
Nata

LumCAT: 2-1284-N
Luminaire: 92.70.046.00
Report No: NT2017092303
Test No: nata-0100
LampCAT: CREE CXA1520
Lamp flux(lm): 1756.0
Number of Lamps: 1
Length(mm): 57
Phm Type: C

Voltage(V): 36.1000
Current(A): 0.5200
Power (W): 18.7000
PF: 0.0000
Ballast type: DC
Width(mm): 57
Height(mm): 0

Photometric Results

Lumens(lm): 1488.63
Efficiency(%): 84.77%
Lumens(lm)/Power(W): 79.61
Central intensity(cd): 5327.973
Maximum intensity(cd): 5327.973
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.0
 [C90/270]Total=23.0
Field angle(10%Imax): [C0/180]Total=60.8
 [C90/270]Total=60.8
Maximum s/h(1/2): C0_180=0.39 C90_270=0.39
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 86.51%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.138%

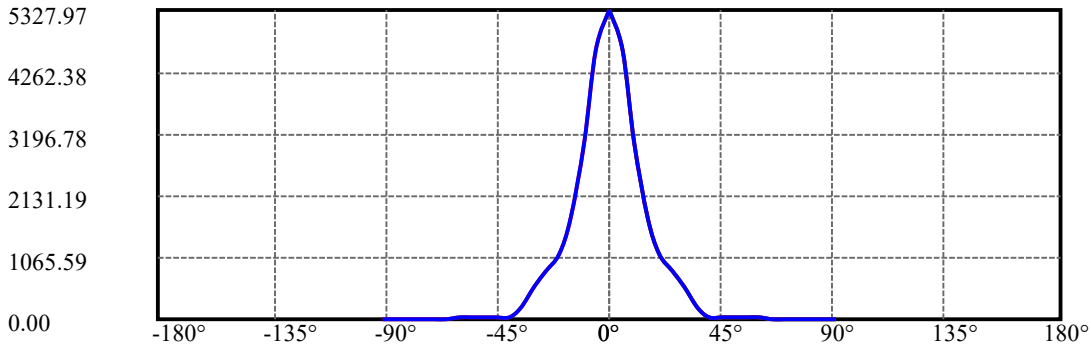
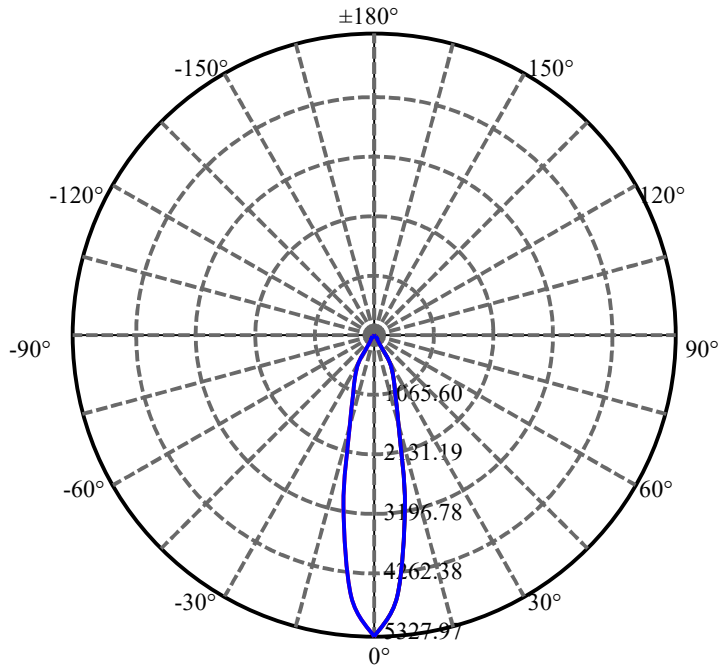
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5327.973	31.862	31.862	1.814%	2.140%
5.0	4637.235	221.536	253.398	12.616%	17.022%
10.0	3051.831	290.483	543.881	16.542%	36.536%
15.0	1766.209	250.569	794.45	14.269%	53.368%
20.0	1134.767	212.739	1007.19	12.115%	67.659%
25.0	811.752	188.045	1195.234	10.709%	80.291%
30.0	561.520	153.895	1349.13	8.764%	90.629%
35.0	198.919	62.540	1411.669	3.561%	94.830%
40.0	40.907	14.413	1426.082	.821%	95.798%
45.0	24.500	9.496	1435.578	.541%	96.436%
50.0	20.151	8.461	1444.04	.482%	97.005%
55.0	18.939	8.504	1452.543	.484%	97.576%
60.0	16.572	7.867	1460.41	.448%	98.104%
65.0	13.764	6.838	1467.248	.389%	98.564%
70.0	11.287	5.813	1473.061	.331%	98.954%
75.0	9.360	4.956	1478.017	.282%	99.287%
80.0	8.589	4.636	1482.653	.264%	99.599%
85.0	7.708	4.209	1486.862	.240%	99.881%
90.0	6.442	1.765	1488.628	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1349.13	76.83%	90.63%
0-40	1426.08	81.21%	95.80%
0-60	1460.41	83.17%	98.10%
0-90	1486.86	84.67%	99.88%
0-120	1486.86	84.67%	99.88%
0-180	1488.63	84.77%	100.00%
60-90	34.32	1.95%	2.31%
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%
0-24.88	1190.90	67.82%	80.00%

