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Nata

LumCAT: 3-1965-E

Luminaire:

Report No: NATA0100

Voltage(V): 218.7000

Test No: 2017022305

Current(A): 0.1480

LampCAT: OSRAM PL-CORE-Z6-MINI -300Power (W): 30.8000

Lamp flux(lm): 2590.0

PF: 0.9500

Number of Lamps: 1

Ballast type:

Length(mm): 79

Width(mm): 79

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2366.87

Efficiency(%): 91.38%

Lumens(lm)/Power(W): 78.47

Central intensity(cd): 8724.926

Maximum intensity(cd): 8724.926

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.7

[C90/270]Total=23.7

Field angle(10%Imax): [C0/180]Total=59.5

[C90/270]Total=59.5

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.42 C90_270=0.42

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.31%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.629%

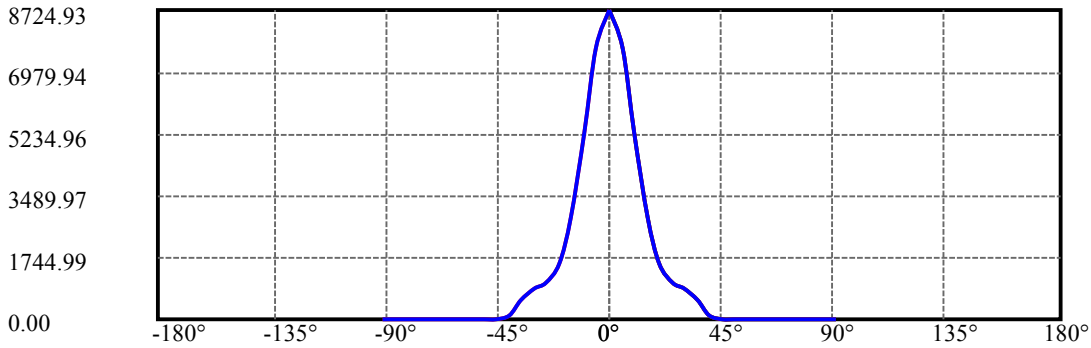
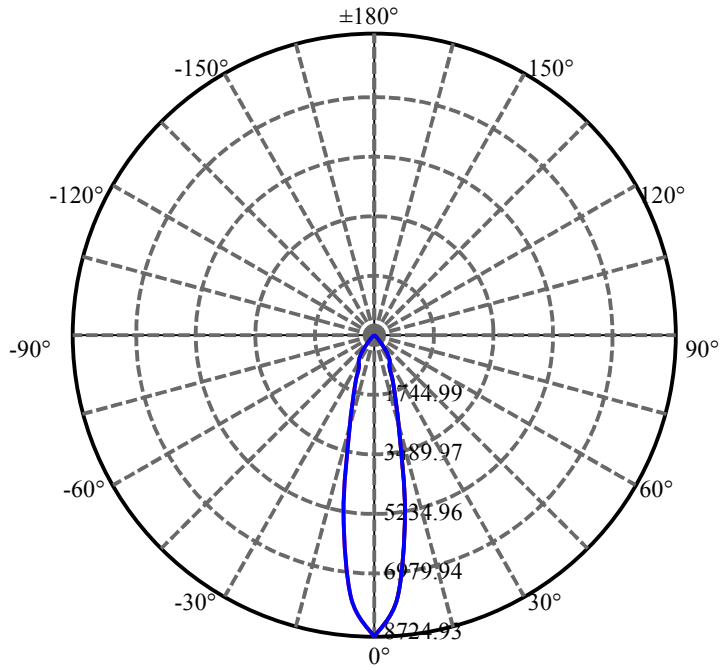
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8724.925	52.177	52.177	2.015%	2.204%
5.0	7656.074	365.756	417.933	14.122%	17.658%
10.0	5265.250	501.163	919.095	19.350%	38.832%
15.0	2854.812	405.008	1324.103	15.637%	55.943%
20.0	1545.688	289.776	1613.879	11.188%	68.186%
25.0	1051.653	243.618	1857.498	9.406%	78.479%
30.0	862.190	236.299	2093.797	9.124%	88.463%
35.0	550.564	173.097	2266.894	6.683%	95.776%
40.0	131.062	46.178	2313.072	1.783%	97.727%
45.0	17.515	6.789	2319.86	.262%	98.014%
50.0	12.050	5.060	2324.92	.195%	98.228%
55.0	11.438	5.136	2330.056	.198%	98.445%
60.0	11.108	5.273	2335.329	.204%	98.667%
65.0	10.867	5.398	2340.727	.208%	98.896%
70.0	10.667	5.494	2346.221	.212%	99.128%
75.0	11.025	5.837	2352.059	.225%	99.374%
80.0	12.408	6.698	2358.757	.259%	99.657%
85.0	10.137	5.535	2364.292	.214%	99.891%
90.0	9.401	2.576	2366.869	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2093.80	80.84%	88.46%
0-40	2313.07	89.31%	97.73%
0-60	2335.33	90.17%	98.67%
0-90	2364.29	91.29%	99.89%
0-120	2364.29	91.29%	99.89%
0-180	2366.87	91.38%	100.00%
60-90	34.24	1.32%	1.45%
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%
0-25.76	1893.50	73.11%	80.00%

