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Nata

LumCAT: 1-1010-M
Luminaire: BJB 47.360.1020
Report No: NATA0100
Test No: GC2019102418
LampCAT: SAMSUNG LC009D
Lamp flux(lm): 1482.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 34.4900
Current(A): 0.2970
Power (W): 10.2400
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 1027.67
Efficiency(%): 69.34%
Lumens(lm)/Power(W): 100.36
Central intensity(cd): 3260.110
Maximum intensity(cd): 3260.110
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.3
 [C90/270]Total=34.3
Field angle(10%Imax): [C0/180]Total=49.0
 [C90/270]Total=49.0
Maximum s/h(1/2): C0_180=0.58 C90_270=0.58
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(%): 69.34%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.552%

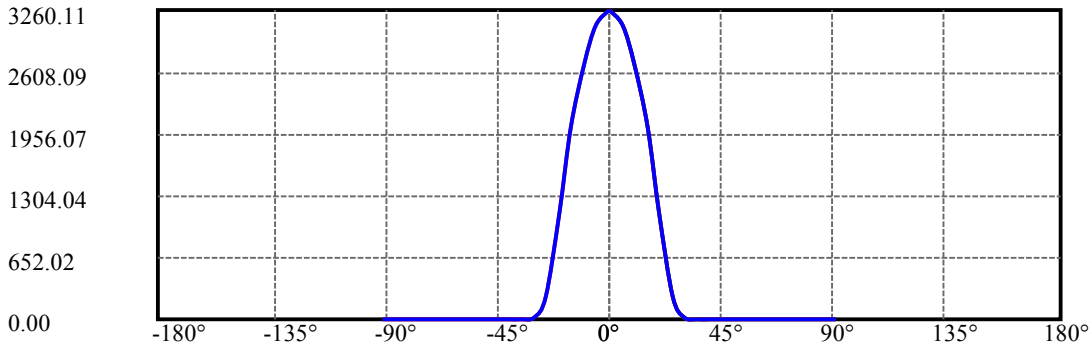
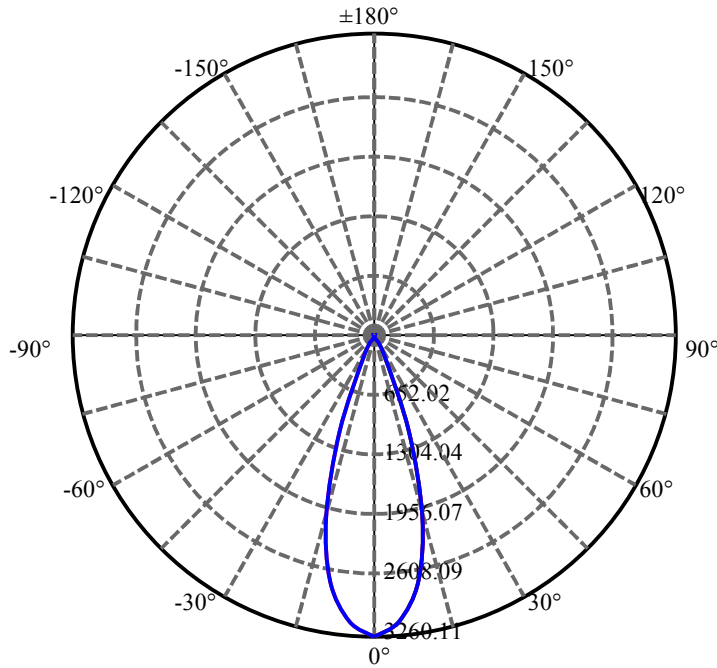
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3260.109	0.000	0	.000%	.000%
5.0	3104.719	76.090	76.09	5.134%	7.404%
10.0	2701.336	207.701	283.791	14.015%	27.615%
15.0	2025.281	280.380	564.17	18.919%	54.898%
20.0	1110.185	258.406	822.577	17.436%	80.043%
25.0	236.967	141.291	963.868	9.534%	93.791%
30.0	20.658	32.603	996.471	2.200%	96.964%
35.0	9.373	4.422	1000.893	.298%	97.394%
40.0	6.926	2.719	1003.612	.183%	97.659%
45.0	5.829	2.362	1005.974	.159%	97.888%
50.0	5.344	2.258	1008.232	.152%	98.108%
55.0	5.063	2.263	1010.494	.153%	98.328%
60.0	4.901	2.303	1012.797	.155%	98.552%
65.0	4.830	2.366	1015.163	.160%	98.783%
70.0	4.767	2.430	1017.593	.164%	99.019%
75.0	4.746	2.487	1020.08	.168%	99.261%
80.0	4.690	2.525	1022.605	.170%	99.507%
85.0	4.648	2.537	1025.142	.171%	99.754%
90.0	4.598	2.532	1027.673	.171%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	996.47	67.24%	96.96%
0-40	1003.61	67.72%	97.66%
0-60	1012.80	68.34%	98.55%
0-90	1025.14	69.17%	99.75%
0-120	1025.14	69.17%	99.75%
0-180	1027.67	69.34%	100.00%
60-90	14.65	0.99%	1.43%
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%
0-19.99	822.14	55.47%	80.00%

