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Nata

LumCAT: 3-2384-M
Luminaire: 92.70.131.00
Report No: NATA0100
Test No: GC2019092323
LampCAT: OSRAM OPTO SOLERIQ S15 LES14.7
Lamp flux(lm): 1871.0
Number of Lamps: 1
Length(mm): 74
Phm Type: C

Voltage(V): 34.9000
Current(A): 0.5000
Power (W): 17.4500
PF: 0.0000
Ballast type: DC
Width(mm): 74
Height(mm): 0

Photometric Results

Lumens(lm): 1817.14
Efficiency(%): 97.12%
Lumens(lm)/Power(W): 104.13
Central intensity(cd): 4472.438
Maximum intensity(cd): 4472.438
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.1
 [C90/270]Total=34.1
Field angle(10%Imax): [C0/180]Total=65.4
 [C90/270]Total=65.4
Maximum s/h(1/2): C0_180=0.57 C90_270=0.57
Maximum s/h(1/4): C0_180=0.55 C90_270=0.55
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 97.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.290%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/9/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

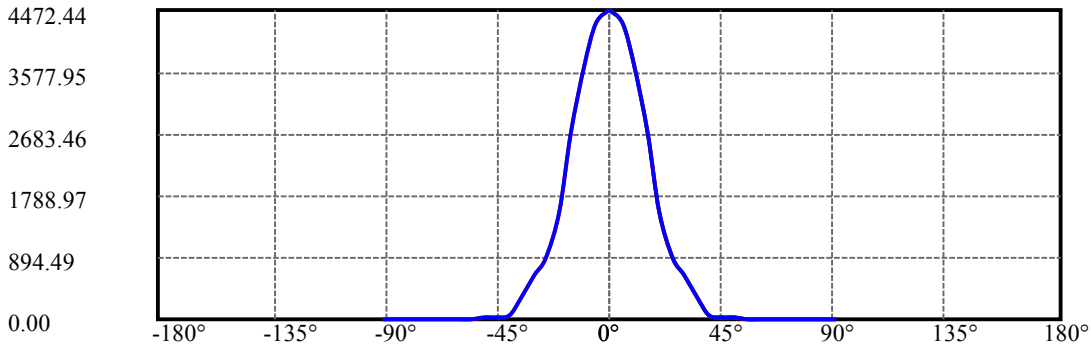
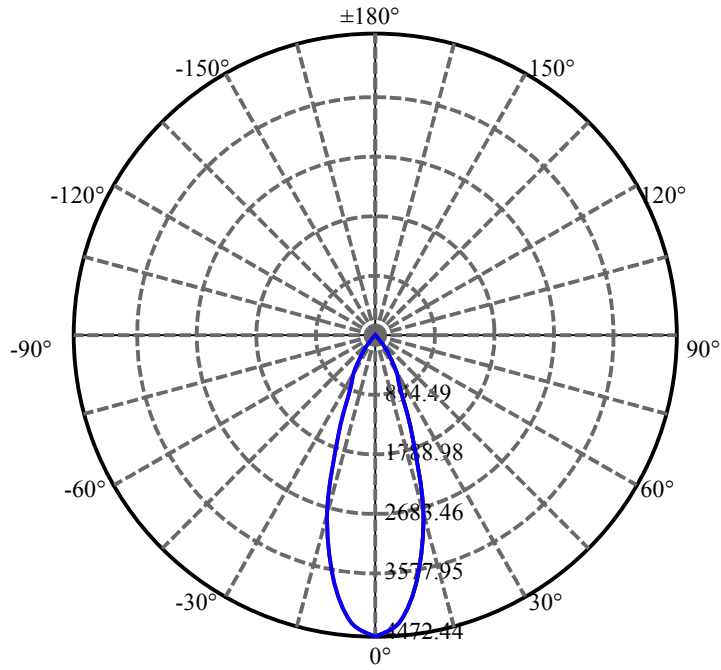
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4472.438	0.000	0	.000%	.000%
5.0	4267.055	104.478	104.478	5.584%	5.750%
10.0	3658.781	283.532	388.01	15.154%	21.353%
15.0	2696.625	376.998	765.009	20.150%	42.100%
20.0	1560.895	350.879	1115.888	18.754%	61.409%
25.0	884.897	256.518	1372.407	13.710%	75.526%
30.0	629.367	191.631	1564.038	10.242%	86.072%
35.0	293.330	135.874	1699.912	7.262%	93.549%
40.0	43.727	56.235	1756.147	3.006%	96.644%
45.0	19.463	11.700	1767.847	.625%	97.288%
50.0	14.632	6.889	1774.736	.368%	97.667%
55.0	12.347	5.866	1780.603	.314%	97.989%
60.0	11.313	5.469	1786.072	.292%	98.290%
65.0	10.814	5.379	1791.451	.288%	98.586%
70.0	10.434	5.380	1796.831	.288%	98.883%
75.0	9.907	5.317	1802.148	.284%	99.175%
80.0	9.429	5.174	1807.322	.277%	99.460%
85.0	9.098	5.034	1812.356	.269%	99.737%
90.0	8.360	4.780	1817.136	.255%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1564.04	83.59%	86.07%
0-40	1756.15	93.86%	96.64%
0-60	1786.07	95.46%	98.29%
0-90	1812.36	96.87%	99.74%
0-120	1812.36	96.87%	99.74%
0-180	1817.14	97.12%	100.00%
60-90	31.75	1.70%	1.75%
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%
0-27.12	1453.71	77.70%	80.00%