ZONAL LUMEN SUMMARY

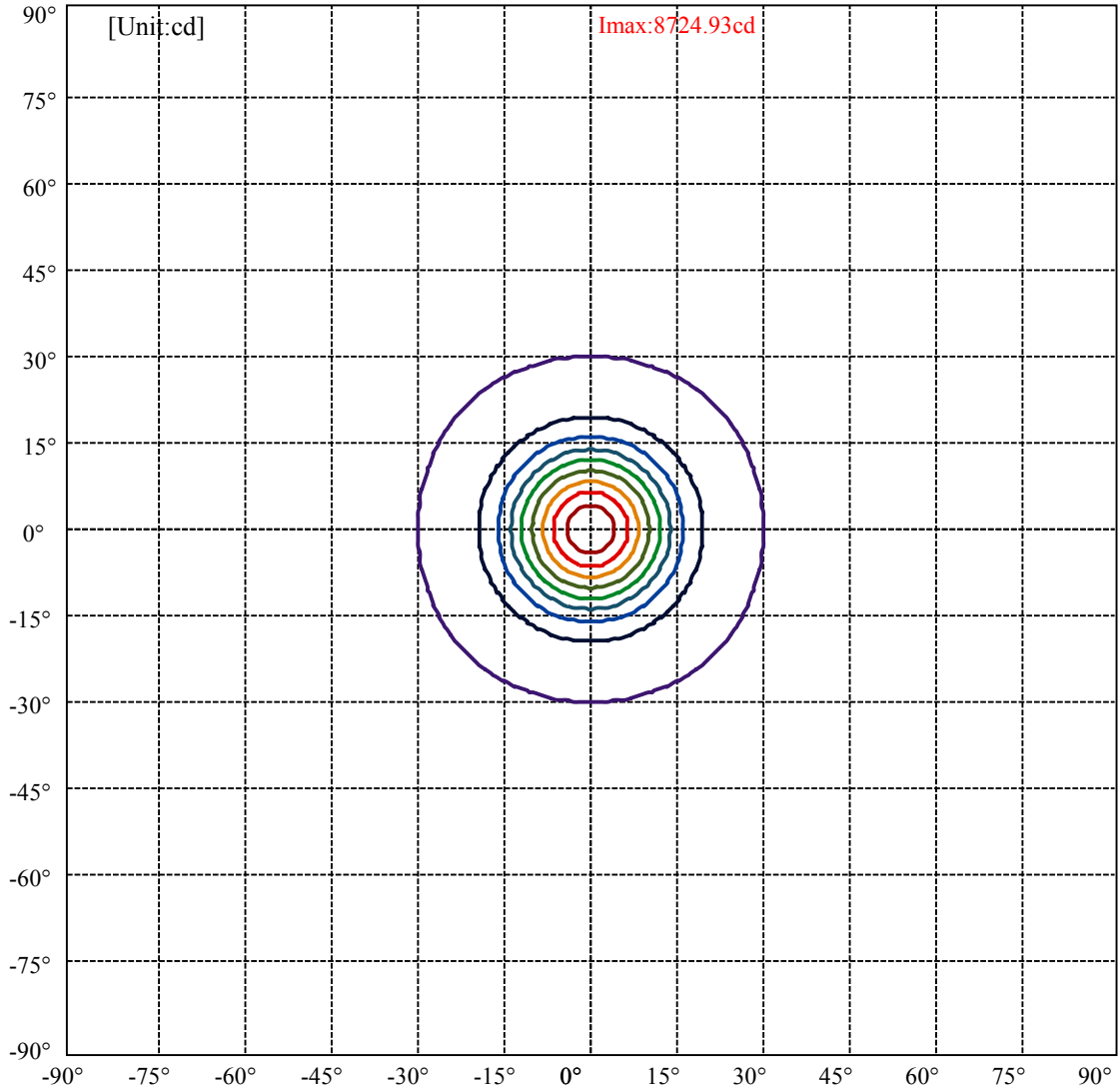
0-10	919.10
10-20	694.78
20-30	479.92
30-40	219.27
40-50	11.85
50-60	10.41
60-70	10.89
70-80	12.54
80-90	5.54
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



