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## NATA

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LumCAT: 2-1702-A  
Luminaire: 99.02.73.173+92.76.365.00  
Report No: NATA0100  
Test No: GC2018101005  
LampCAT: BRIDGELUX V22B  
Lamp flux(lm): 3728.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 49.3000  
Current(A): 0.5000  
Power (W): 24.6500  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm):0

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## Photometric Results

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Lumens(lm): 3332.78  
Efficiency(%): 89.40%  
Lumens(lm)/Power(W): 136.81  
Central intensity(cd): 7162.313  
Maximum intensity(cd): 7162.313  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=36.1  
                                  [C90/270]Total=36.1  
Field angle(10%Imax): [C0/180]Total=72.1  
                                  [C90/270]Total=72.1  
Maximum s/h(1/2): C0\_180=0.61 C90\_270=0.61  
Maximum s/h(1/4): C0\_180=0.58 C90\_270=0.58  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 90.46%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.541%

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Equipment:  
Temperature(°C): 25.0

Date: 2018/10/10  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.50

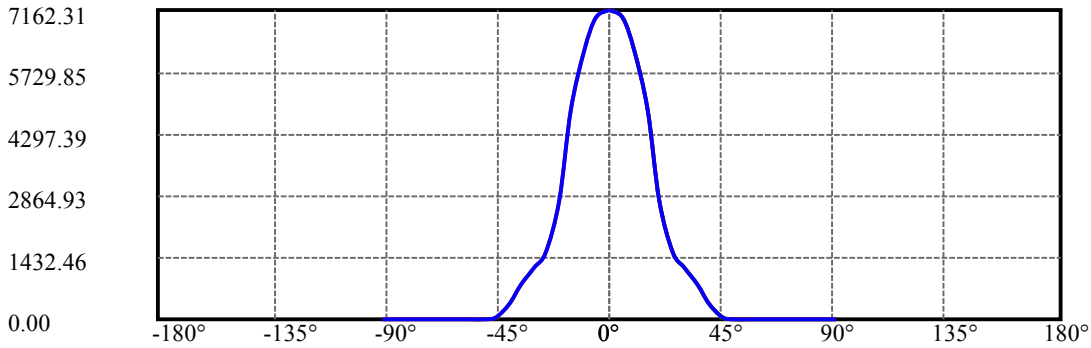
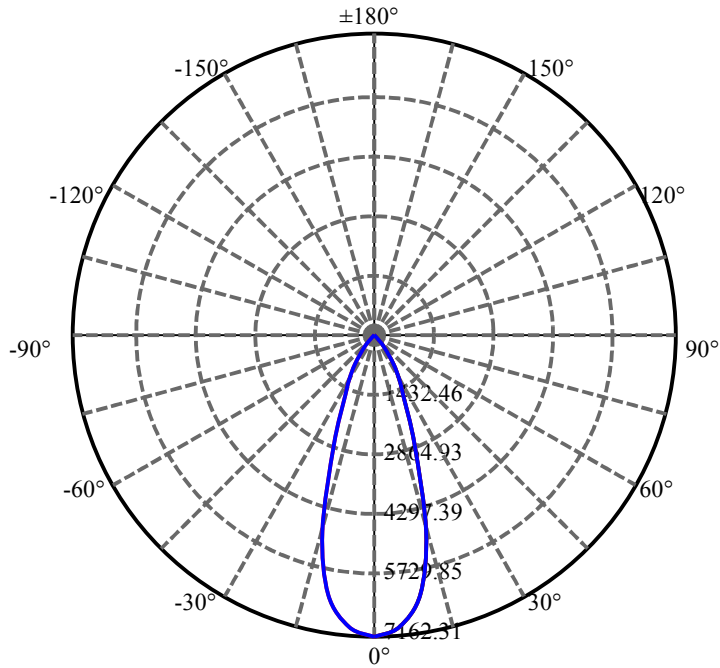
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7162.313	42.832	42.832	1.149%	1.285%
5.0	6975.633	333.249	376.081	8.939%	11.284%
10.0	6245.859	594.500	970.581	15.947%	29.122%
15.0	4830.188	685.251	1655.832	18.381%	49.683%
20.0	2768.063	518.940	2174.772	13.920%	65.254%
25.0	1576.477	365.195	2539.967	9.796%	76.212%
30.0	1206.788	330.743	2870.71	8.872%	86.136%
35.0	809.986	254.659	3125.368	6.831%	93.777%
40.0	355.641	125.305	3250.673	3.361%	97.536%
45.0	45.127	17.491	3268.164	.469%	98.061%
50.0	16.945	7.115	3275.279	.191%	98.275%
55.0	15.722	7.059	3282.339	.189%	98.486%
60.0	15.131	7.183	3289.522	.193%	98.702%
65.0	15.033	7.468	3296.99	.200%	98.926%
70.0	15.349	7.906	3304.896	.212%	99.163%
75.0	15.342	8.123	3313.019	.218%	99.407%
80.0	15.096	8.149	3321.168	.219%	99.652%
85.0	14.442	7.886	3329.054	.212%	99.888%
90.0	13.598	3.727	3332.781	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2870.71	77.00%	86.14%
0-40	3250.67	87.20%	97.54%
0-60	3289.52	88.24%	98.70%
0-90	3329.05	89.30%	99.89%
0-120	3329.05	89.30%	99.89%
0-180	3332.78	89.40%	100.00%
60-90	46.72	1.25%	1.40%
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%
0-26.91	2666.23	71.52%	80.00%

