



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NATA

LumCAT: 1497-E	
Luminaire: 92.70.046.00	
Report No: NATA0100	Voltage(V): 35.5000
Test No: GC2019010212	Current(A): 0.3000
LampCAT: CREE CXA1512	Power (W): 10.6500
Lamp flux(lm): 1552.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 44	Width(mm): 44
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1347.35
Efficiency(%): 86.81%
Lumens(lm)/Power(W): 127.37
Central intensity(cd): 1746.563
Maximum intensity(cd): 1746.563
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=51.0
 [C90/270]Total=51.0
Field angle(10%Imax): [C0/180]Total=84.2
 [C90/270]Total=84.2
Maximum s/h(1/2): C0_180=0.78 C90_270=0.78
Maximum s/h(1/4): C0_180=0.81 C90_270=0.81
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.40%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.166%

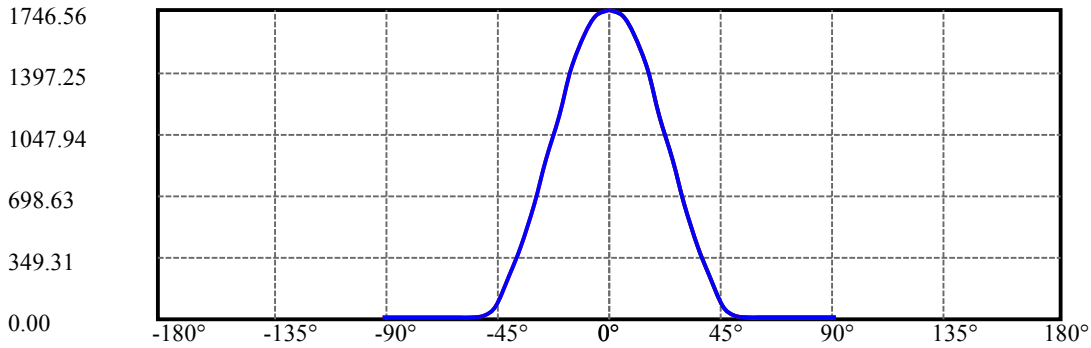
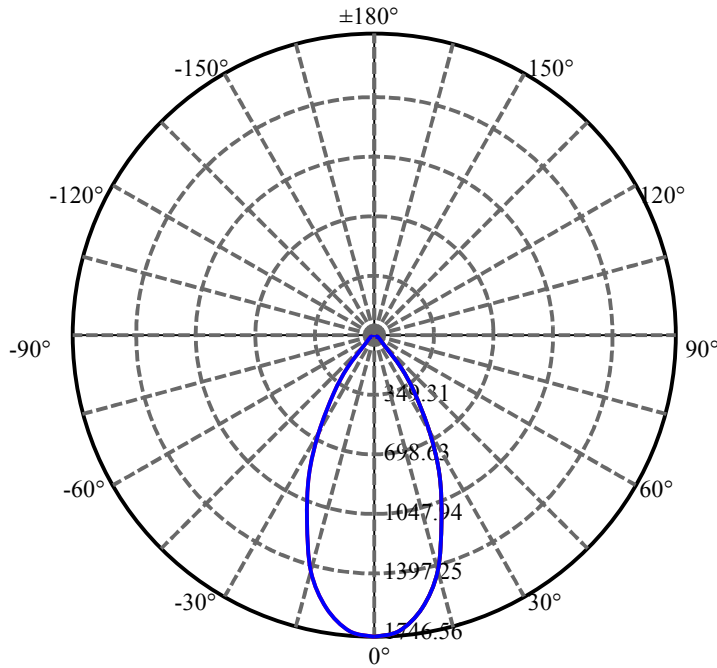
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1746.563	10.445	10.445	.673%	.775%
5.0	1716.328	81.995	92.439	5.283%	6.861%
10.0	1609.453	153.193	245.632	9.871%	18.231%
15.0	1412.297	200.360	445.992	12.910%	33.101%
20.0	1150.320	215.655	661.647	13.895%	49.107%
25.0	897.581	207.927	869.575	13.397%	64.539%
30.0	650.855	178.379	1047.954	11.493%	77.779%
35.0	413.276	129.933	1177.887	8.372%	87.422%
40.0	249.314	87.842	1265.729	5.660%	93.942%
45.0	71.304	27.637	1293.366	1.781%	95.993%
50.0	25.144	10.558	1303.924	.680%	96.777%
55.0	15.729	7.062	1310.986	.455%	97.301%
60.0	14.934	7.089	1318.076	.457%	97.827%
65.0	14.400	7.154	1325.229	.461%	98.358%
70.0	13.563	6.986	1332.216	.450%	98.876%
75.0	10.238	5.420	1337.636	.349%	99.279%
80.0	7.959	4.297	1341.932	.277%	99.598%
85.0	7.038	3.843	1345.776	.248%	99.883%
90.0	5.759	1.578	1347.354	.102%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1047.95	67.52%	77.78%
0-40	1265.73	81.55%	93.94%
0-60	1318.08	84.93%	97.83%
0-90	1345.78	86.71%	99.88%
0-120	1345.78	86.71%	99.88%
0-180	1347.35	86.81%	100.00%
60-90	34.79	2.24%	2.58%
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%
0-31.15	1077.88	69.45%	80.00%