ZONAL LUMEN SUMMARY

0-10	388.01
10-20	727.88
20-30	448.15
30-40	192.11
40-50	18.59
50-60	11.34
60-70	10.76
70-80	10.49
80-90	5.03
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: —————

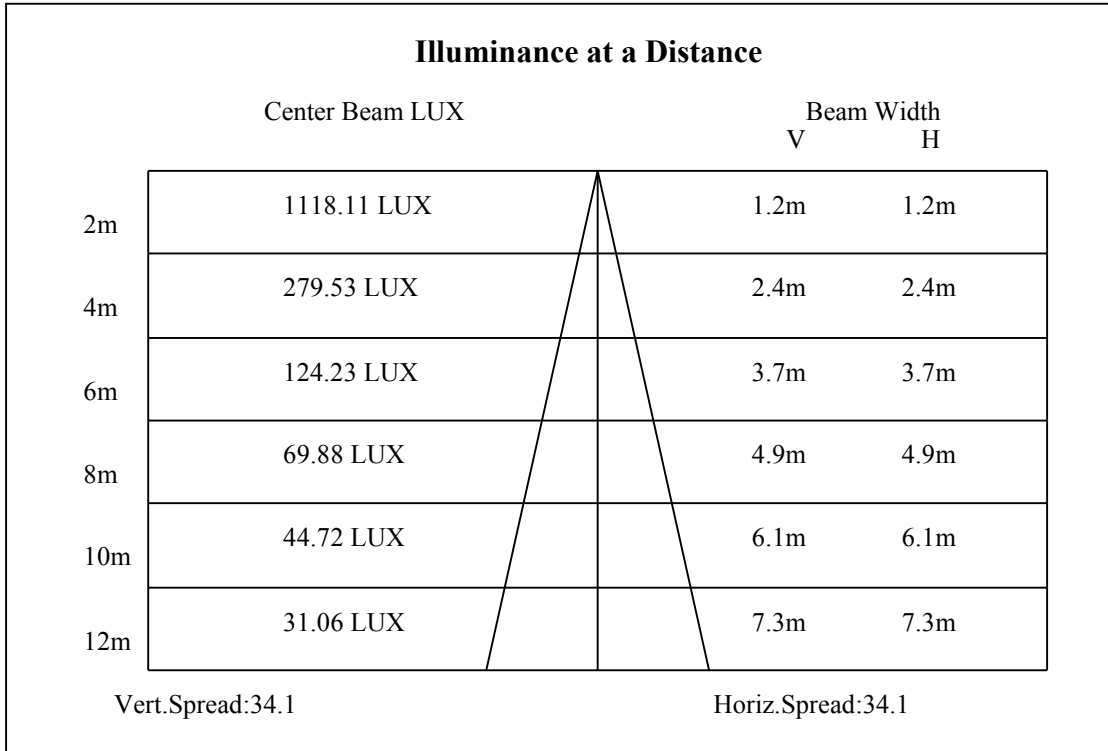