ZONAL LUMEN SUMMARY

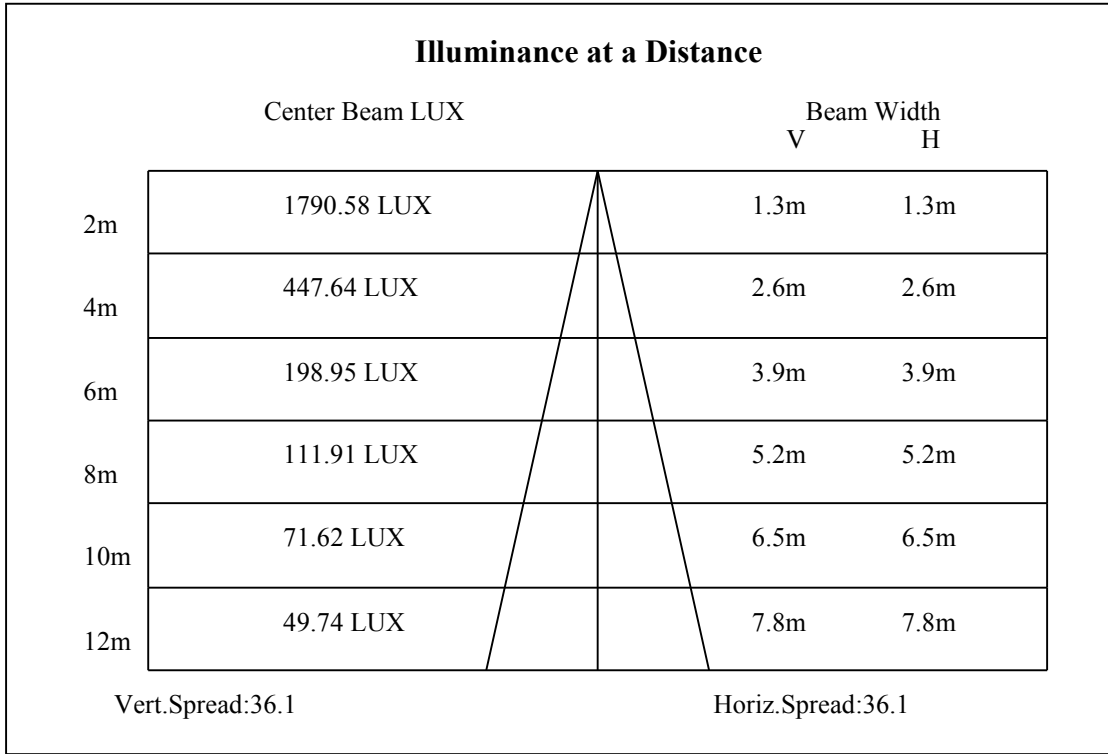
0-10	970.58
10-20	1204.19
20-30	695.94
30-40	379.96
40-50	24.61
50-60	14.24
60-70	15.37
70-80	16.27
80-90	7.89
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

