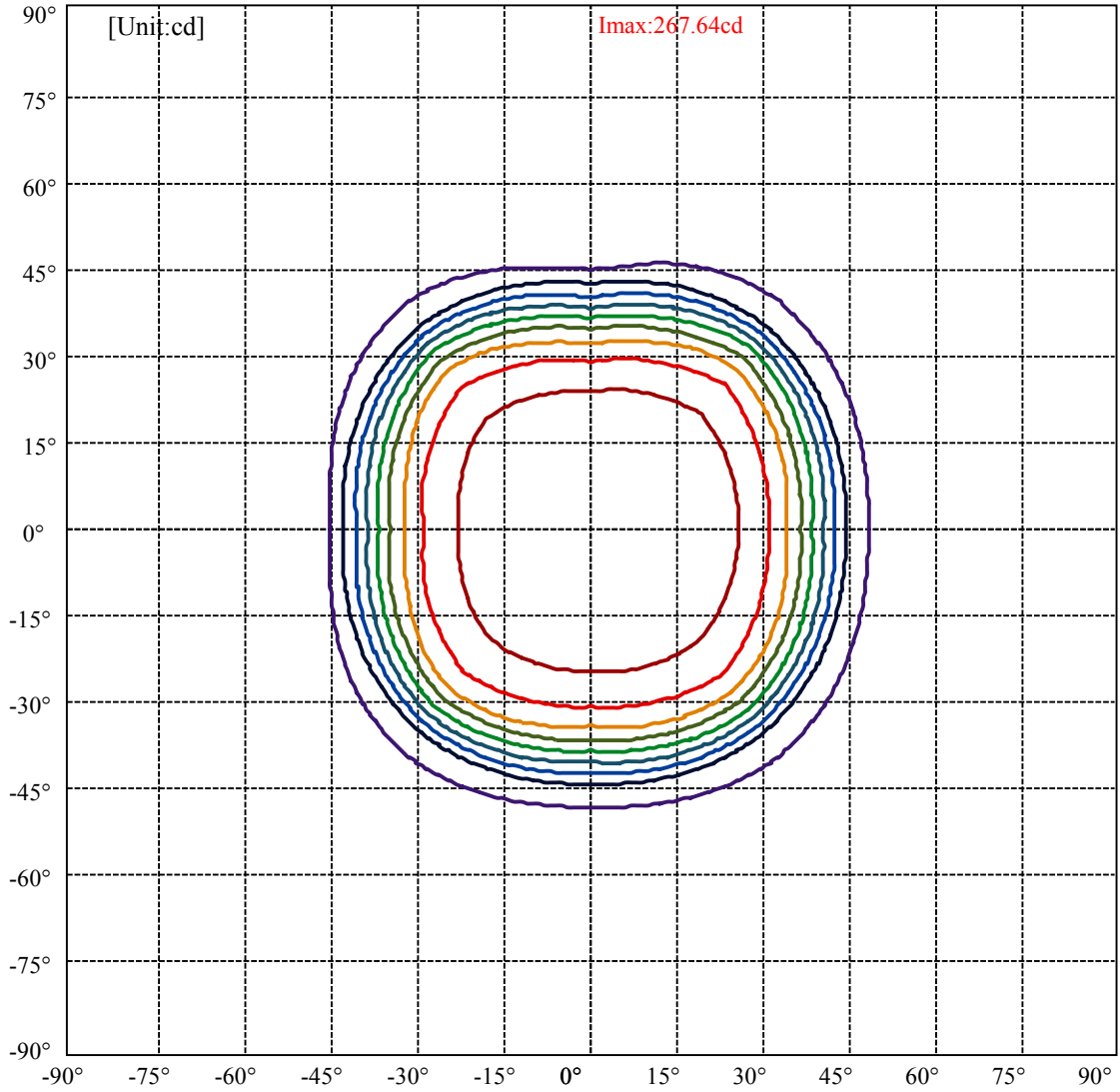
C90/C270: ———

Field angle(10%Imax):C0/180Left:49.7 Right:42.6
:C90/270Left:42.6 Right:49.6

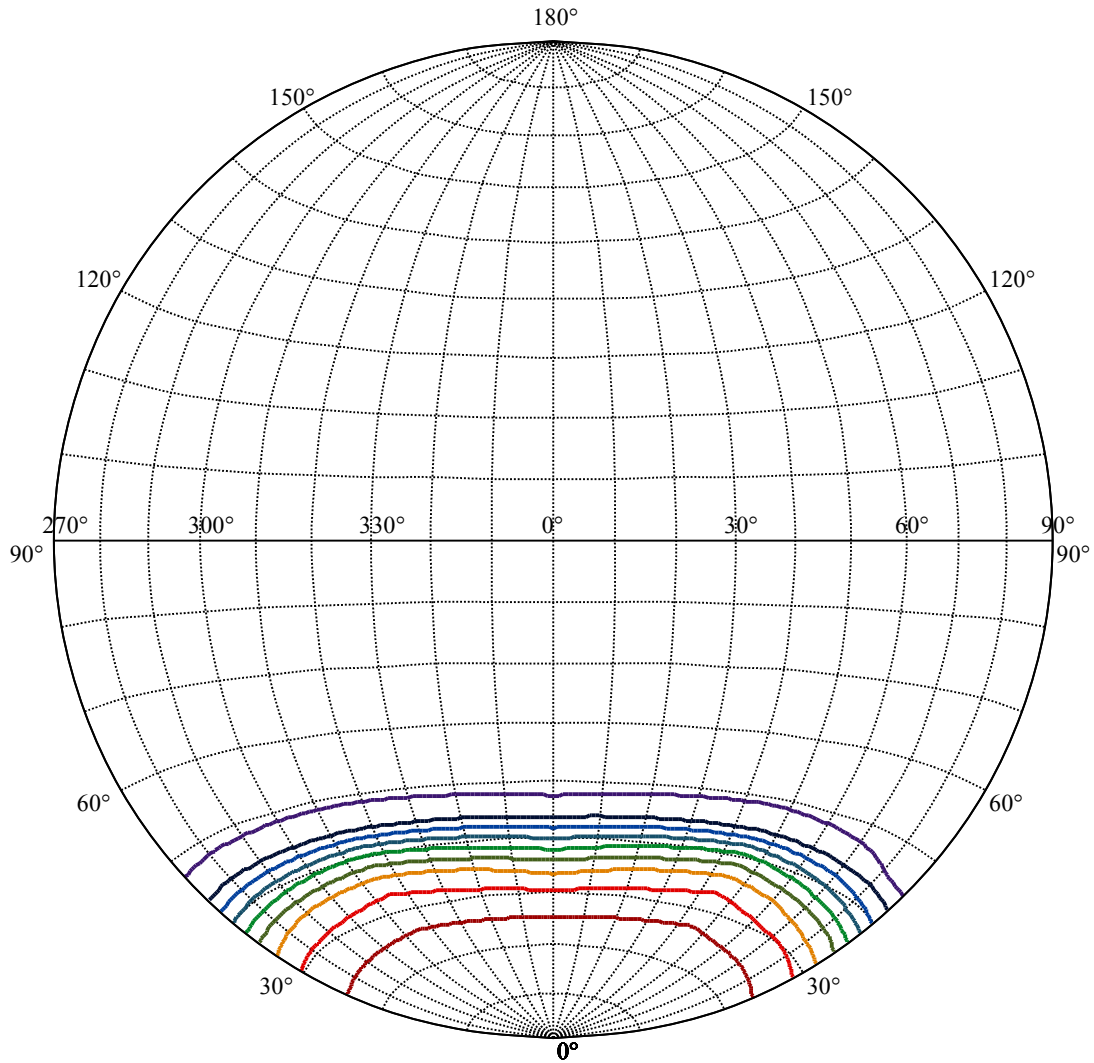
Beam Angle(50%Imax):C0/180Left:41.3 Right:32.9
:C90/270Left:33.0 Right:41.3



Max , Ave Beam angle of C0 plane 74.70



(10%Imax) 26.7637	—
(20%Imax) 53.5275	—
(30%Imax) 80.2912	—
(40%Imax) 107.055	—
(50%Imax) 133.819	—
(60%Imax) 160.582	—
(70%Imax) 187.346	—
(80%Imax) 214.11	—
(90%Imax) 240.874	—



House

[Unit:cd]