C90/C270: —————

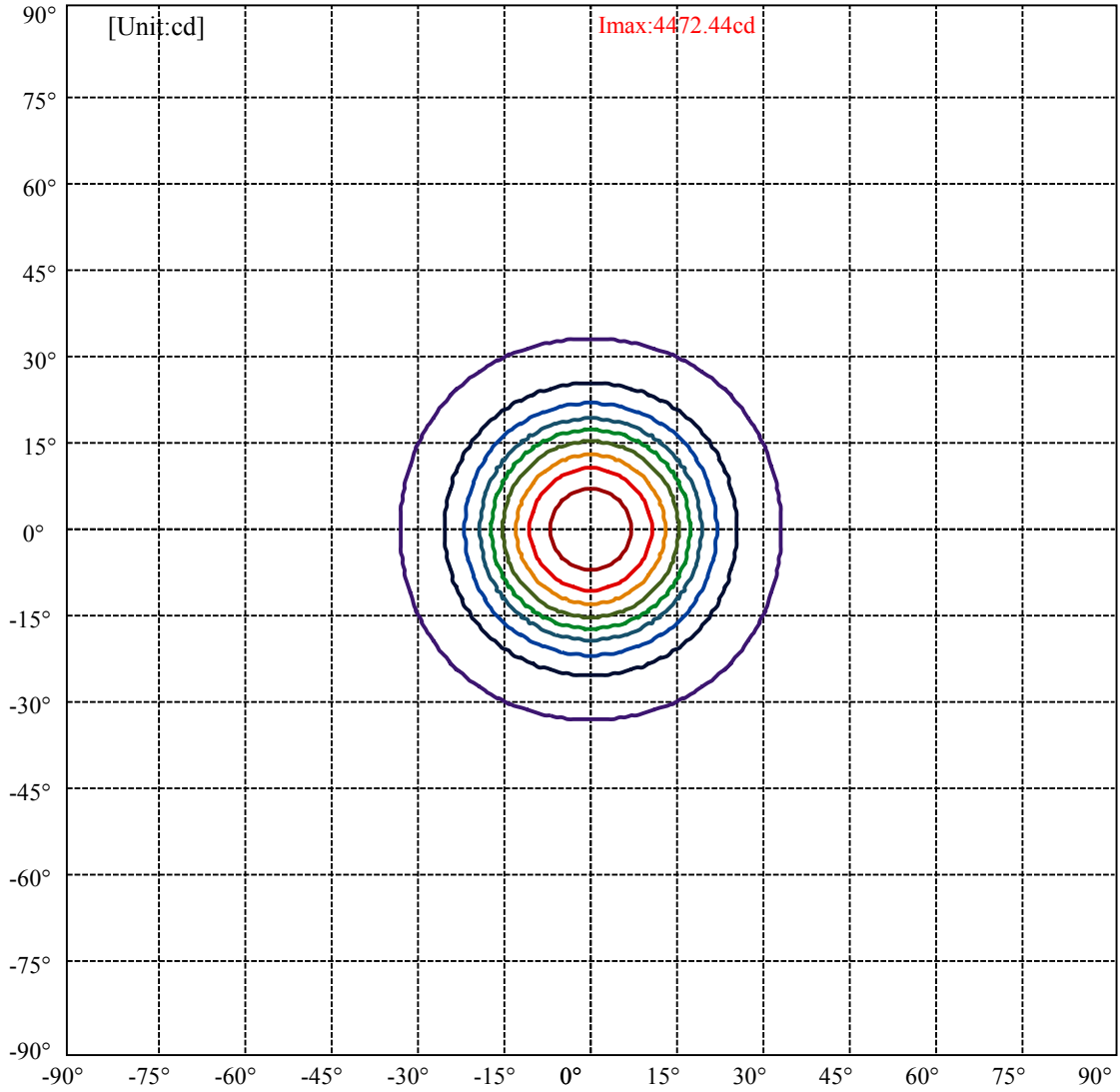
Field angle(10%Imax):C0/180Left:32.7 Right:32.7

:C90/270Left:32.7 Right:32.7

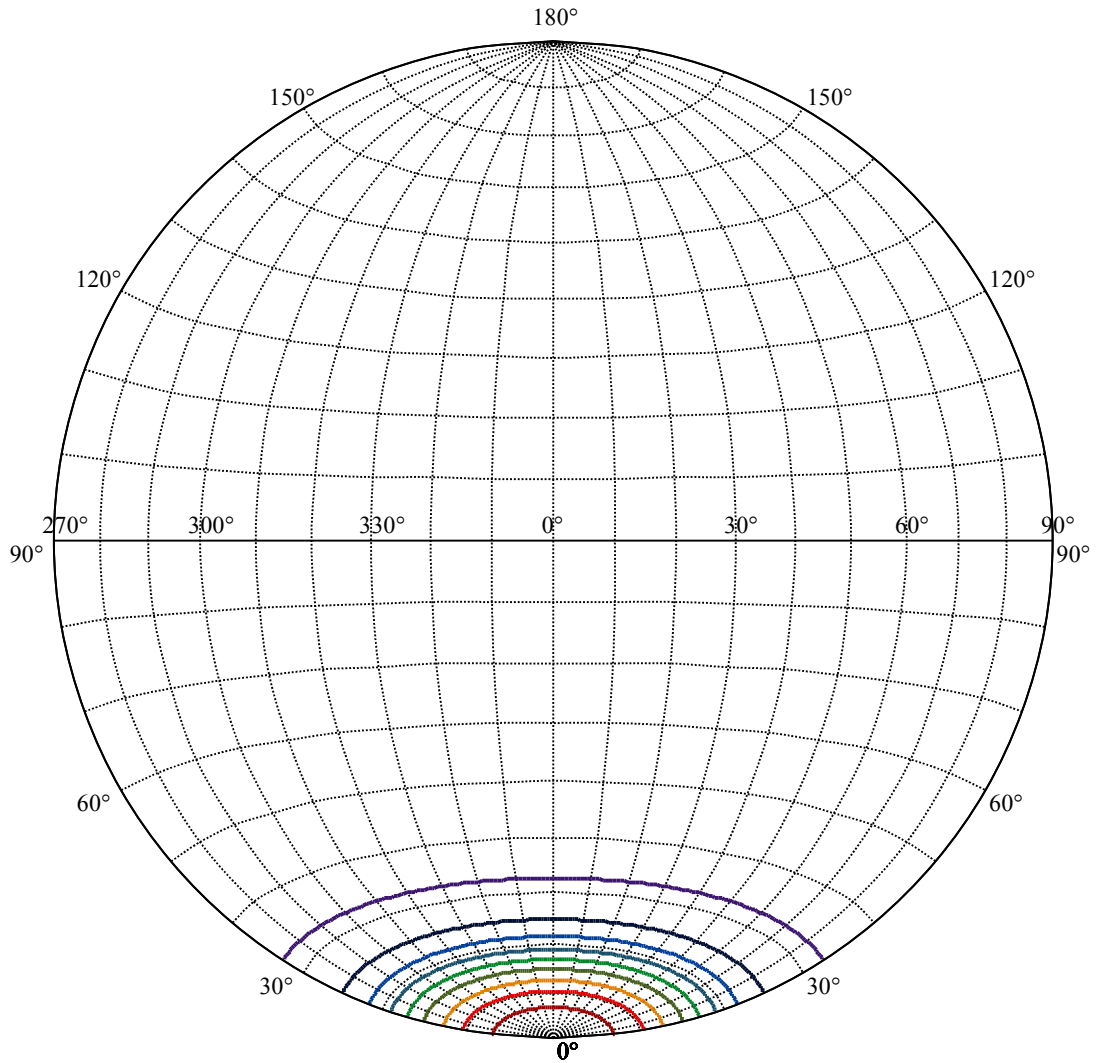
Beam Angle(50%Imax):C0/180Left:17.0 Right:17.0