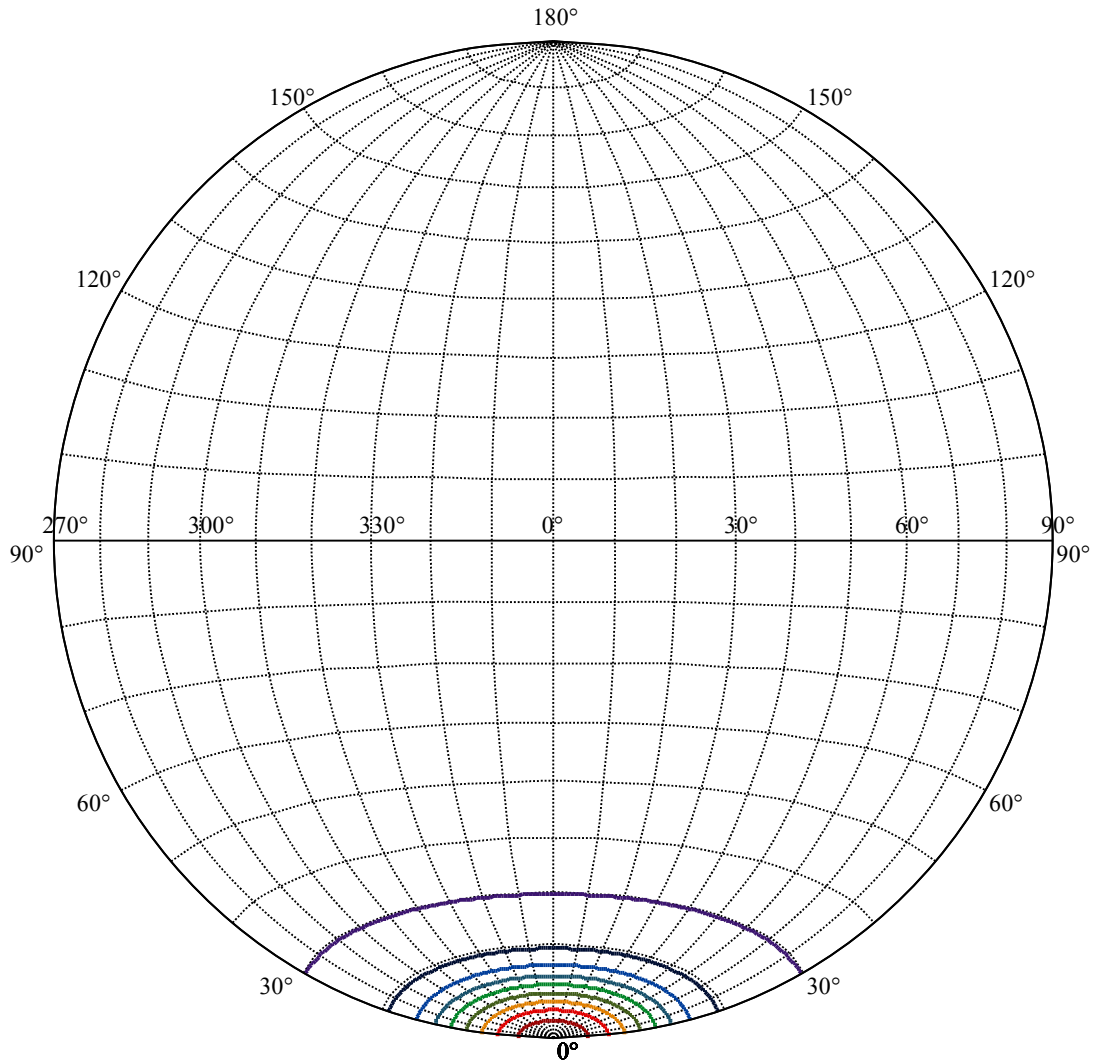
C0(Max): ———
C0/C180: ———
C90/C270: ———

Field angle(10%Imax):C0/180Left:29.7 Right:29.7
:C90/270Left:29.7 Right:29.7

Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9
:C90/270Left:11.9 Right:11.9