Road

Imax:267.64

(10%Imax) 26.7637

(20%Imax) 53.5275

(30%Imax) 80.2912

(40%Imax) 107.055

(50%Imax) 133.819

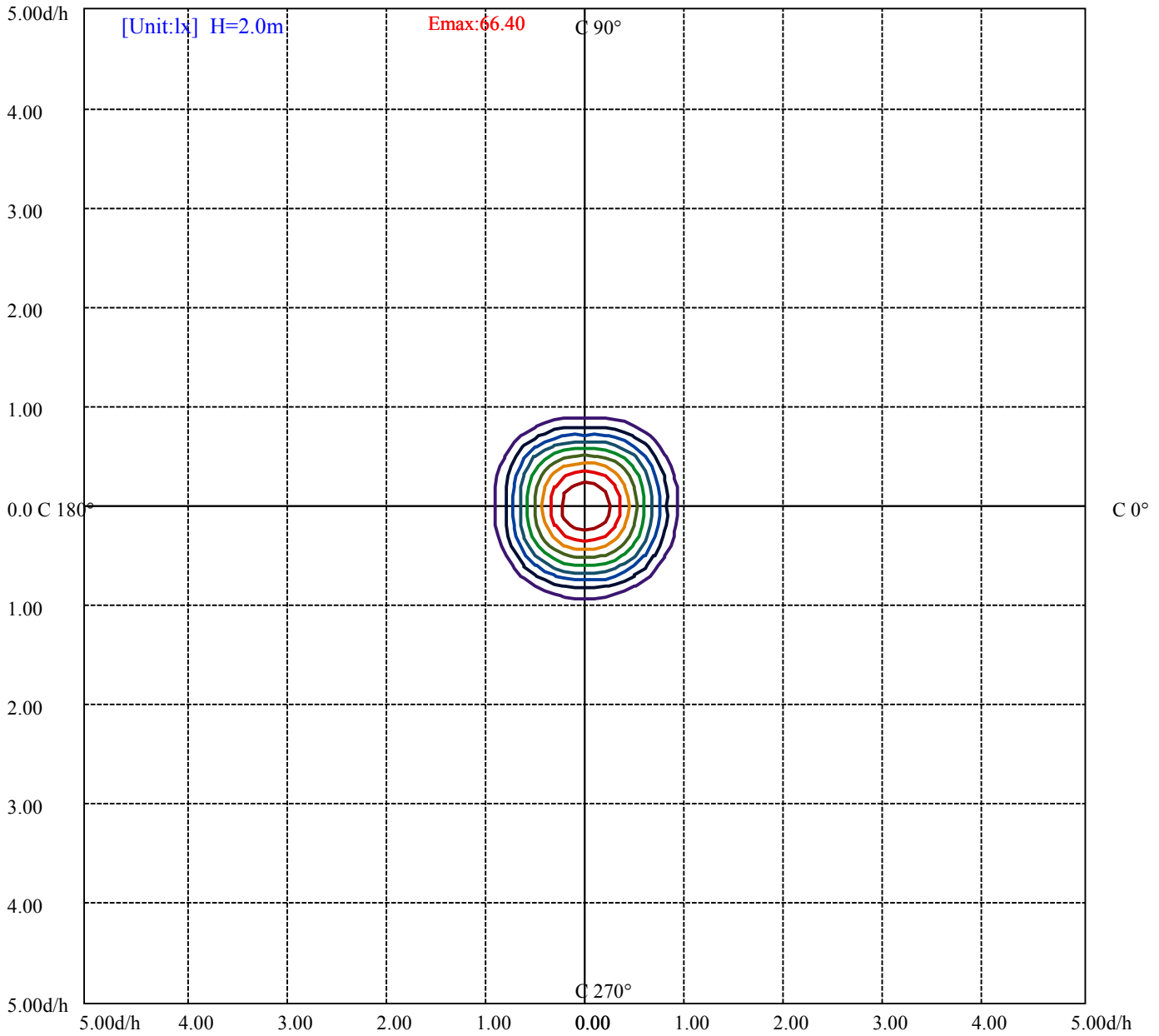
(60%Imax) 160.582

(70%Imax) 187.346

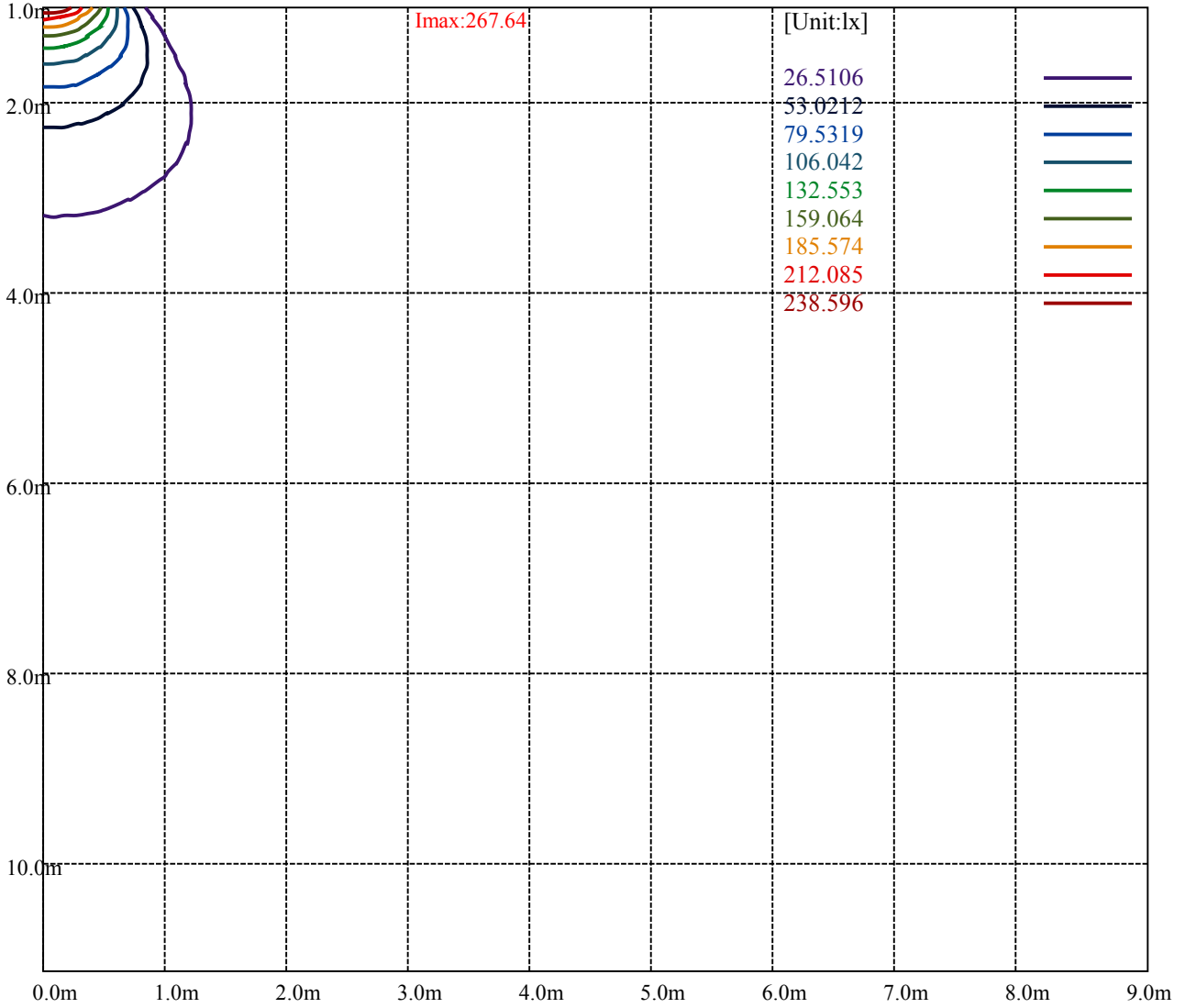
(80%Imax) 214.11

(90%Imax) 240.874





(10%Emax) 6.640325	—
(20%Emax) 13.28063	—
(30%Emax) 19.92095	—
(40%Emax) 26.56125	—
(50%Emax) 33.2015	—
(60%Emax) 39.842	—
(70%Emax) 46.48225	—
(80%Emax) 53.1225	—
(90%Emax) 59.76275	—