:C90/270Left:17.0 Right:17.0





(10%Imax) 447.244	—
(20%Imax) 894.487	—
(30%Imax) 1341.73	—
(40%Imax) 1788.97	—
(50%Imax) 2236.22	—
(60%Imax) 2683.46	—
(70%Imax) 3130.71	—
(80%Imax) 3577.95	—
(90%Imax) 4025.19	—



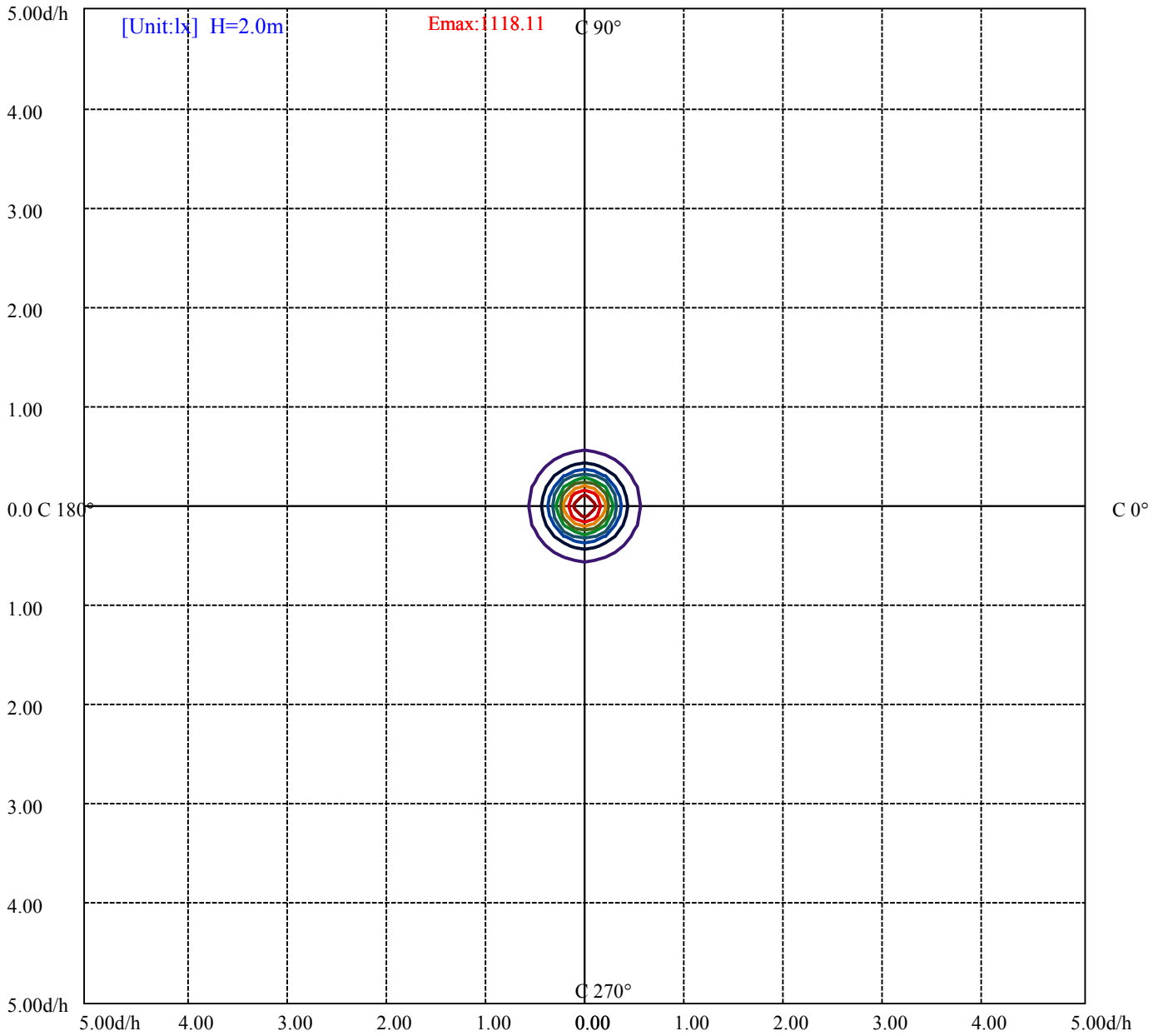