ZONAL LUMEN SUMMARY

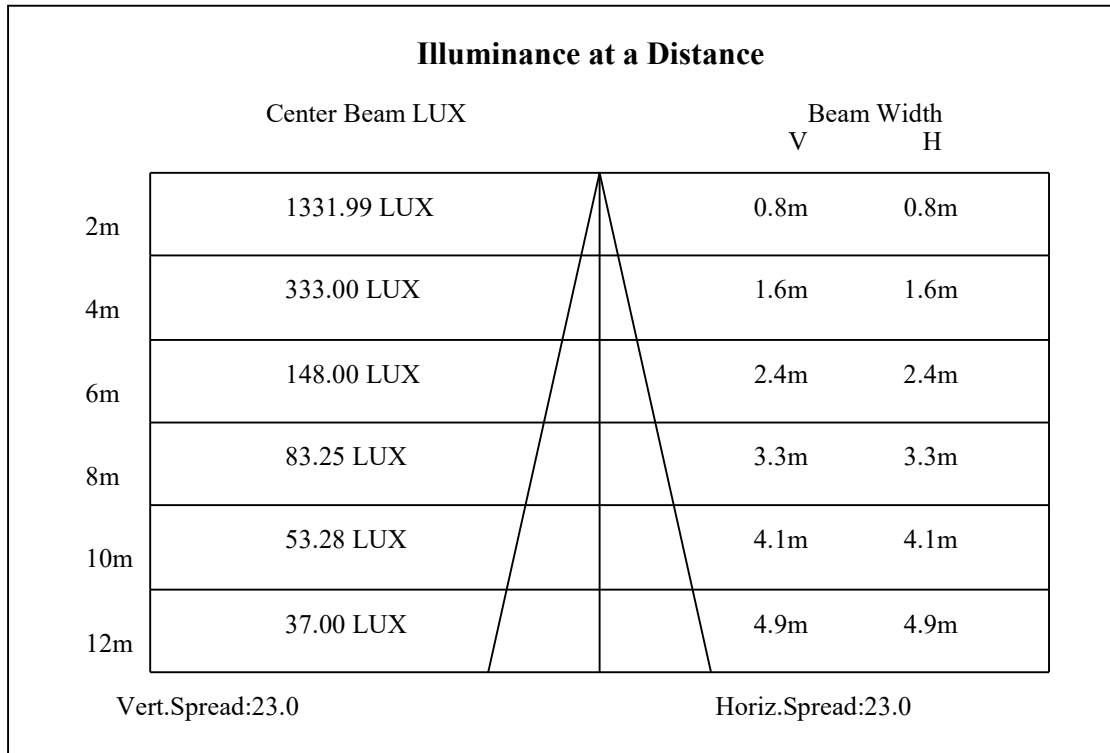
0-10	543.88
10-20	463.31
20-30	341.94
30-40	76.95
40-50	17.96
50-60	16.37
60-70	12.65
70-80	9.59
80-90	4.21
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