ZONAL LUMEN SUMMARY

0-10	283.79
10-20	538.79
20-30	173.89
30-40	7.14
40-50	4.62
50-60	4.57
60-70	4.80
70-80	5.01
80-90	2.54
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: —————

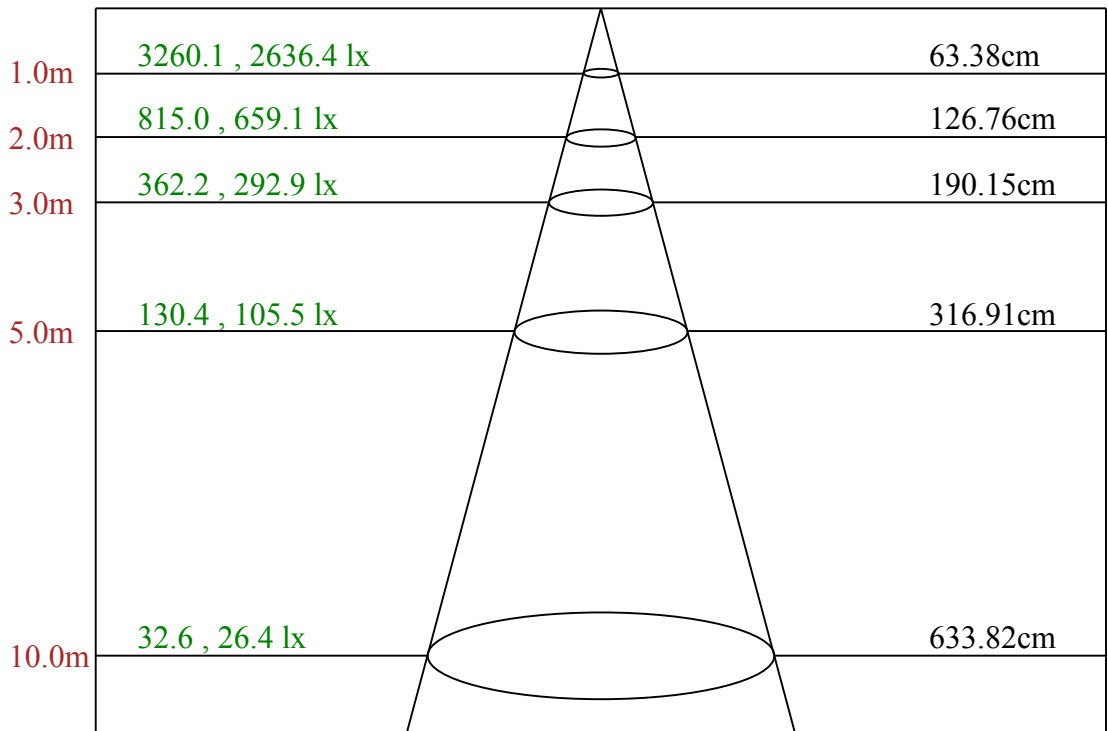
C90/C270: —————

Field angle(10%Imax):C0/180Left:24.5 Right:24.5

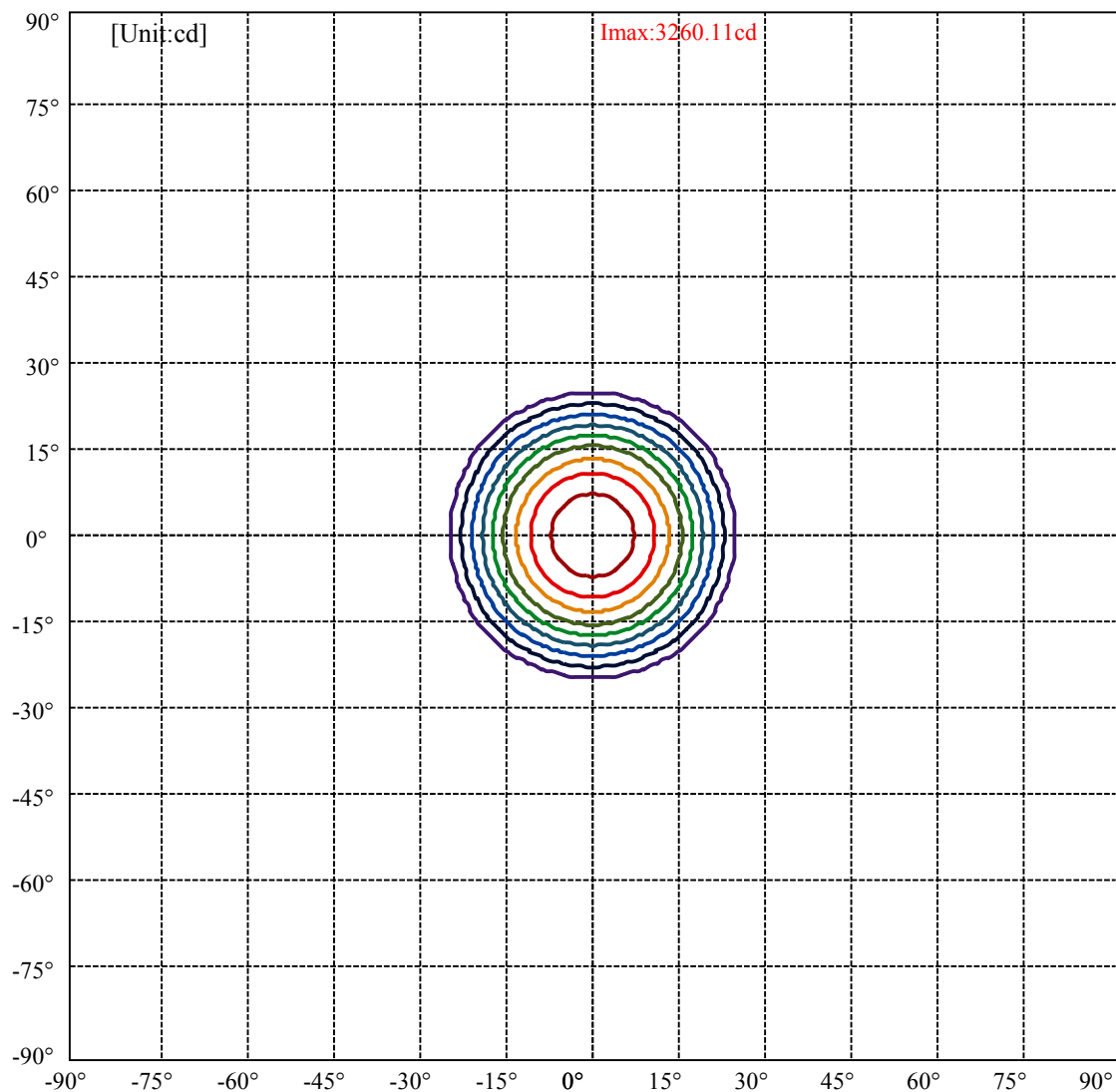
:C90/270Left:24.5 Right:24.5

Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2

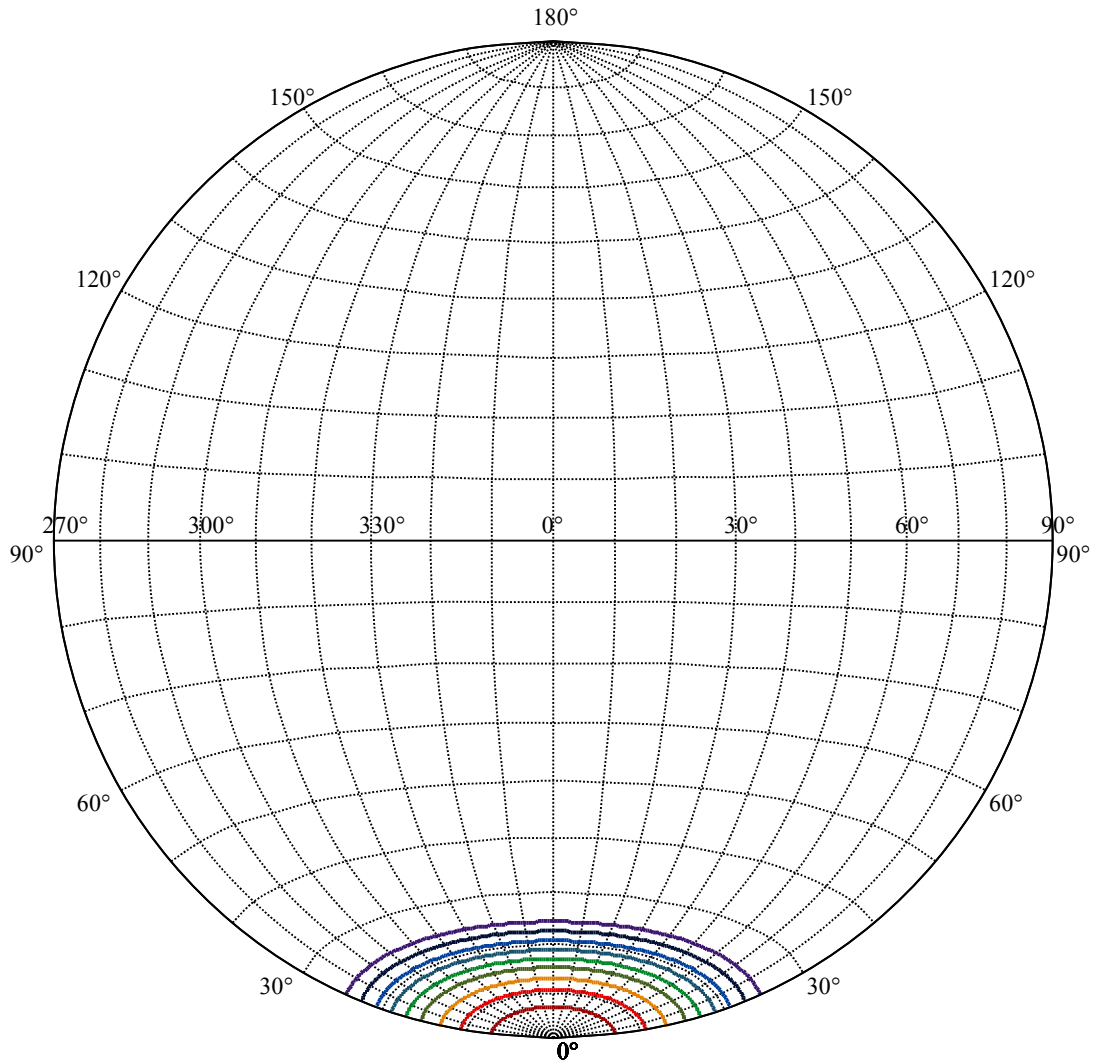
:C90/270Left:17.2 Right:17.2



Max , Ave Beam angle of C0 plane 35.17



(10%Imax) 326.011	—
(20%Imax) 652.022	—
(30%Imax) 978.033	—
(40%Imax) 1304.04	—
(50%Imax) 1630.05	—
(60%Imax) 1956.07	—
(70%Imax) 2282.08	—
(80%Imax) 2608.09	—
(90%Imax) 2934.1	—