House

[Unit:cd]

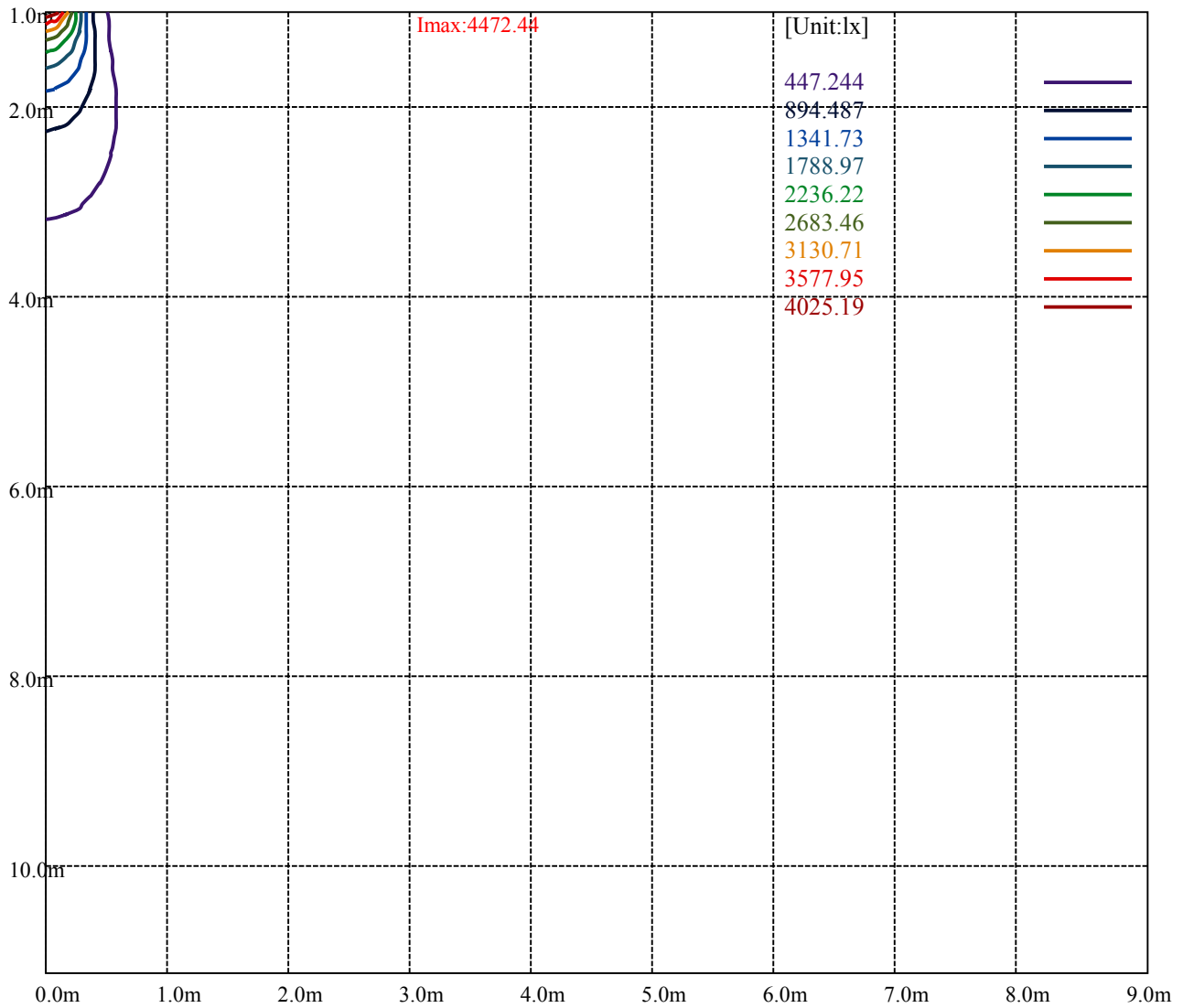
Road

Imax:4472.44

(10%Imax) 447.244	—
(20%Imax) 894.487	—
(30%Imax) 1341.73	—
(40%Imax) 1788.97	—
(50%Imax) 2236.22	—
(60%Imax) 2683.46	—
(70%Imax) 3130.71	—
(80%Imax) 3577.95	—
(90%Imax) 4025.19	—