(10%Imax) 872.493	—
(20%Imax) 1744.99	—
(30%Imax) 2617.48	—
(40%Imax) 3489.97	—
(50%Imax) 4362.46	—
(60%Imax) 5234.96	—
(70%Imax) 6107.45	—
(80%Imax) 6979.94	—
(90%Imax) 7852.43	—



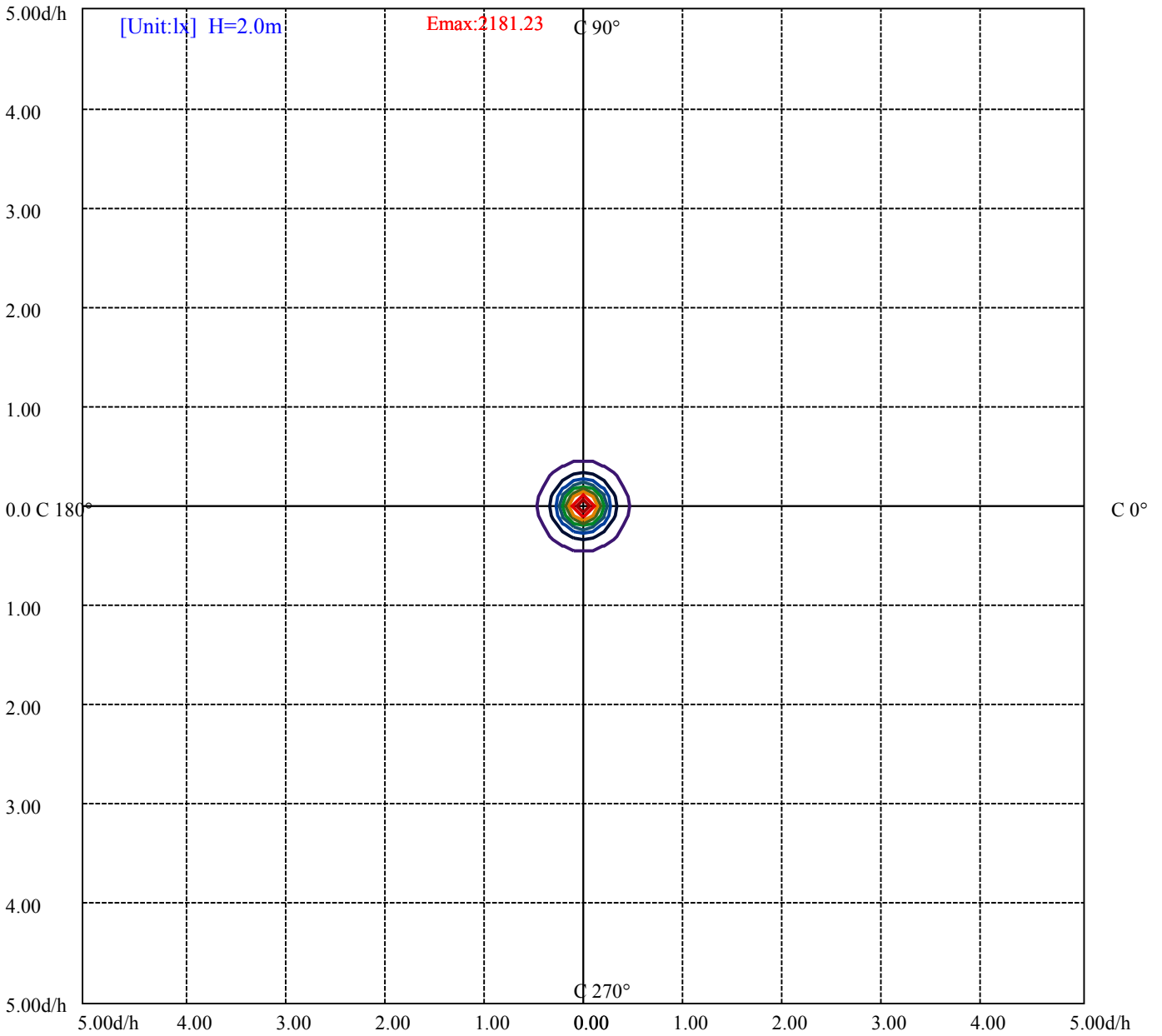
House

[Unit:cd]