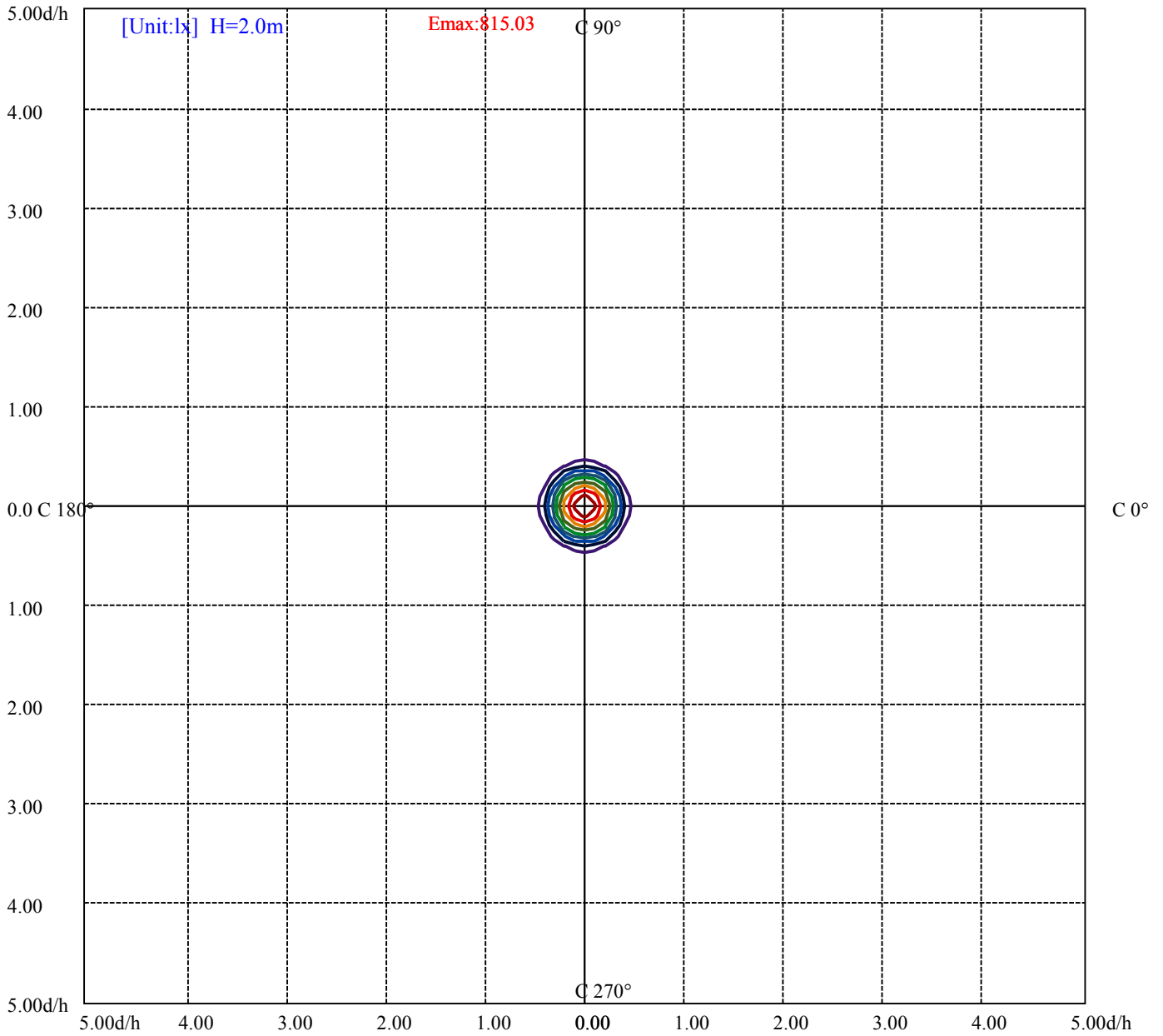
House

[Unit:cd]

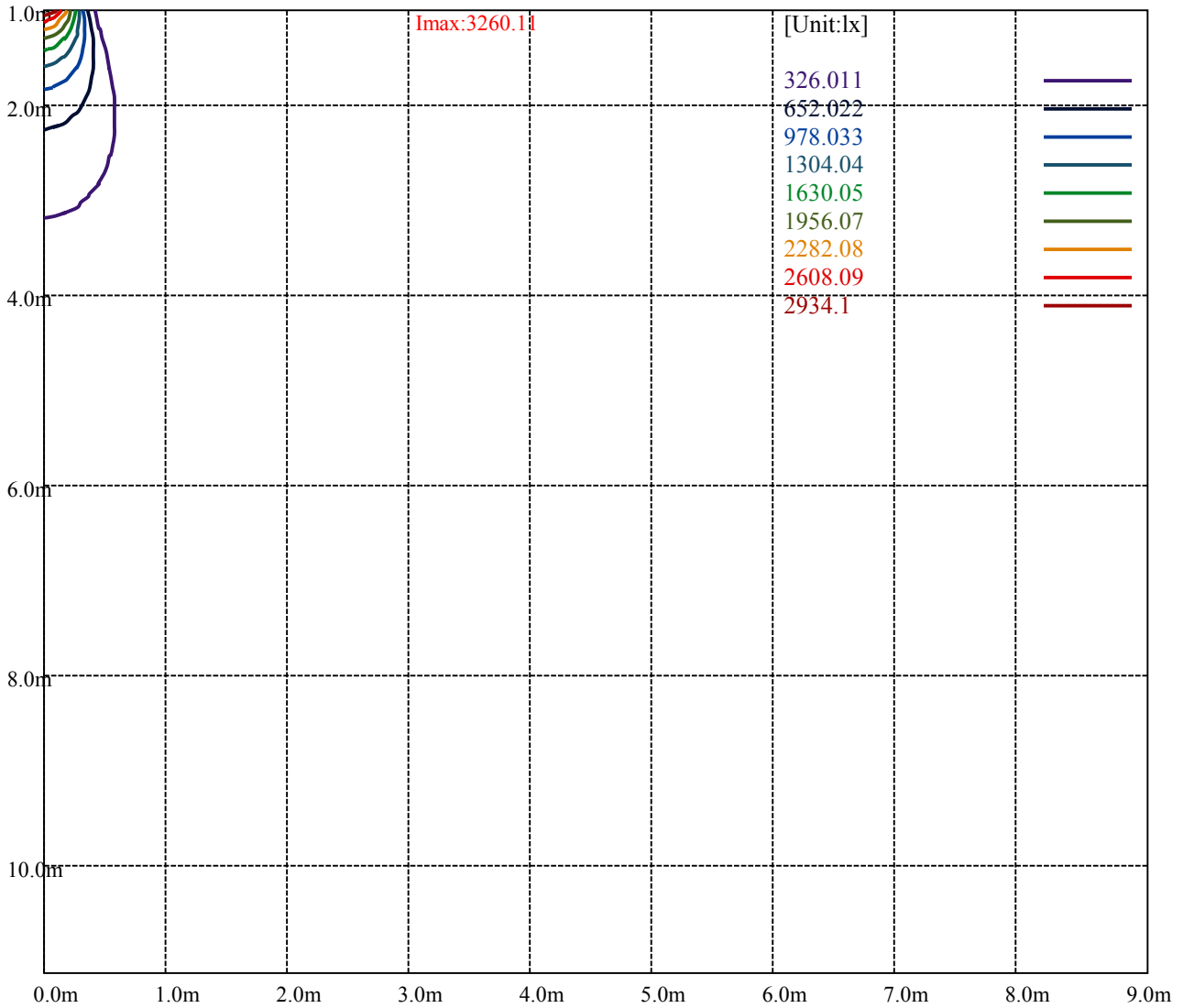
Road

Imax:3260.11

(10%Imax) 326.011	—
(20%Imax) 652.022	—
(30%Imax) 978.033	—
(40%Imax) 1304.04	—
(50%Imax) 1630.05	—
(60%Imax) 1956.07	—
(70%Imax) 2282.08	—
(80%Imax) 2608.09	—
(90%Imax) 2934.1	—