- (10%Emax) 111.8108
- (20%Emax) 223.6215
- (30%Emax) 335.4325
- (40%Emax) 447.2425
- (50%Emax) 559.055
- (60%Emax) 670.865
- (70%Emax) 782.675
- (80%Emax) 894.485
- (90%Emax) 1006.297



Luminance Table

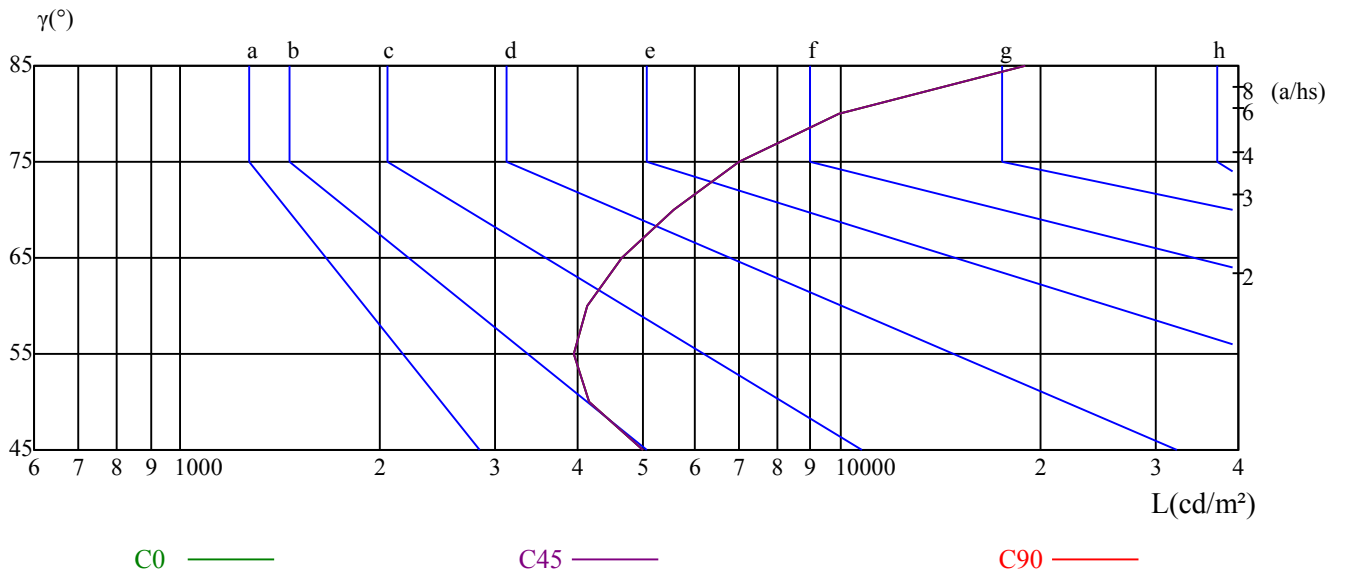
γ	45	50	55	60	65	70	75	80	85
C0	5026	4157	3931	4132	4673	5571	6990	9916	19064
C45	5026	4157	3931	4132	4673	5571	6990	9916	19064
C90	5026	4157	3931	4132	4673	5571	6990	9916	19064