Luminance Table

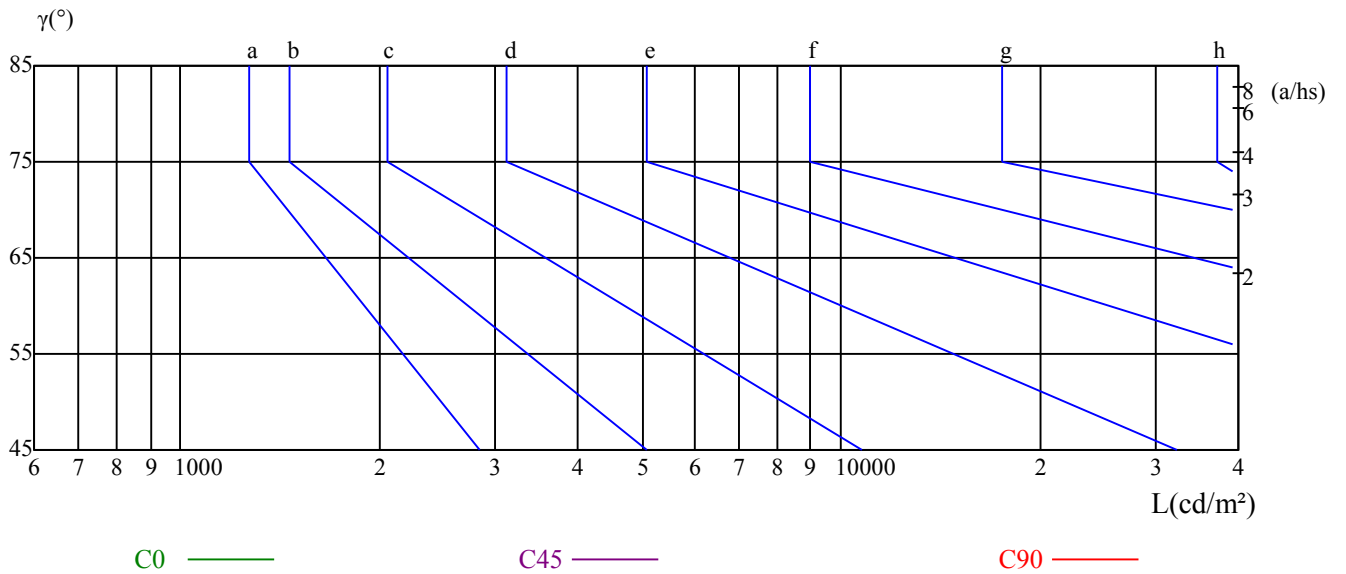
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

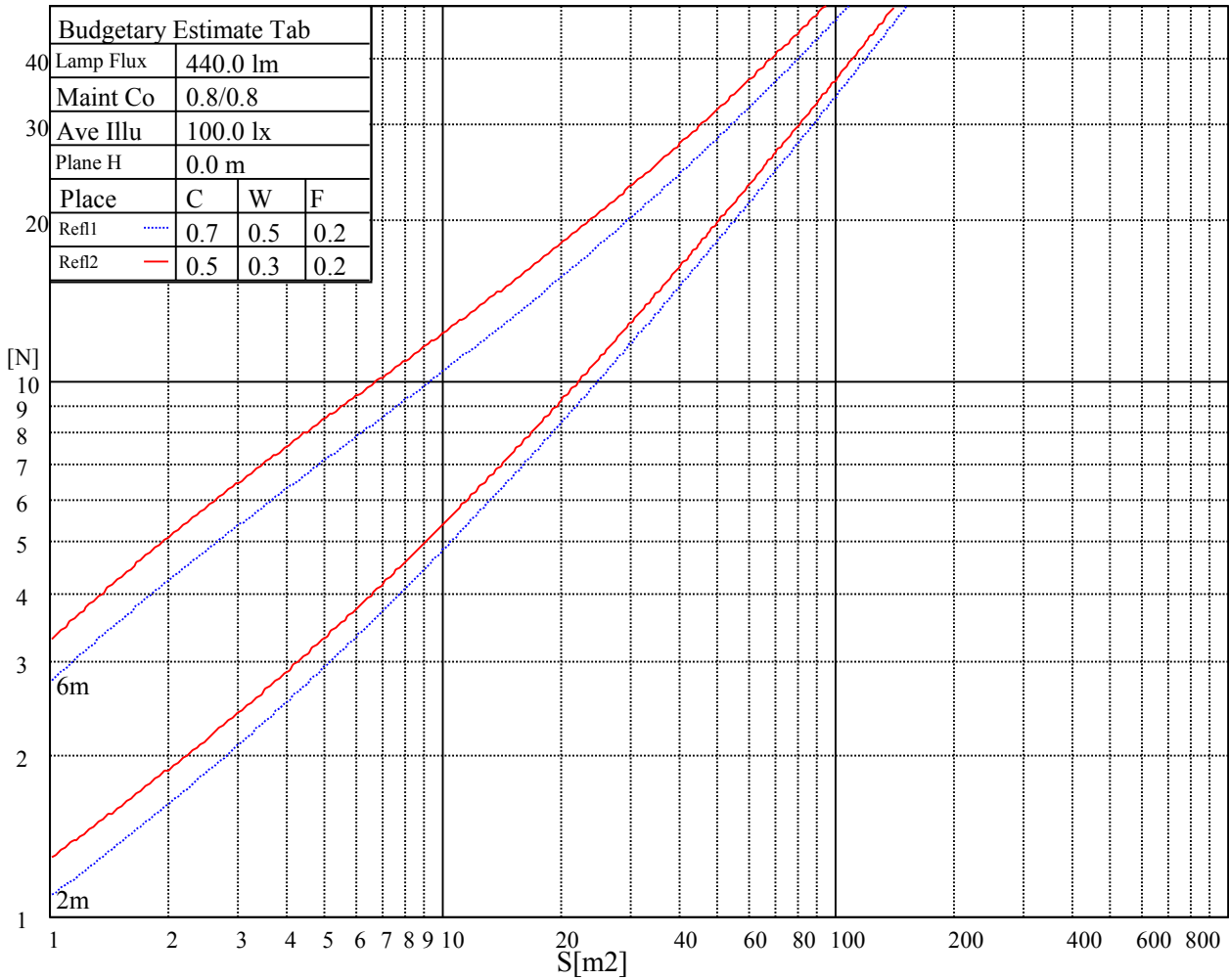
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