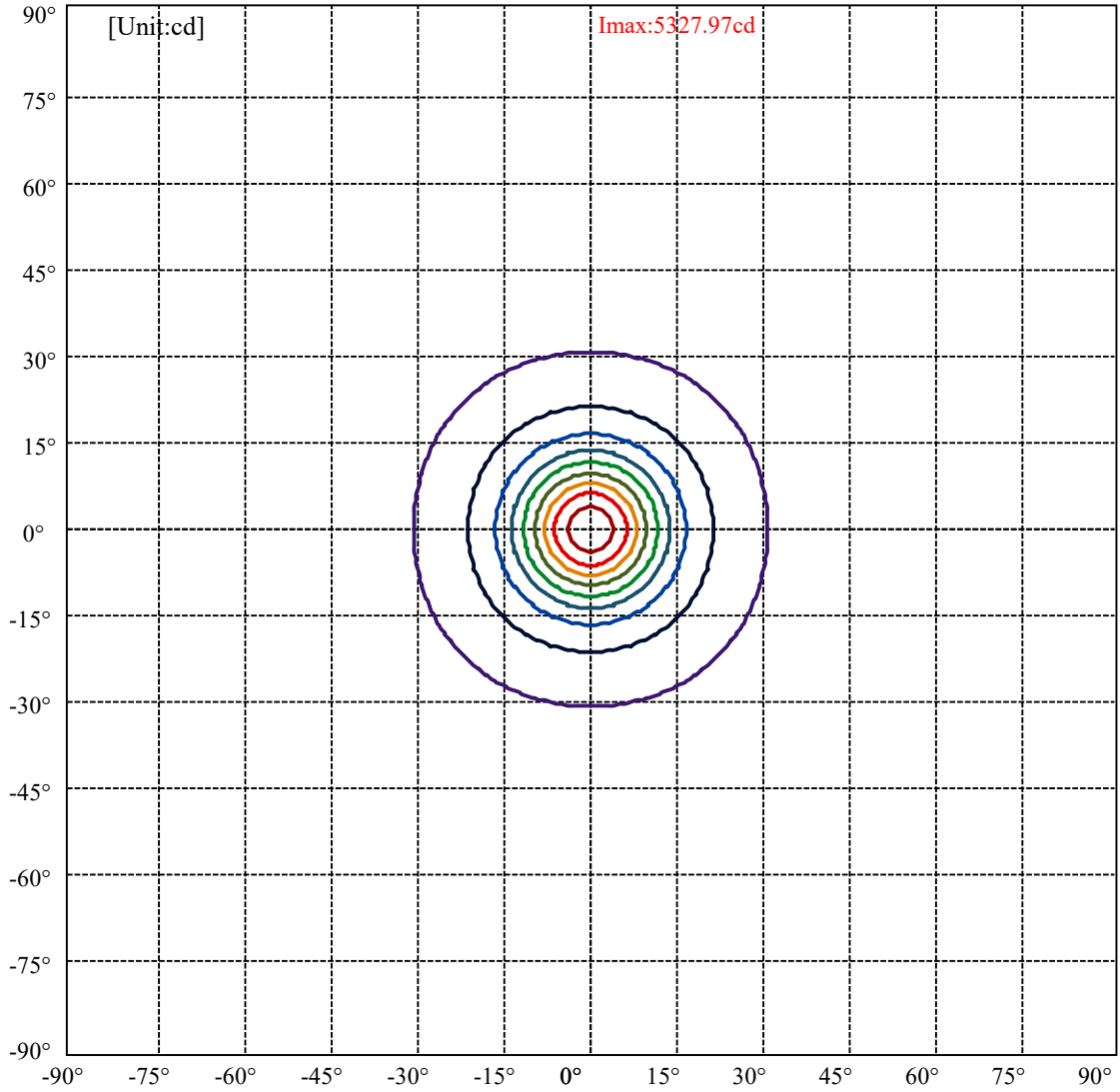


C0(Max): ———
 C0/C180: ———
 C90/C270: ———

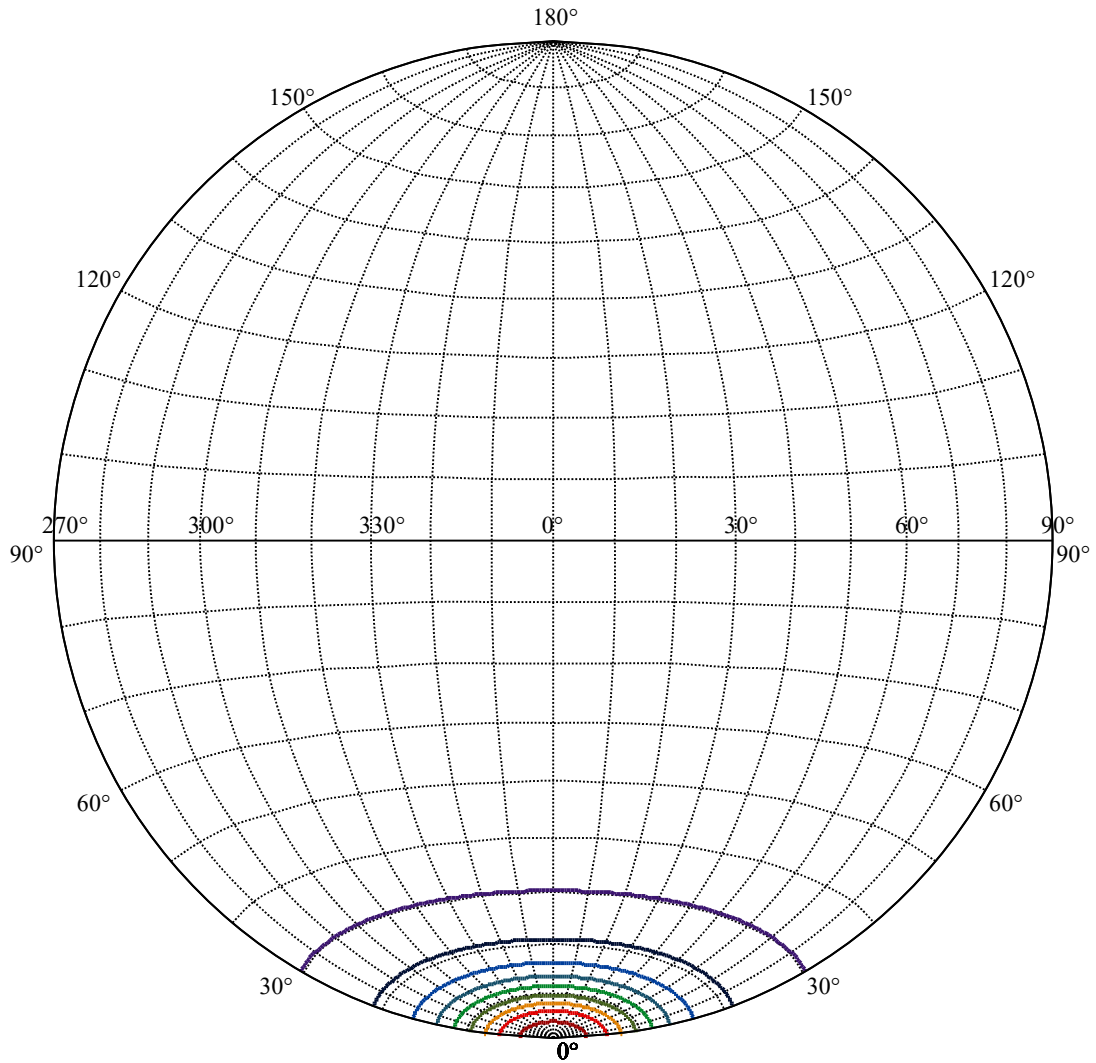
Field angle(10%Imax):C0/180Left:30.4 Right:30.4
 :C90/270Left:30.4 Right:30.4

Beam Angle(50%Imax):C0/180Left:11.5 Right:11.5
 :C90/270Left:11.5 Right:11.5





(10%Imax) 532.797	—
(20%Imax) 1065.59	—
(30%Imax) 1598.39	—
(40%Imax) 2131.19	—
(50%Imax) 2663.99	—
(60%Imax) 3196.78	—
(70%Imax) 3729.58	—
(80%Imax) 4262.38	—
(90%Imax) 4795.18	—