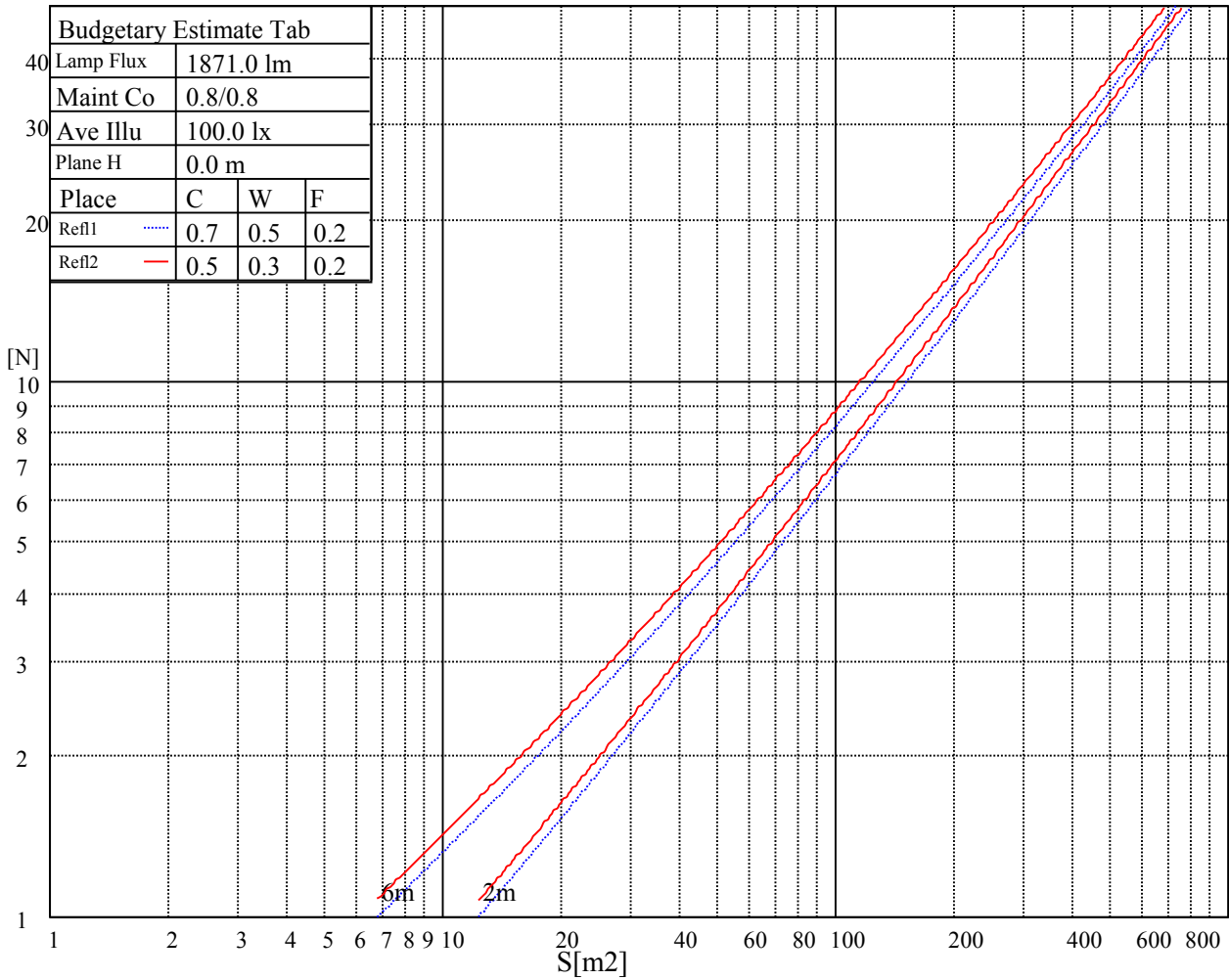
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4673	4673	4673	6990	6990	6990	19064	19064	19064