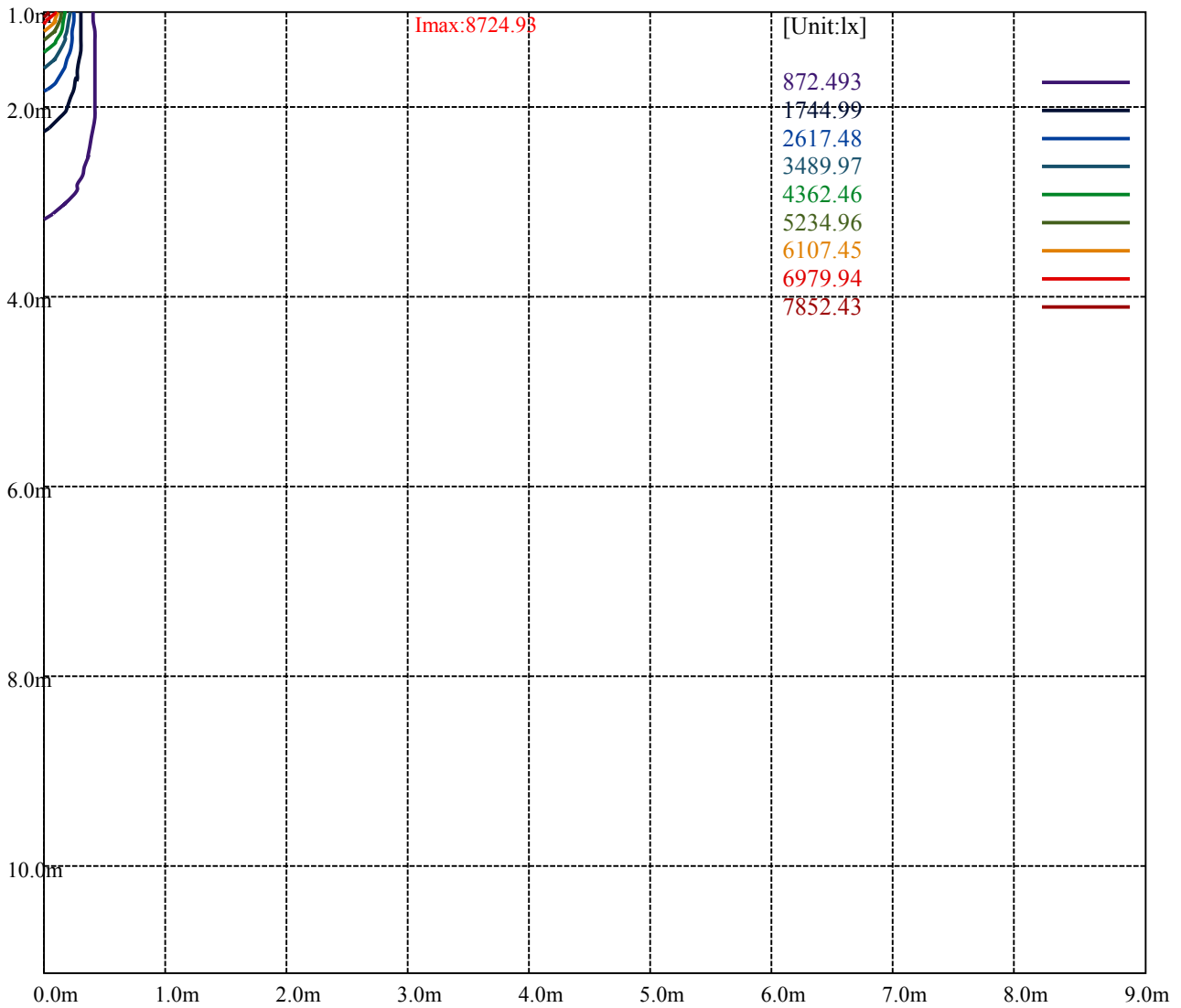
Road

Imax:8724.93

(10%Imax)	872.493	—
(20%Imax)	1744.99	—
(30%Imax)	2617.48	—
(40%Imax)	3489.97	—
(50%Imax)	4362.46	—
(60%Imax)	5234.96	—
(70%Imax)	6107.45	—
(80%Imax)	6979.94	—
(90%Imax)	7852.43	—



- (10%Emax) 218.1223
- (20%Emax) 436.245
- (30%Emax) 654.3675
- (40%Emax) 872.49
- (50%Emax) 1090.613
- (60%Emax) 1308.735
- (70%Emax) 1526.858
- (80%Emax) 1744.98
- (90%Emax) 1963.1