- (10%Emax) 81.5025
- (20%Emax) 163.0052
- (30%Emax) 244.5078
- (40%Emax) 326.01
- (50%Emax) 407.5125
- (60%Emax) 489.015
- (70%Emax) 570.5175
- (80%Emax) 652.02
- (90%Emax) 733.5225



Luminance Table

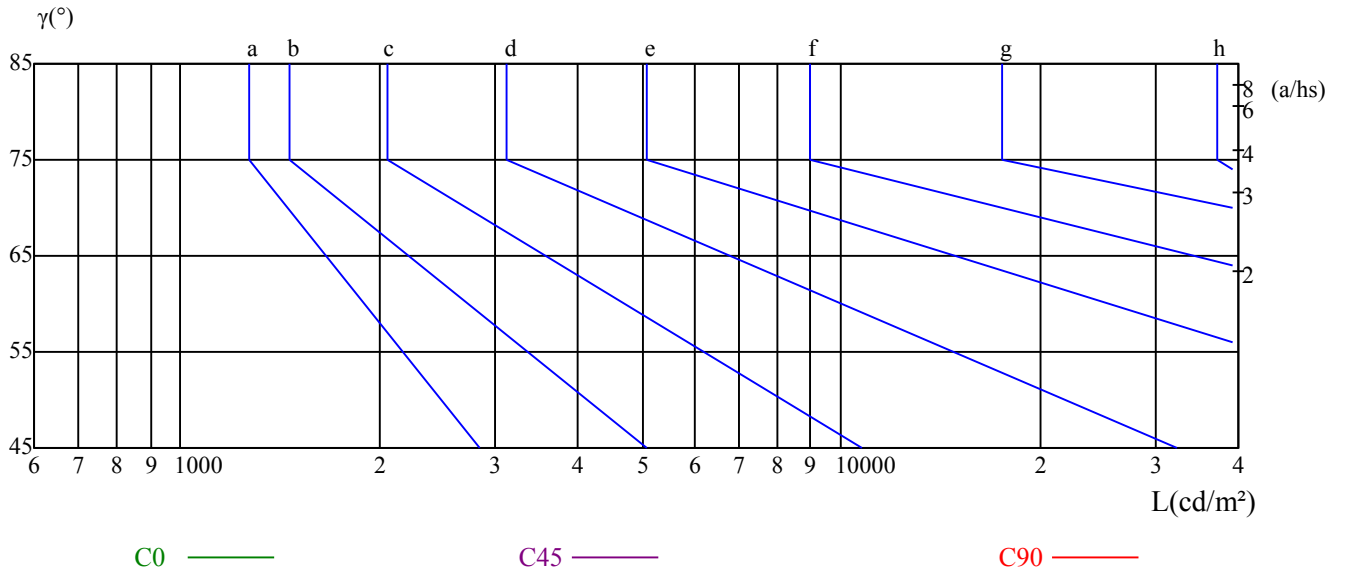
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