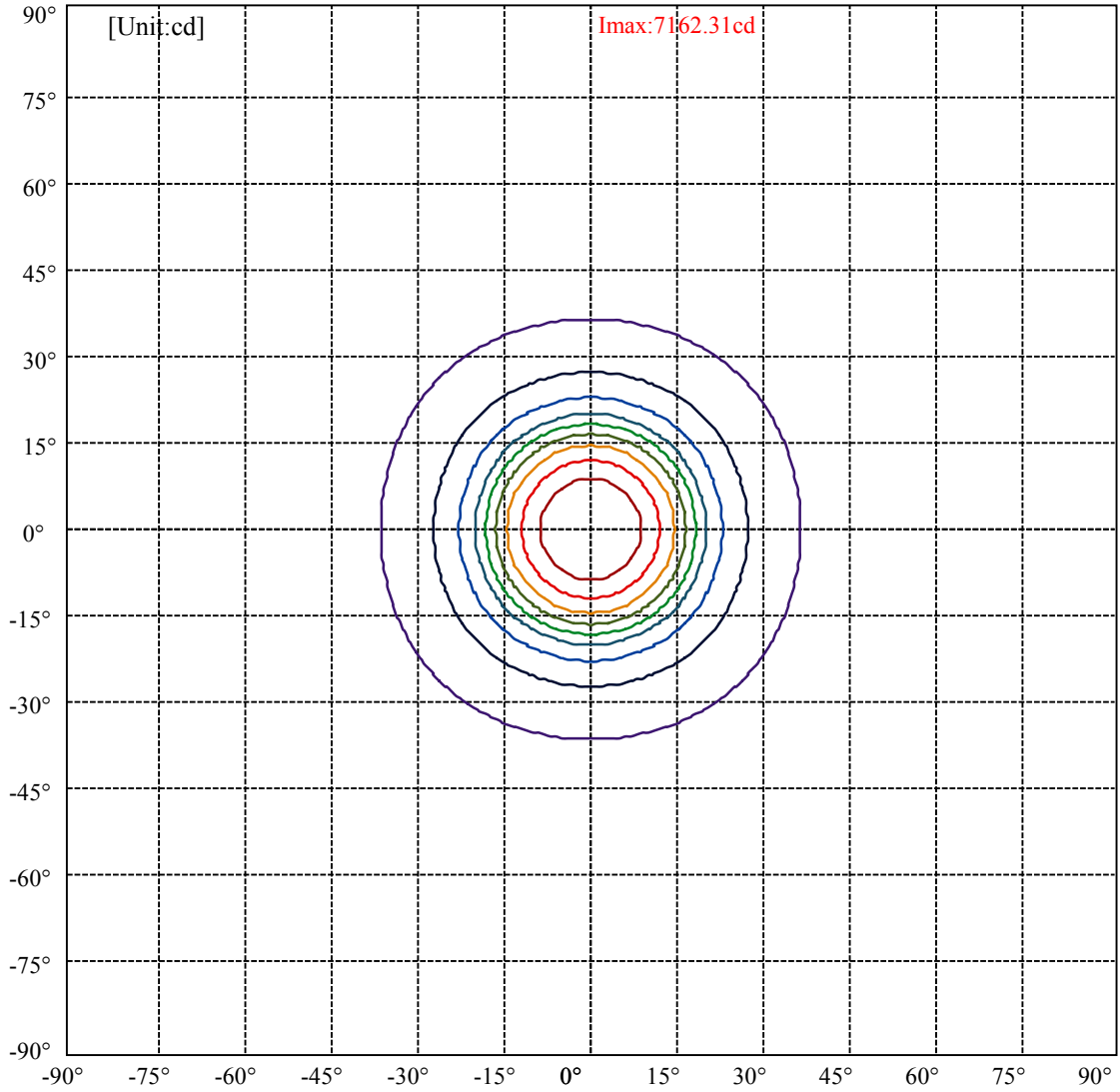


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:36.0 Right:36.0  
:C90/270Left:36.0 Right:36.0

Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0  
:C90/270Left:18.0 Right:18.0