Luminance Table

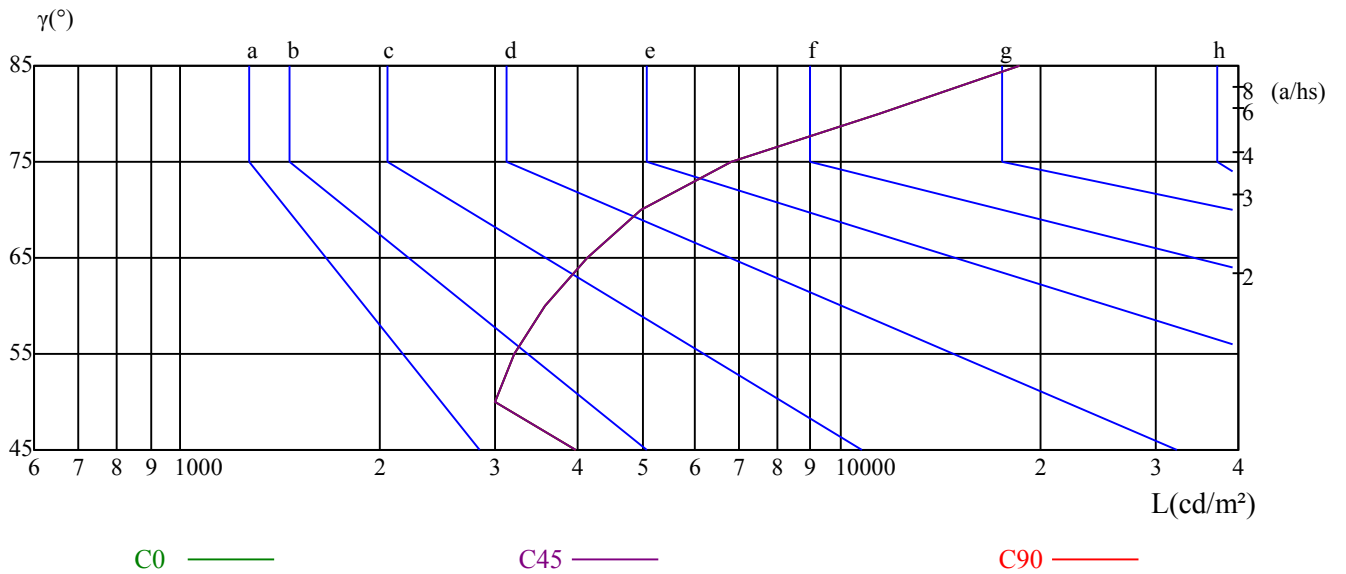
γ	45	50	55	60	65	70	75	80	85
C0	3969	3004	3195	3560	4120	4997	6825	11450	18637
C45	3969	3004	3195	3560	4120	4997	6825	11450	18637
C90	3969	3004	3195	3560	4120	4997	6825	11450	18637