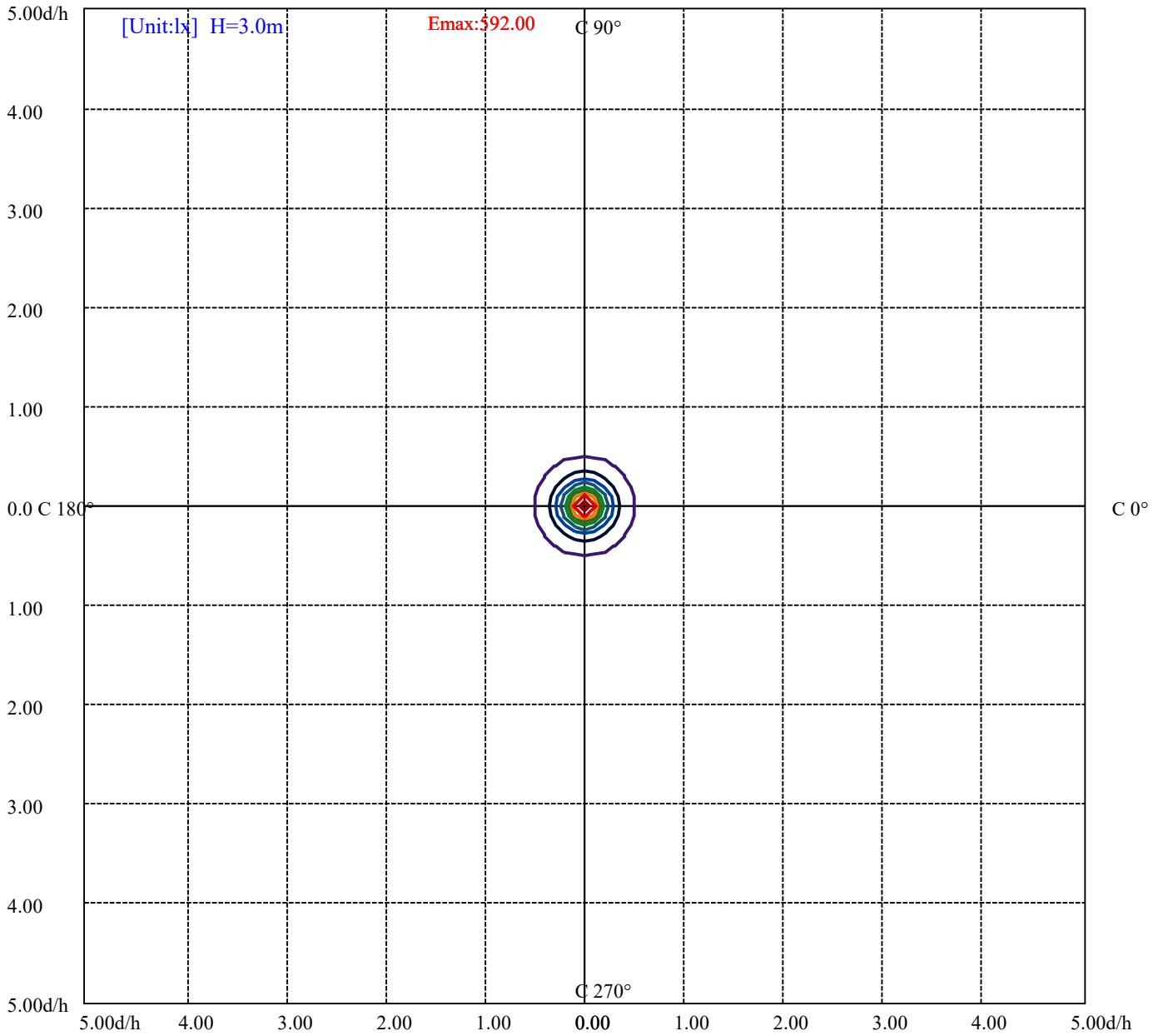
House

[Unit:cd]