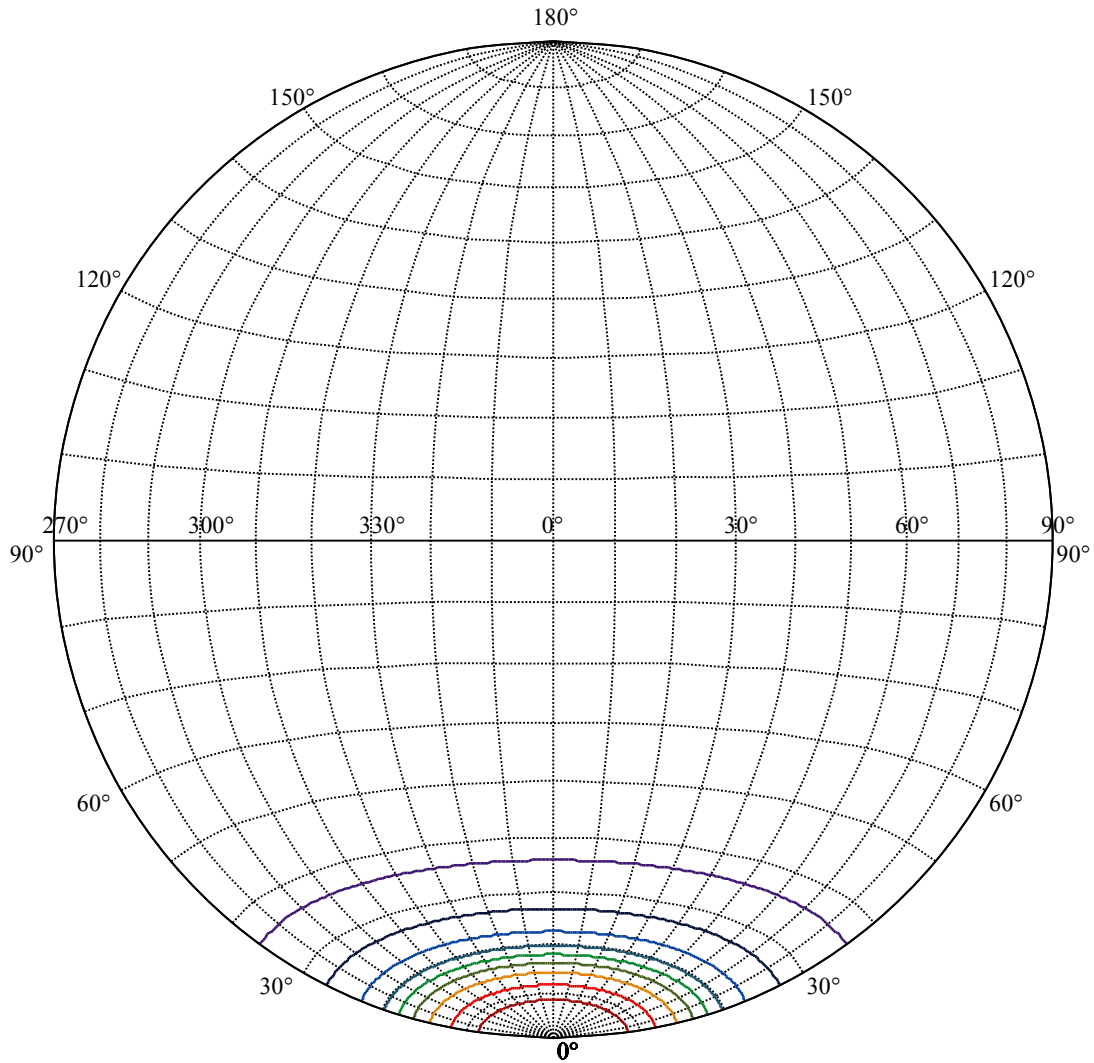


(10%Imax) 716.231	—
(20%Imax) 1432.46	—
(30%Imax) 2148.69	—
(40%Imax) 2864.93	—
(50%Imax) 3581.16	—
(60%Imax) 4297.39	—
(70%Imax) 5013.62	—
(80%Imax) 5729.85	—
(90%Imax) 6446.08	—