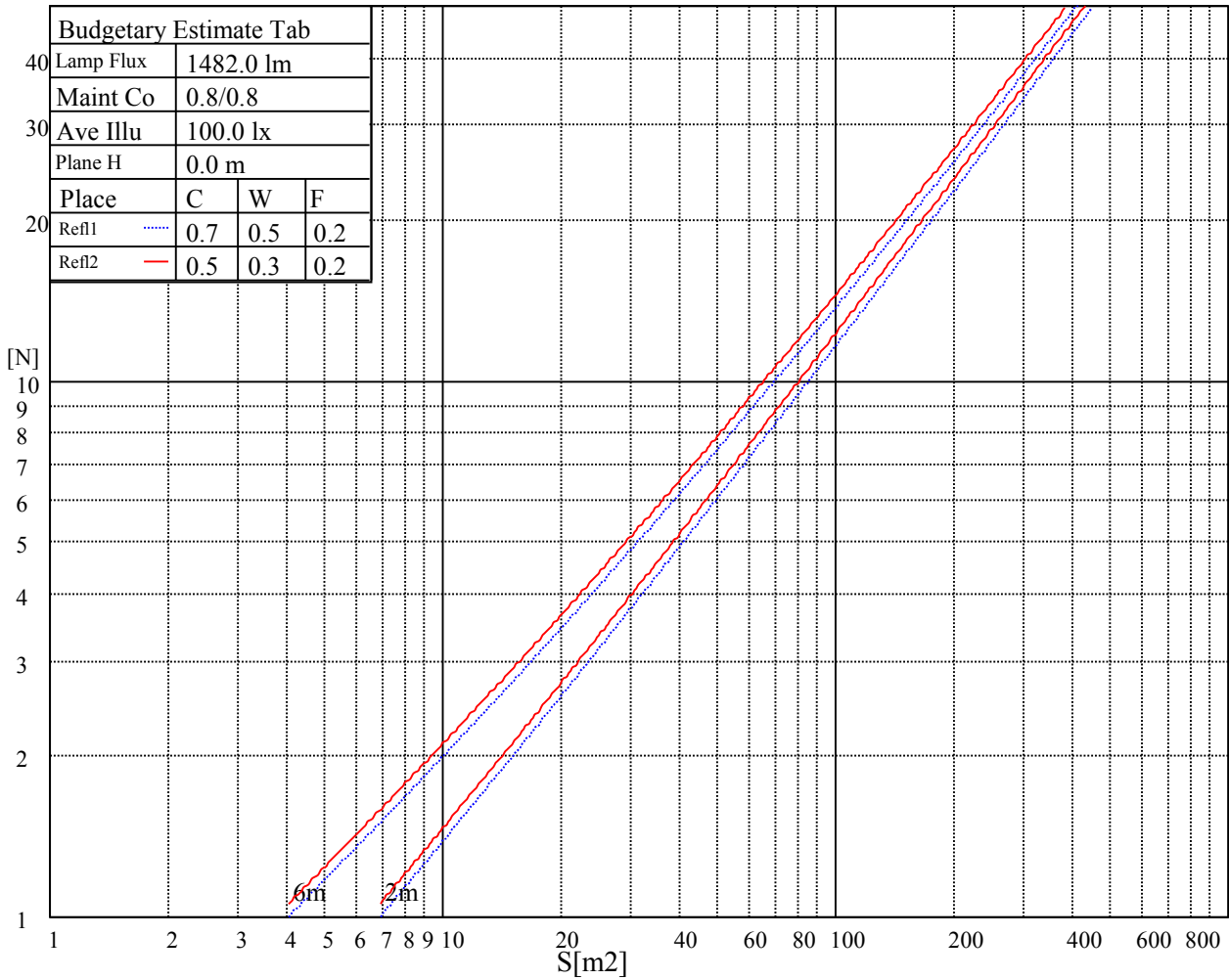
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

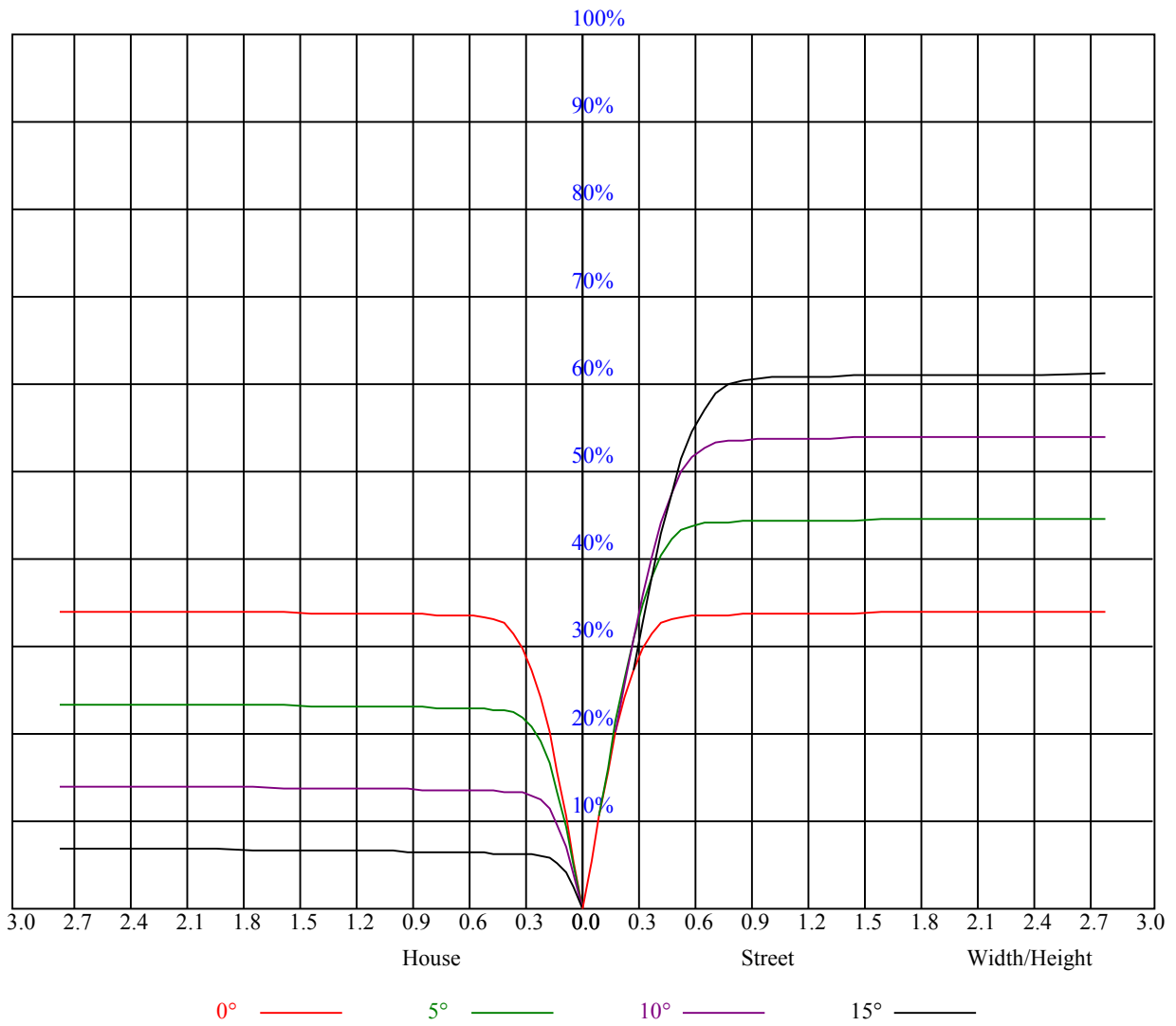
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.83	0.83	0.83	0.81	0.81	0.81	0.77	0.77	0.77	0.74	0.74	0.74	0.71	0.71	0.71	0.69
1	0.78	0.76	0.75	0.76	0.75	0.74	0.74	0.73	0.72	0.71	0.70	0.70	0.69	0.68	0.68	0.66
2	0.74	0.72	0.70	0.73	0.71	0.69	0.71	0.69	0.68	0.69	0.67	0.66	0.67	0.66	0.65	0.64
3	0.71	0.68	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.66	0.65	0.63	0.65	0.64	0.63	0.62
4	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.63	0.62	0.64	0.63	0.61	0.63	0.62	0.60	0.59
5	0.65	0.62	0.60	0.65	0.62	0.60	0.63	0.61	0.59	0.62	0.60	0.59	0.61	0.60	0.58	0.57
6	0.63	0.60	0.58	0.62	0.60	0.57	0.61	0.59	0.57	0.61	0.58	0.57	0.60	0.58	0.56	0.56
7	0.61	0.58	0.56	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.58	0.56	0.55	0.54
8	0.59	0.56	0.54	0.58	0.56	0.54	0.58	0.55	0.53	0.57	0.55	0.53	0.57	0.54	0.53	0.52
9	0.57	0.54	0.52	0.57	0.54	0.52	0.56	0.53	0.52	0.55	0.53	0.52	0.55	0.53	0.51	0.51
10	0.55	0.52	0.50	0.55	0.52	0.50	0.54	0.52	0.50	0.54	0.52	0.50	0.54	0.51	0.50	0.49