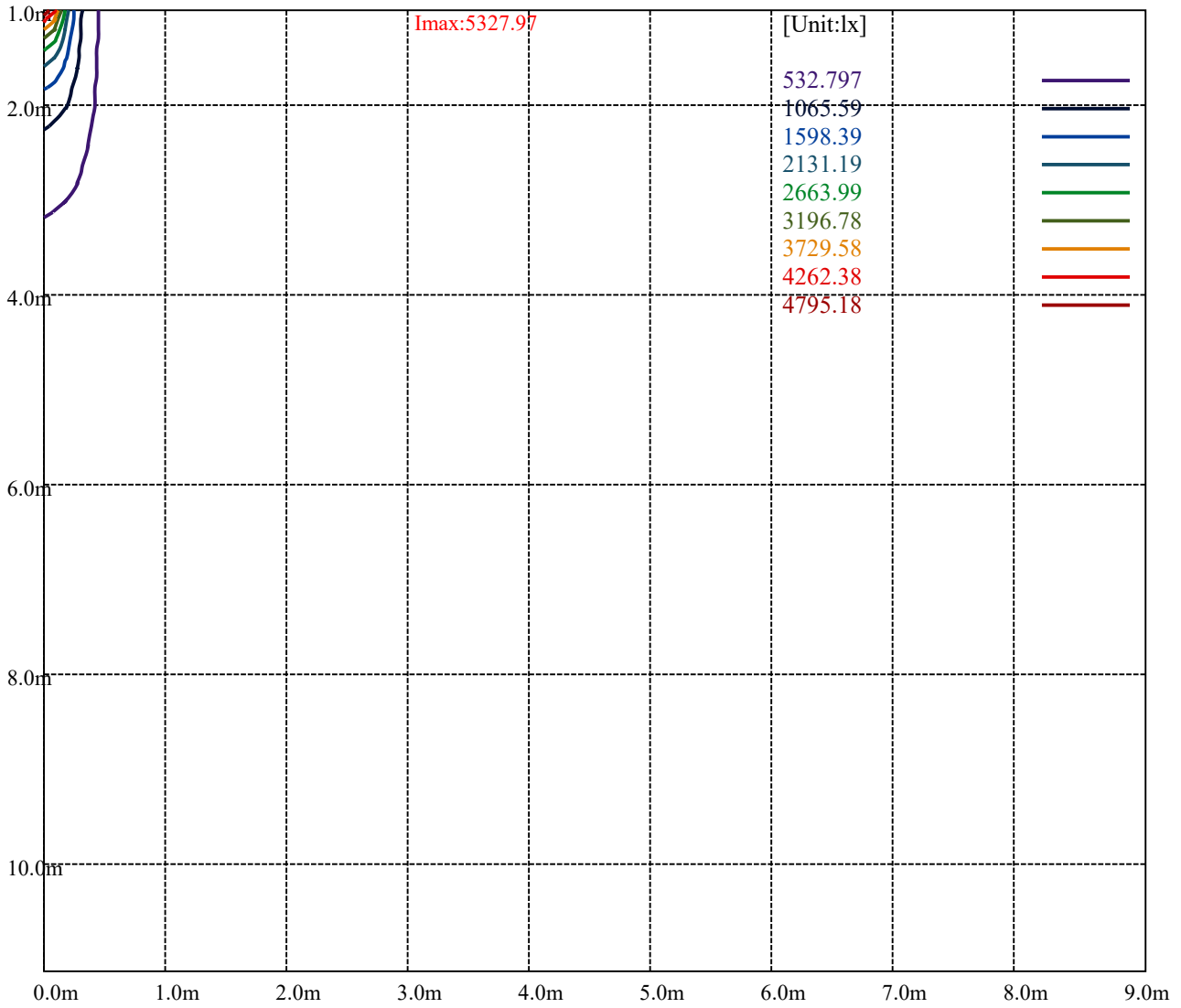
Road

Imax:5327.97

(10%Imax) 532.797	—
(20%Imax) 1065.59	—
(30%Imax) 1598.39	—
(40%Imax) 2131.19	—
(50%Imax) 2663.99	—
(60%Imax) 3196.78	—
(70%Imax) 3729.58	—
(80%Imax) 4262.38	—
(90%Imax) 4795.18	—



(10%Emax) 59.19944	—
(20%Emax) 118.3989	—
(30%Emax) 177.5989	—
(40%Emax) 236.7978	—
(50%Emax) 295.9978	—
(60%Emax) 355.1967	—
(70%Emax) 414.3967	—
(80%Emax) 473.5956	—
(90%Emax) 532.7956	—



Luminance Table

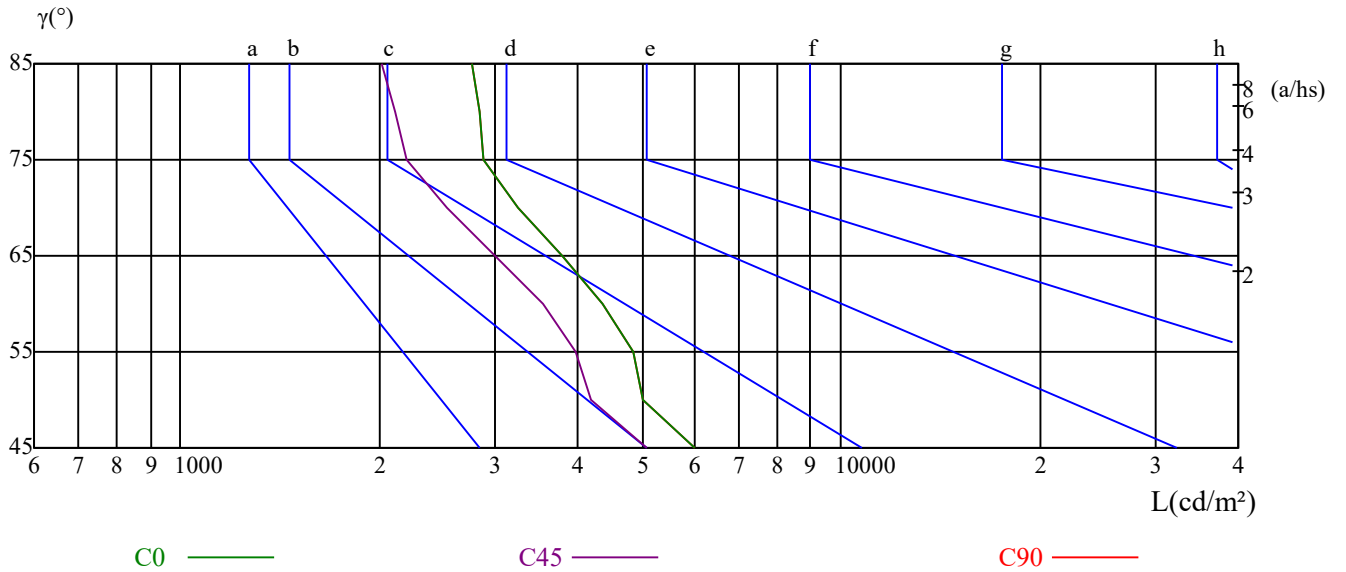
γ	45	50	55	60	65	70	75	80	85
C0	6018	5026	4834	4365	3775	3255	2868	2831	2771
C45	5098	4193	3971	3529	3000	2540	2194	2117	2020
C90	6018	5026	4834	4365	3775	3255	2868	2831	2771