Equipment:  
Temperature(°C): 25.0

Date: 2018/10/10  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.50



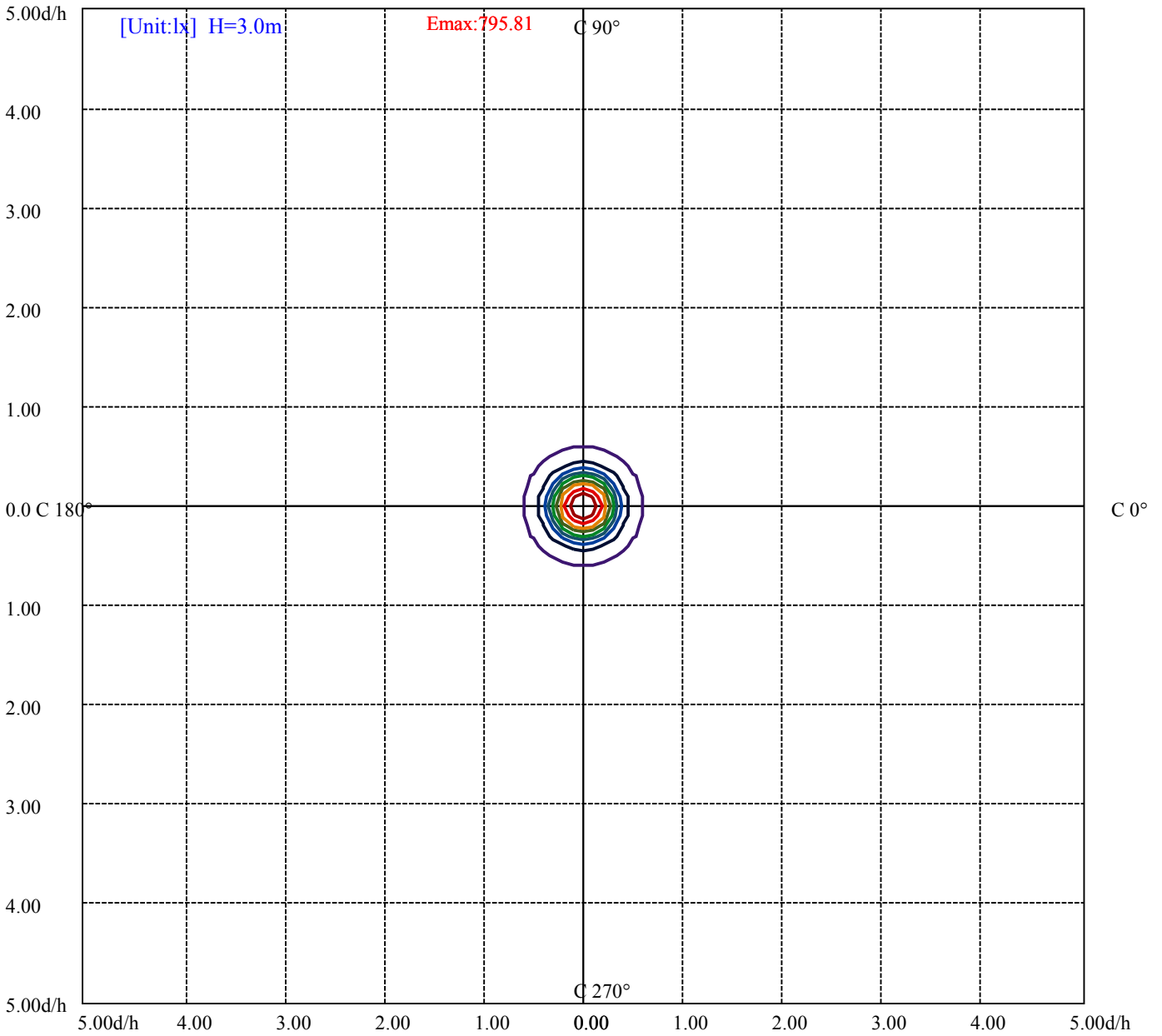
House

[Unit:cd]