Nata 1-1010-M

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	3261.94	3133.13	2730.94	2041.88	1198.13	284.63	21.32	9.51	6.92
45.0	3255.75	3139.31	2746.13	2102.63	1207.69	293.63	20.59	9.62	6.98
90.0	3263.06	3083.63	2691.00	1986.19	1054.52	199.74	18.62	9.06	6.92
135.0	3259.69	3148.88	2804.06	2198.81	1272.38	365.63	24.47	9.62	7.26
180.0	3261.94	3079.69	2657.25	1994.06	1044.90	171.45	19.46	8.94	6.69
225.0	3255.75	3079.13	2653.88	1920.94	1033.65	167.12	19.29	9.39	6.86
270.0	3263.06	3130.88	2709.56	2090.81	1143.00	290.81	23.68	9.90	7.09
315.0	3259.69	3043.13	2617.88	1866.94	927.23	122.74	17.83	8.94	6.69
360.0	3261.94	3133.13	2730.94	2041.88	1198.13	284.63	21.32	9.51	6.92
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	5.79	5.29	5.01	4.84	4.73	4.67	4.67	4.61	4.61
45.0	5.91	5.40	5.12	4.95	4.89	4.78	4.78	4.78	4.73
90.0	5.85	5.40	5.06	4.95	4.89	4.84	4.78	4.73	4.67
135.0	5.91	5.40	5.06	4.89	4.78	4.73	4.67	4.67	4.61
180.0	5.68	5.23	5.01	4.84	4.78	4.67	4.67	4.61	4.61
225.0	5.85	5.40	5.12	4.95	4.89	4.89	4.89	4.73	4.67
270.0	5.96	5.40	5.12	4.95	4.89	4.84	4.84	4.73	4.67
315.0	5.68	5.23	5.01	4.84	4.78	4.73	4.67	4.67	4.61
360.0	5.79	5.29	5.01	4.84	4.73	4.67	4.67	4.61	4.61
C/ γ (°)	90.0								
0.0	4.56								
45.0	4.61								
90.0	4.61								
135.0	4.61								
180.0	4.56								
225.0	4.67								
270.0	4.61								
315.0	4.56								
360.0	4.56								