Glare Table

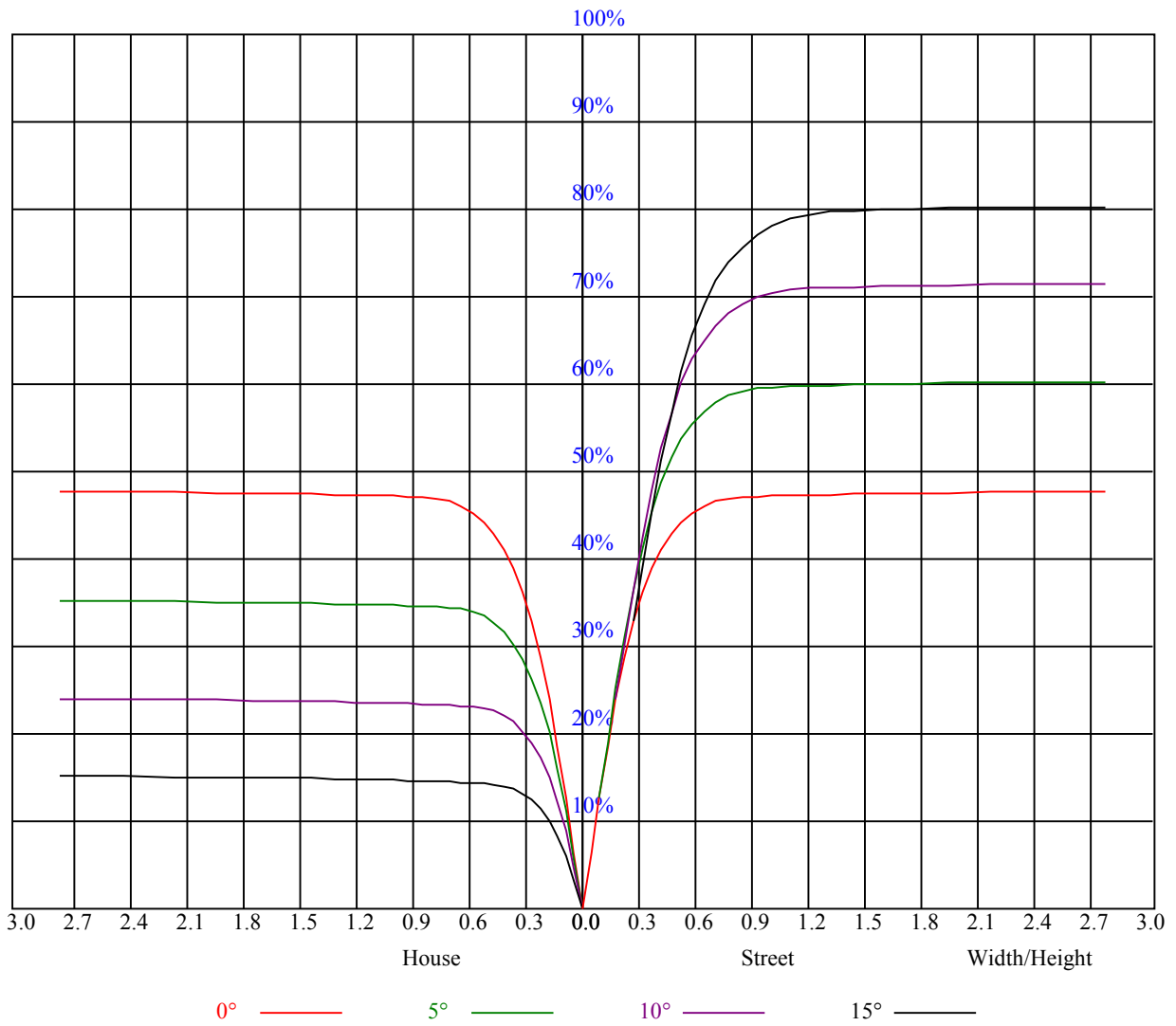
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.16	1.16	1.16	1.13	1.13	1.13	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.97
1	1.08	1.06	1.04	1.06	1.04	1.02	1.02	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.94	0.92
2	1.02	0.99	0.96	1.00	0.97	0.95	0.97	0.95	0.92	0.94	0.92	0.91	0.92	0.90	0.89	0.87
3	0.96	0.92	0.89	0.95	0.91	0.88	0.93	0.89	0.87	0.90	0.88	0.86	0.88	0.86	0.84	0.83
4	0.92	0.87	0.83	0.91	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.79
5	0.87	0.82	0.79	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.75
6	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.72
7	0.80	0.75	0.71	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.69
8	0.76	0.71	0.68	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.66
9	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
10	0.70	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.61



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	4453.31	4474.69	4077.56	3142.13	2028.94	1125.56	791.44	484.88	94.50
45.0	4466.81	4364.44	3849.75	2941.31	1762.31	888.19	664.88	349.88	38.76
90.0	4469.63	4109.06	3436.31	2336.63	1090.97	705.04	542.36	163.58	22.73
135.0	4500.00	4183.88	3440.25	2496.38	1488.38	863.44	604.69	294.19	26.83
180.0	4453.31	4062.38	3268.69	2316.94	1439.44	894.77	598.61	182.31	37.29
225.0	4466.81	4128.75	3403.13	2466.00	1107.51	827.16	599.06	195.69	27.06
270.0	4469.63	4364.44	3845.25	2893.50	1715.06	794.81	529.31	301.50	54.96
315.0	4500.00	4448.81	3949.31	2980.13	1854.56	980.21	704.59	374.63	47.70
360.0	4453.31	4474.69	4077.56	3142.13	2028.94	1125.56	791.44	484.88	94.50

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.33	20.14	14.91	12.60	11.48	10.74	9.84	9.17	8.78
45.0	17.04	13.39	11.64	10.91	10.52	10.07	9.51	9.06	8.72
90.0	14.01	12.21	11.03	10.46	10.13	9.90	9.68	9.56	9.17
135.0	15.92	12.94	11.64	11.14	10.91	10.80	10.58	10.13	9.68
180.0	21.54	16.48	13.67	12.38	11.70	11.14	10.46	9.96	9.90
225.0	15.81	12.83	11.25	10.58	10.41	10.24	9.73	9.23	9.00
270.0	20.36	14.57	12.54	11.48	10.80	10.35	9.84	9.23	8.83
315.0	19.69	14.51	12.09	10.97	10.58	10.24	9.62	9.11	8.72
360.0	31.33	20.14	14.91	12.60	11.48	10.74	9.84	9.17	8.78

C/γ(°)	90.0
0.0	8.55
45.0	8.33
90.0	8.27
135.0	8.33
180.0	8.33
225.0	8.27
270.0	8.33
315.0	8.49
360.0	8.55