Road

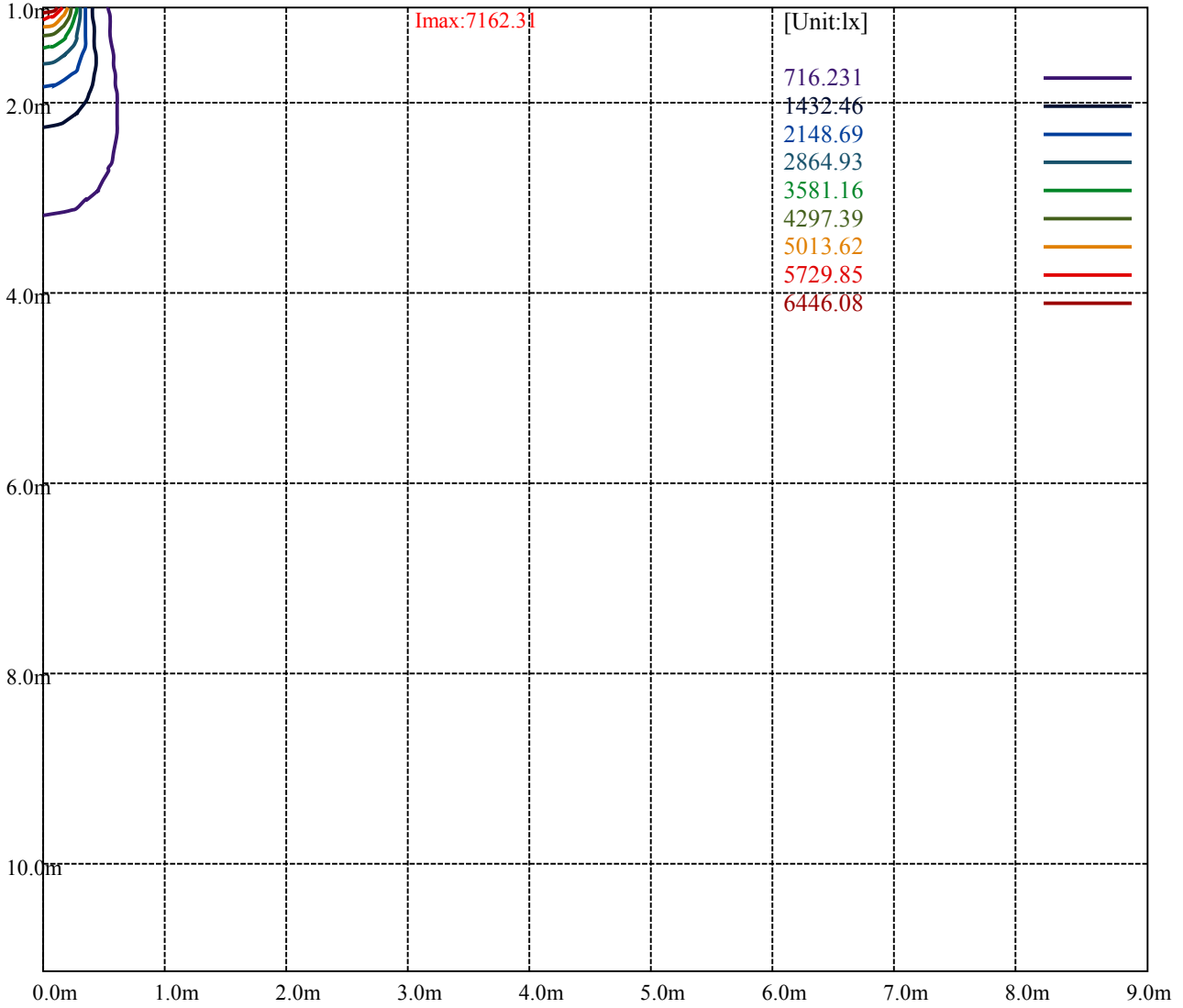
**Imax:7162.31**

(10%Imax) 716.231	—
(20%Imax) 1432.46	—
(30%Imax) 2148.69	—
(40%Imax) 2864.93	—
(50%Imax) 3581.16	—
(60%Imax) 4297.39	—
(70%Imax) 5013.62	—
(80%Imax) 5729.85	—
(90%Imax) 6446.08	—



(10%Emax) 79.58122	—
(20%Emax) 159.1622	—
(30%Emax) 238.7433	—
(40%Emax) 318.3244	—
(50%Emax) 397.9055	—
(60%Emax) 477.4867	—
(70%Emax) 557.0677	—
(80%Emax) 636.65	—
(90%Emax) 716.2311	—





Luminance Limiting Curve(no luminous side)

Luminance Table

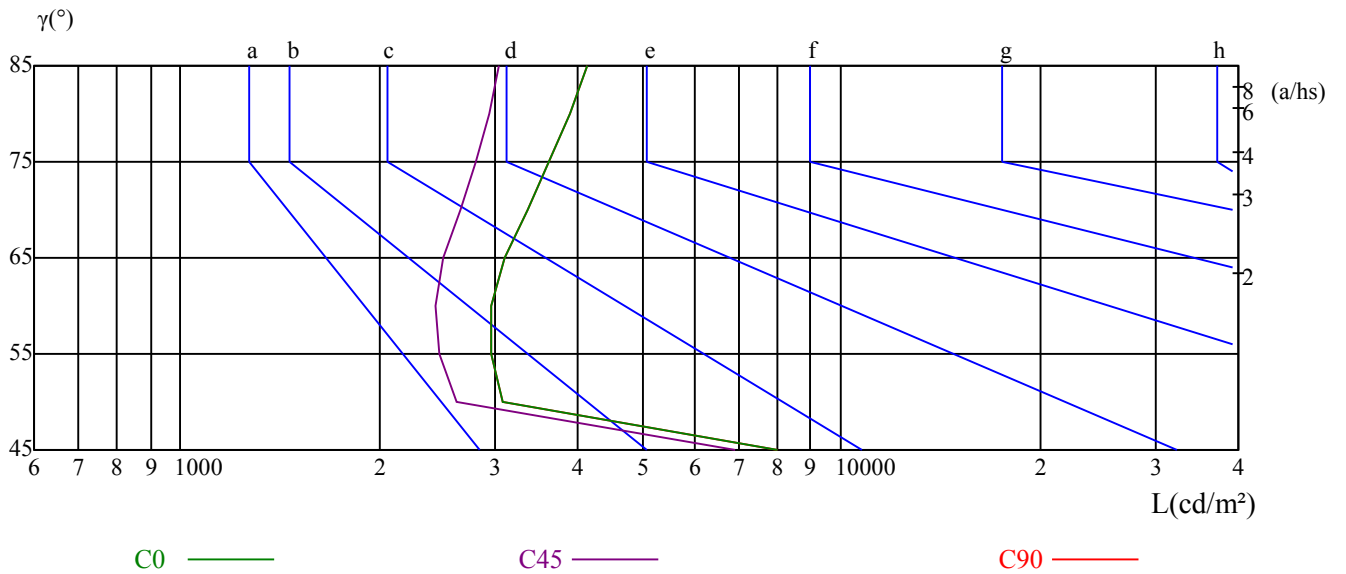
$\gamma$	45	50	55	60	65	70	75	80	85
C0	7997	3076	2948	2957	3092	3359	3616	3887	4132
C45	6895	2612	2465	2432	2498	2661	2802	2937	3030
C90	7997	3076	2948	2957	3092	3359	3616	3887	4132