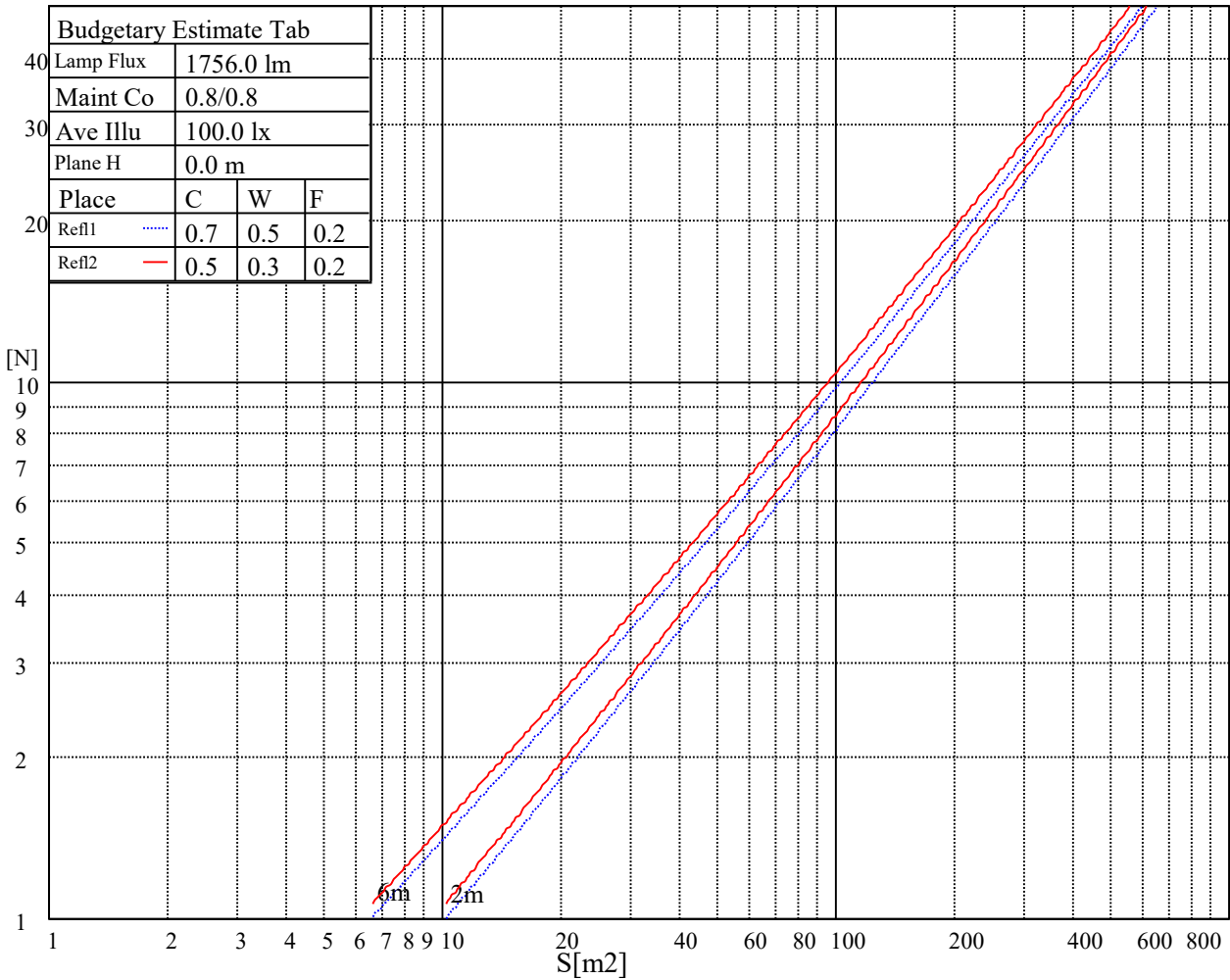
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10024	10024	10024	11130	11130	11130	27220	27220	27220