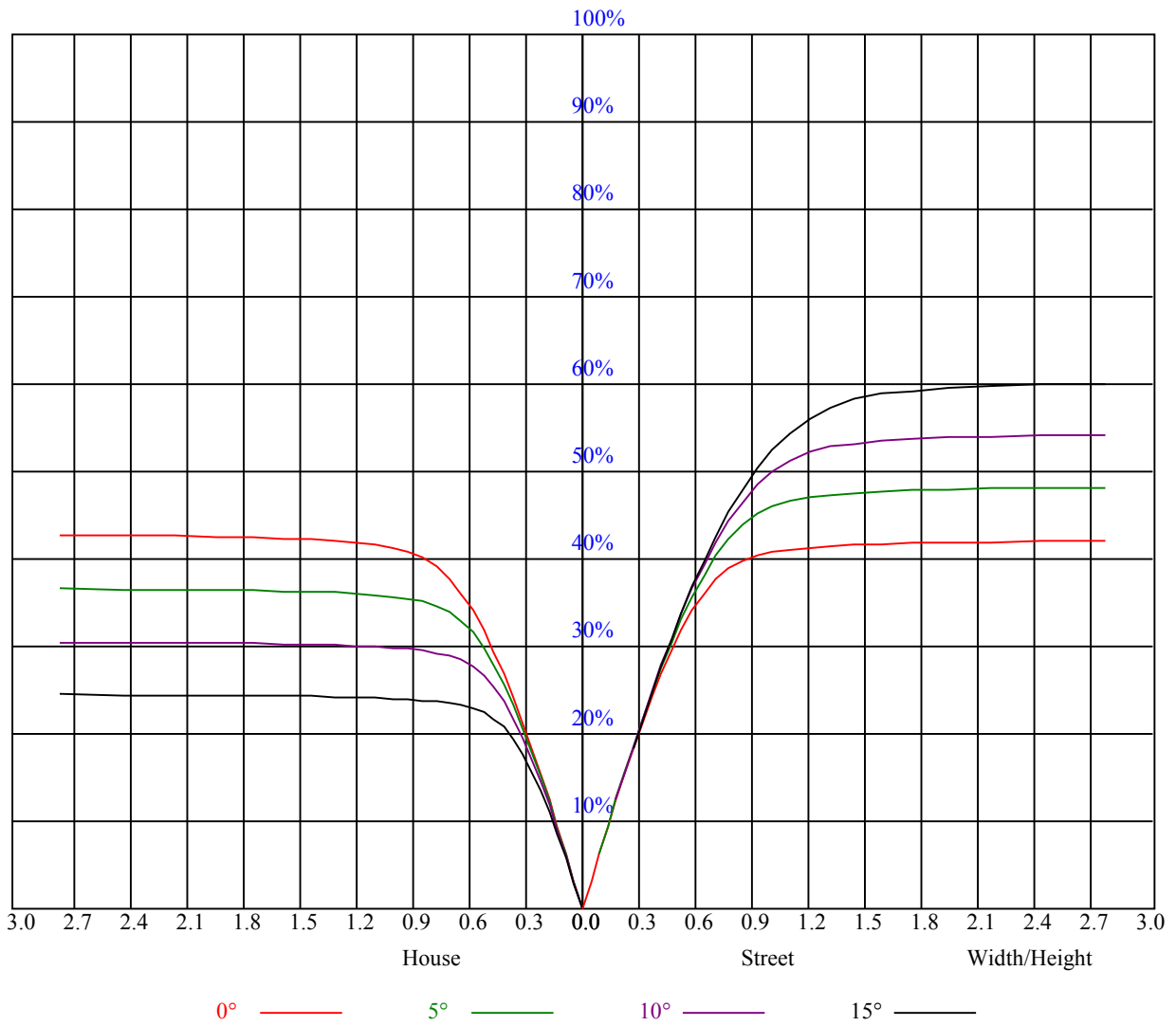
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.86
1	0.94	0.91	0.89	0.92	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.82	0.82	0.81	0.80	0.78
2	0.86	0.82	0.79	0.85	0.81	0.78	0.82	0.79	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.72
3	0.79	0.74	0.71	0.78	0.74	0.70	0.76	0.72	0.69	0.74	0.70	0.68	0.72	0.69	0.67	0.65
4	0.73	0.68	0.64	0.72	0.67	0.63	0.70	0.66	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.60
5	0.68	0.62	0.58	0.67	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.56	0.62	0.59	0.56	0.55
6	0.63	0.57	0.53	0.62	0.56	0.53	0.61	0.56	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
7	0.58	0.52	0.48	0.58	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.47	0.46
8	0.54	0.48	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.42
9	0.51	0.45	0.41	0.50	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.48	0.44	0.41	0.39
10	0.47	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.38	0.45	0.41	0.38	0.45	0.41	0.38	0.36