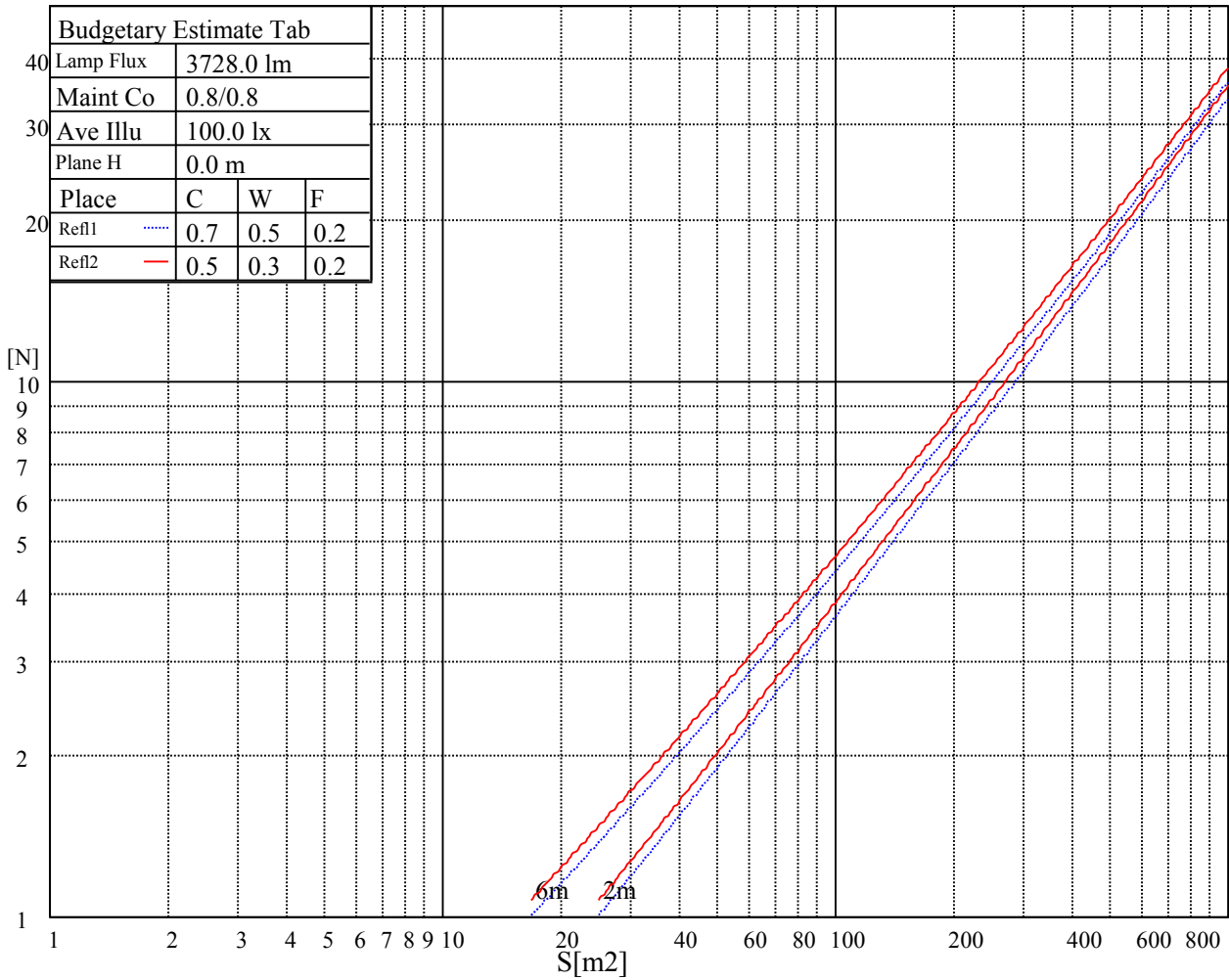
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7259	7259	7259	12097	12097	12097	33817	33817	33817