Glare Table

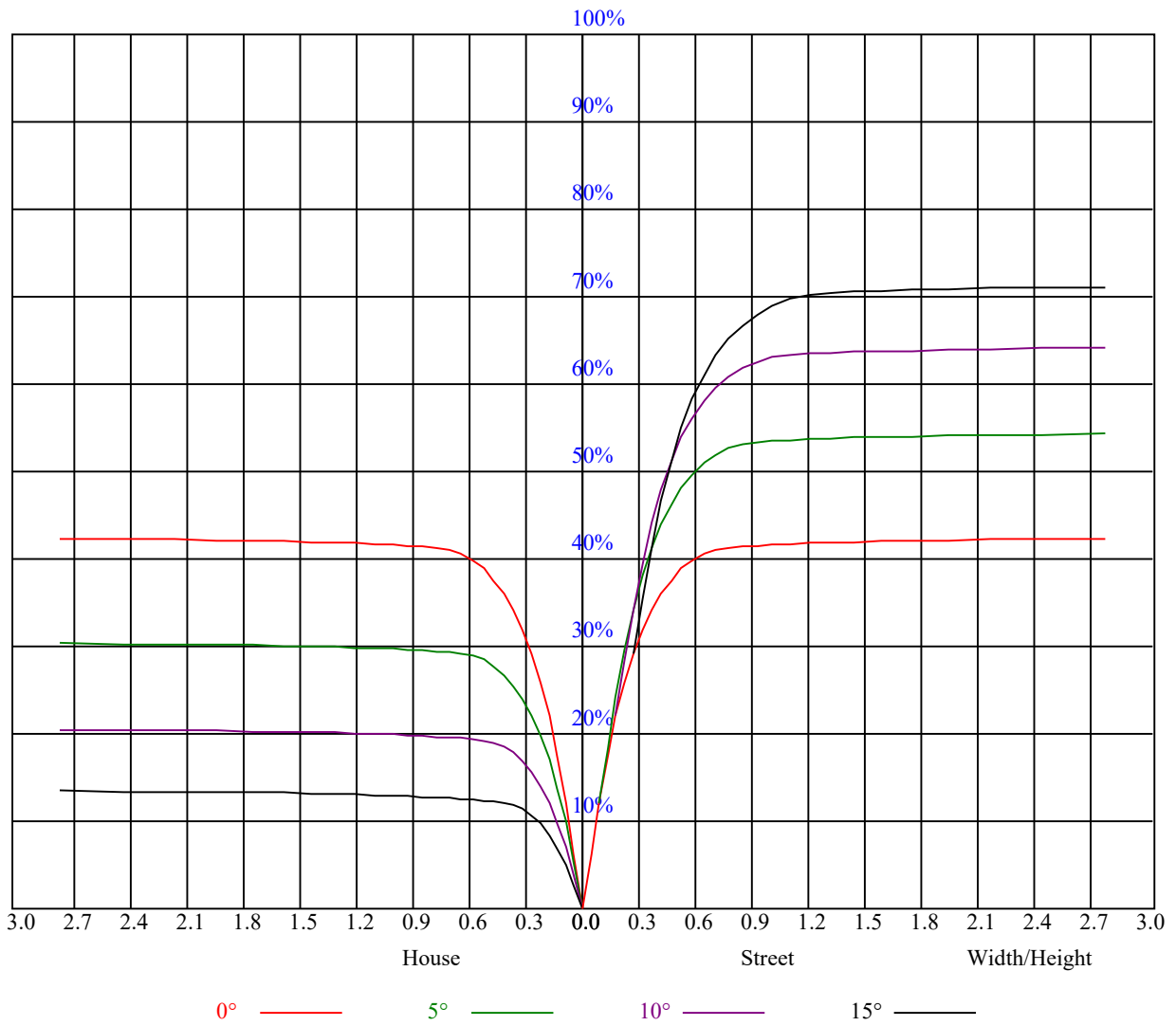
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.95	0.92	0.90	0.93	0.90	0.88	0.89	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.79
2	0.89	0.86	0.83	0.88	0.85	0.82	0.85	0.83	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.76
3	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
4	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.73	0.70	0.68	0.67
6	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63
8	0.70	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61
9	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57



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	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
45.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
90.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
135.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
180.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
225.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
270.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
315.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91
360.0	5327.97	4637.24	3051.83	1766.21	1134.77	811.75	561.52	198.92	40.91

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
45.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
90.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
135.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
180.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
225.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
270.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
315.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71
360.0	24.50	20.15	18.94	16.57	13.76	11.29	9.36	8.59	7.71

C/γ(°)	90.0
0.0	6.44
45.0	6.44
90.0	6.44
135.0	6.44
180.0	6.44
225.0	6.44
270.0	6.44
315.0	6.44
360.0	6.44