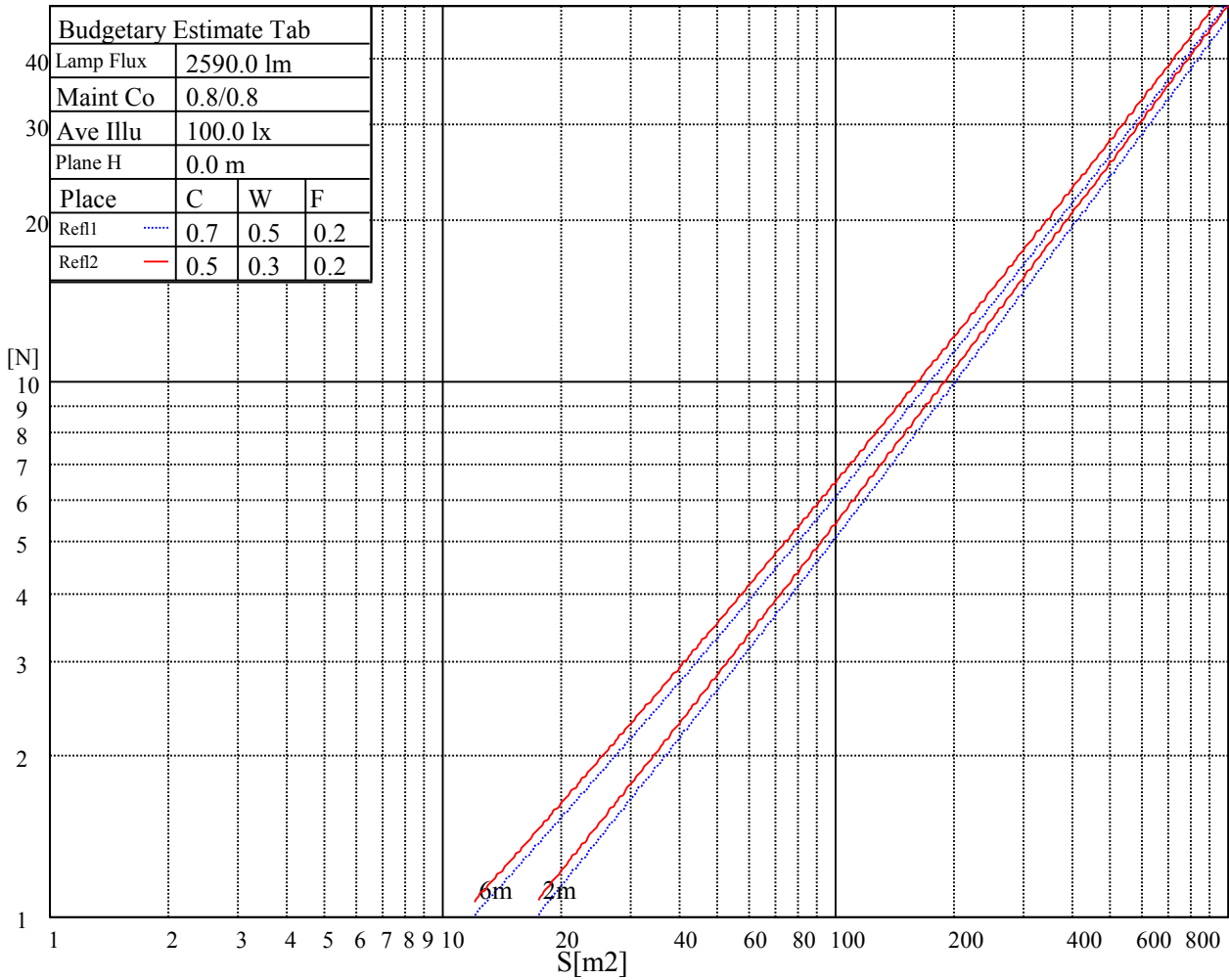
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4120	4120	4120	6825	6825	6825	18637	18637	18637