Glare Table

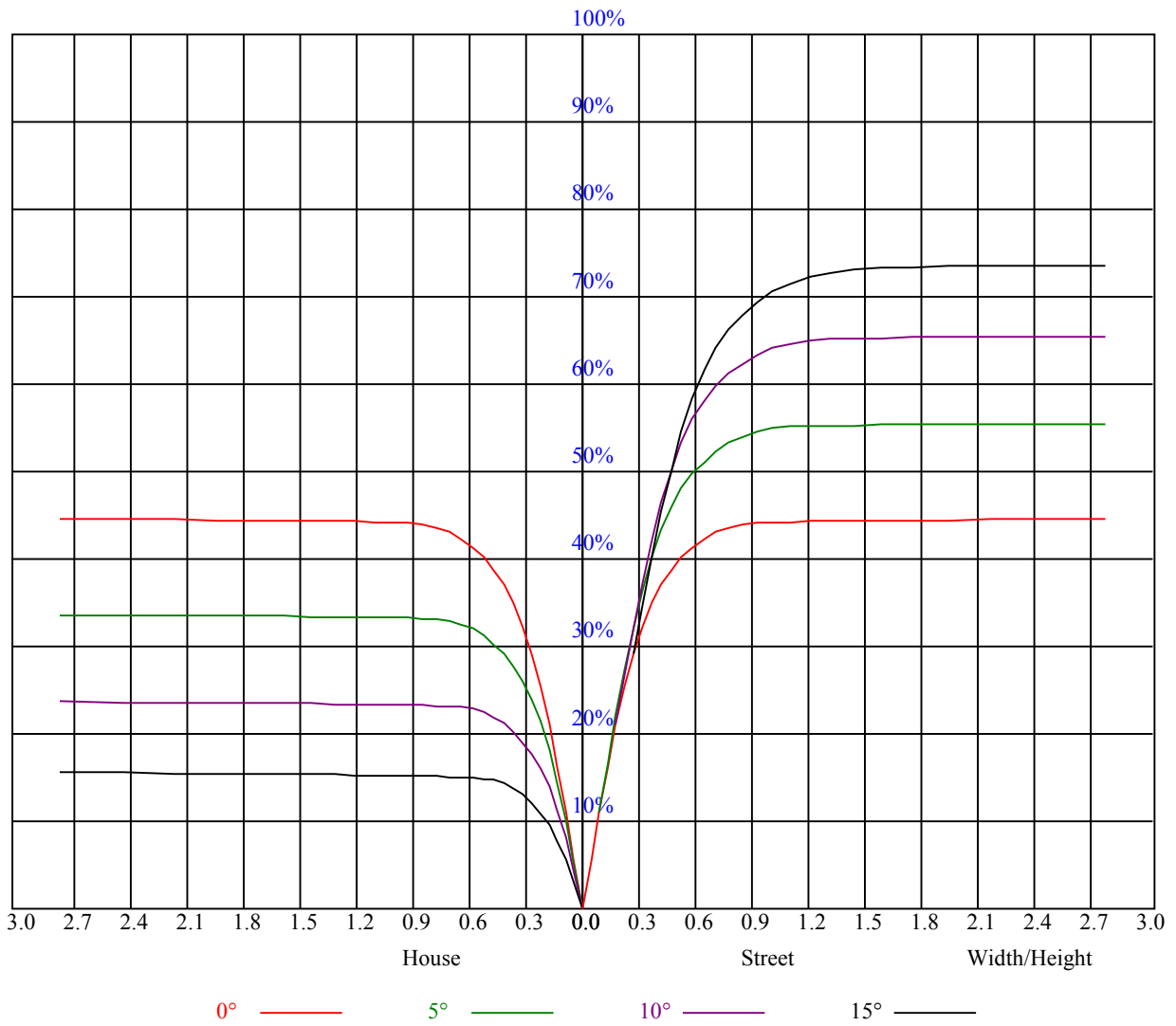
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.87	0.86	0.84
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.76
4	0.85	0.81	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.75	0.79	0.76	0.74	0.73
5	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
7	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
10	0.67	0.62	0.60	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	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	7168.50	6885.00	6166.13	4637.25	2564.44	1550.25	1231.88	782.44	345.94
45.0	7170.75	7039.69	6365.25	5117.63	2997.00	1621.69	1286.44	844.88	403.31
90.0	7165.69	7020.56	6287.63	4906.13	2868.19	1574.44	1117.91	841.89	370.46
135.0	7144.31	7139.25	6543.00	5403.94	3343.50	1722.38	1359.56	959.63	488.25
180.0	7168.50	7082.44	6374.81	5019.19	2860.88	1584.00	1227.94	843.36	388.63
225.0	7170.75	6955.31	6151.50	4695.19	2594.81	1531.69	1089.34	757.91	299.98
270.0	7165.69	6978.38	6180.19	4705.31	2726.44	1562.06	1240.31	792.56	317.25
315.0	7144.31	6704.44	5898.38	4156.88	2189.25	1465.31	1100.93	657.23	231.30
360.0	7168.50	6885.00	6166.13	4637.25	2564.44	1550.25	1231.88	782.44	345.94

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	33.24	17.49	16.03	15.19	14.85	15.75	15.81	15.53	14.51
45.0	48.54	16.76	15.69	15.30	15.02	15.13	15.30	15.19	14.57
90.0	40.16	16.88	15.69	14.96	14.74	14.96	14.96	14.85	14.51
135.0	96.69	17.33	15.58	15.13	14.79	14.79	14.85	14.74	14.46
180.0	56.19	16.43	15.41	14.96	14.57	14.57	14.63	14.63	14.23
225.0	30.09	16.54	15.53	15.08	14.91	15.19	15.36	15.02	14.01
270.0	31.28	17.55	15.86	15.24	15.36	16.03	15.86	15.47	14.68
315.0	24.81	16.59	15.98	15.19	16.03	16.37	15.98	15.36	14.57
360.0	33.24	17.49	16.03	15.19	14.85	15.75	15.81	15.53	14.51

C/γ(°)	90.0
0.0	13.50
45.0	13.67
90.0	13.61
135.0	13.61
180.0	13.50
225.0	13.67
270.0	13.67
315.0	13.56
360.0	13.50