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	265.11	267.64	266.96	262.13	255.32	242.38	218.14	173.93	105.69
45.0	265.61	265.33	264.15	262.52	257.57	246.71	232.76	205.37	144.45
90.0	265.44	263.81	261.39	259.26	252.39	236.19	206.38	152.83	75.94
135.0	265.44	264.09	262.07	260.44	254.64	243.39	228.09	200.87	134.33
180.0	265.11	261.73	259.99	257.79	250.26	232.03	206.33	153.28	80.89
225.0	265.61	265.73	264.71	261.79	254.25	241.48	226.41	199.46	128.98
270.0	265.44	266.40	265.28	260.55	252.90	238.95	217.46	176.63	105.30
315.0	265.44	267.13	266.79	264.49	258.41	244.46	230.68	204.13	137.76
360.0	265.11	267.64	266.96	262.13	255.32	242.38	218.14	173.93	105.69

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	36.39	17.55	10.74	6.53	3.94	2.59	1.74	1.52	1.46
45.0	49.44	21.49	12.83	8.27	4.84	2.81	1.91	1.58	1.46
90.0	22.28	14.74	8.49	5.29	3.26	2.14	1.58	1.46	1.41
135.0	41.23	20.48	12.15	7.76	4.50	2.64	1.86	1.46	1.41
180.0	23.91	15.53	8.83	5.29	3.26	2.14	1.58	1.46	1.41
225.0	40.44	20.59	12.21	7.71	4.44	2.59	1.74	1.52	1.41
270.0	35.78	18.28	10.86	6.69	3.88	2.53	1.69	1.52	1.46
315.0	45.56	21.49	12.88	8.21	4.84	2.81	1.86	1.52	1.46
360.0	36.39	17.55	10.74	6.53	3.94	2.59	1.74	1.52	1.46

C/γ(°)	90.0
0.0	1.41
45.0	1.41
90.0	1.46
135.0	1.41
180.0	1.41
225.0	1.41
270.0	1.46
315.0	1.41
360.0	1.41