Glare Table

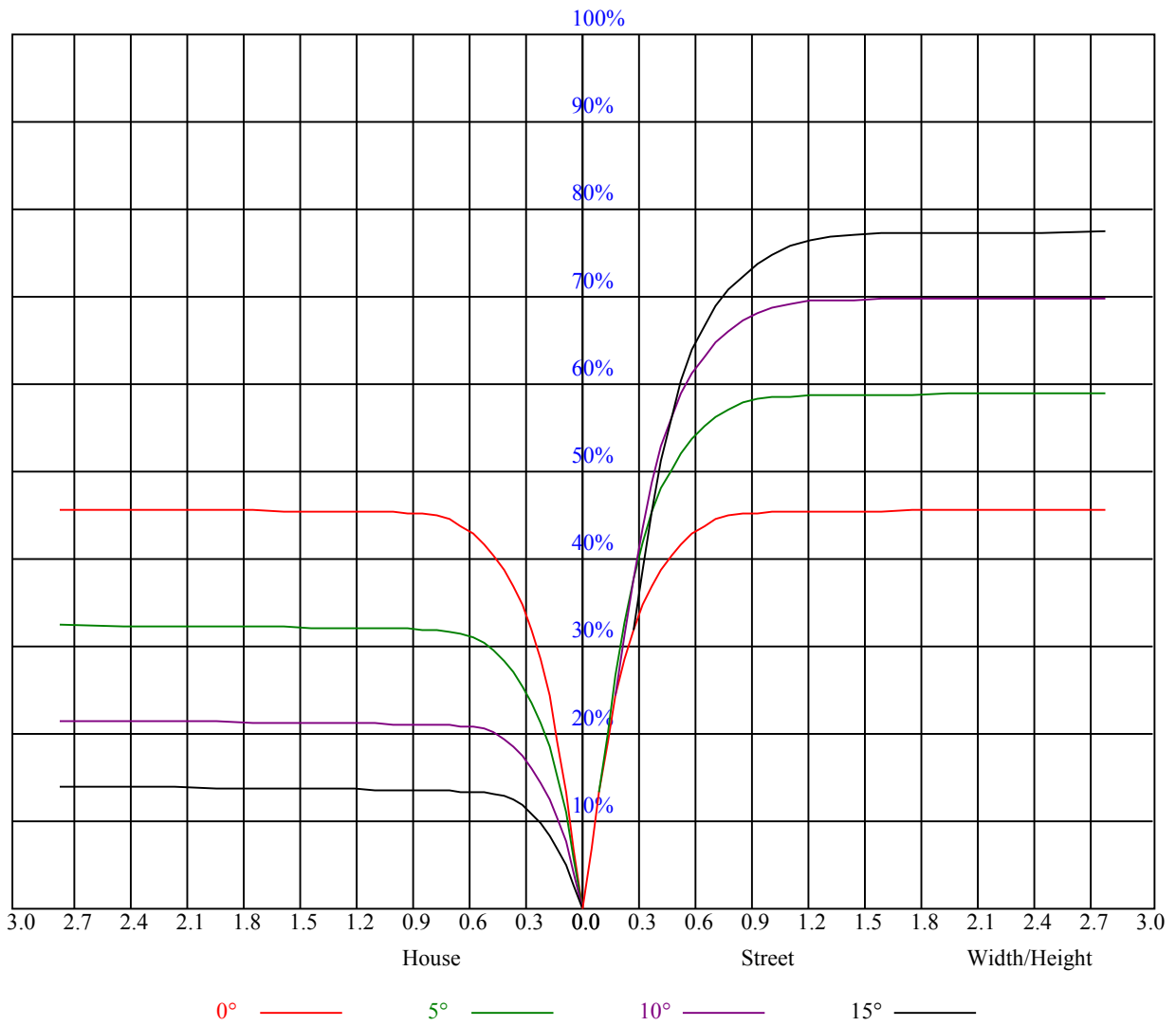
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	0.99	0.97	1.00	0.98	0.96	0.96	0.94	0.93	0.93	0.91	0.90	0.90	0.88	0.87	0.85
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.82
3	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.79
4	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.82	0.79	0.77	0.76
5	0.84	0.80	0.77	0.84	0.79	0.76	0.82	0.78	0.76	0.81	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.74	0.71	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.68
8	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.73	0.69	0.67	0.66
9	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.71	0.67	0.65	0.64
10	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.66	0.63	0.62



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	8687.90	8494.10	6311.67	3570.41	1882.38	1194.72	913.94	730.60	283.54
45.0	8886.10	7377.01	4854.32	2589.30	1430.37	982.76	813.73	449.81	23.89
90.0	8500.16	6308.91	3900.75	1950.10	1087.03	926.43	745.13	233.33	16.13
135.0	8825.54	6959.68	4348.91	2150.50	1265.75	959.63	819.79	352.36	23.84
180.0	8687.90	6850.12	4154.56	2075.08	1095.24	946.86	825.30	367.61	32.15
225.0	8886.10	8028.87	5614.10	2959.83	1667.11	1063.52	906.56	694.87	157.68
270.0	8500.16	8749.56	6653.02	3966.26	2095.45	1254.18	951.37	823.09	296.20
315.0	8825.54	8480.34	6284.69	3577.01	1842.19	1085.11	921.70	752.84	215.05
360.0	8687.90	8494.10	6311.67	3570.41	1882.38	1194.72	913.94	730.60	283.54

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.77	13.05	12.28	11.84	11.73	11.56	11.40	18.44	11.56
45.0	12.72	12.00	11.56	11.40	11.23	11.01	11.67	12.17	9.41
90.0	11.62	11.12	10.74	10.57	10.24	9.86	10.46	10.52	9.30
135.0	12.39	11.67	11.29	10.96	10.74	10.63	12.50	12.88	9.47
180.0	12.77	11.89	11.29	10.90	10.68	10.52	11.18	10.52	9.63
225.0	14.70	12.11	11.34	10.90	10.57	10.41	10.13	9.97	9.69
270.0	31.22	12.06	11.29	10.85	10.52	10.24	9.91	9.74	9.74
315.0	25.93	12.50	11.73	11.45	11.23	11.12	10.96	15.03	12.28
360.0	18.77	13.05	12.28	11.84	11.73	11.56	11.40	18.44	11.56

C/γ(°)	90.0
0.0	9.52
45.0	9.30
90.0	9.36
135.0	9.41
180.0	9.47
225.0	9.30
270.0	9.36
315.0	9.47
360.0	9.52