ZONAL LUMEN SUMMARY

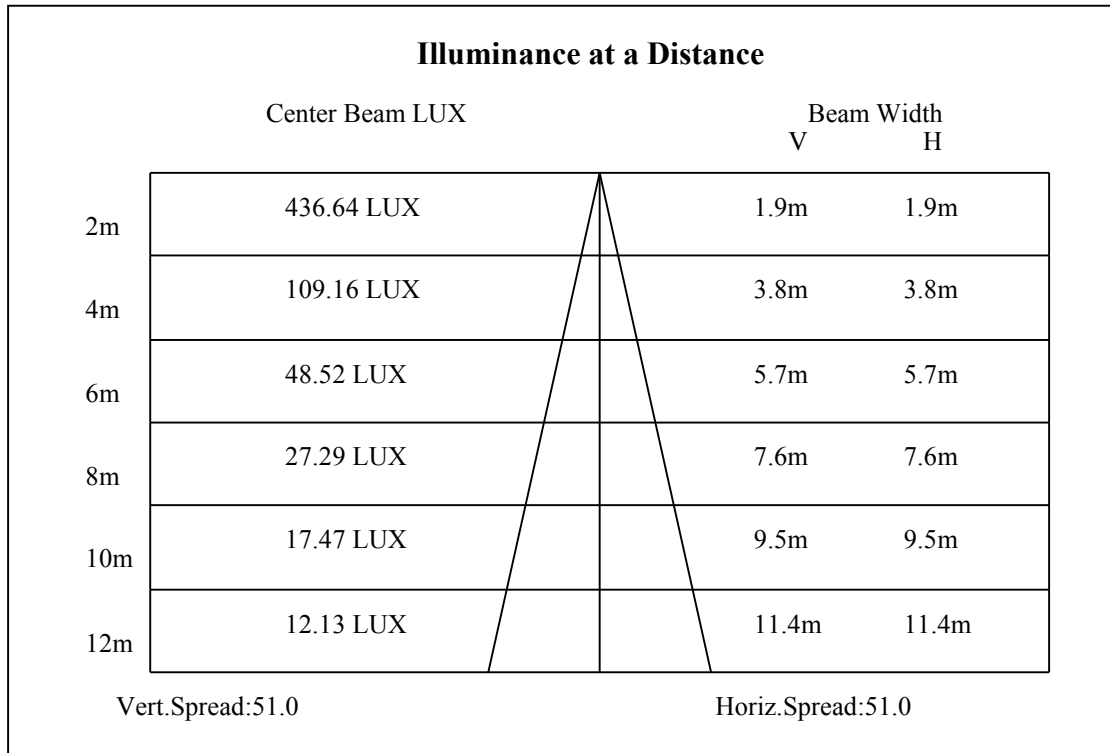
0-10	245.63
10-20	416.02
20-30	386.31
30-40	217.78
40-50	38.19
50-60	14.15
60-70	14.14
70-80	9.72
80-90	3.84
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

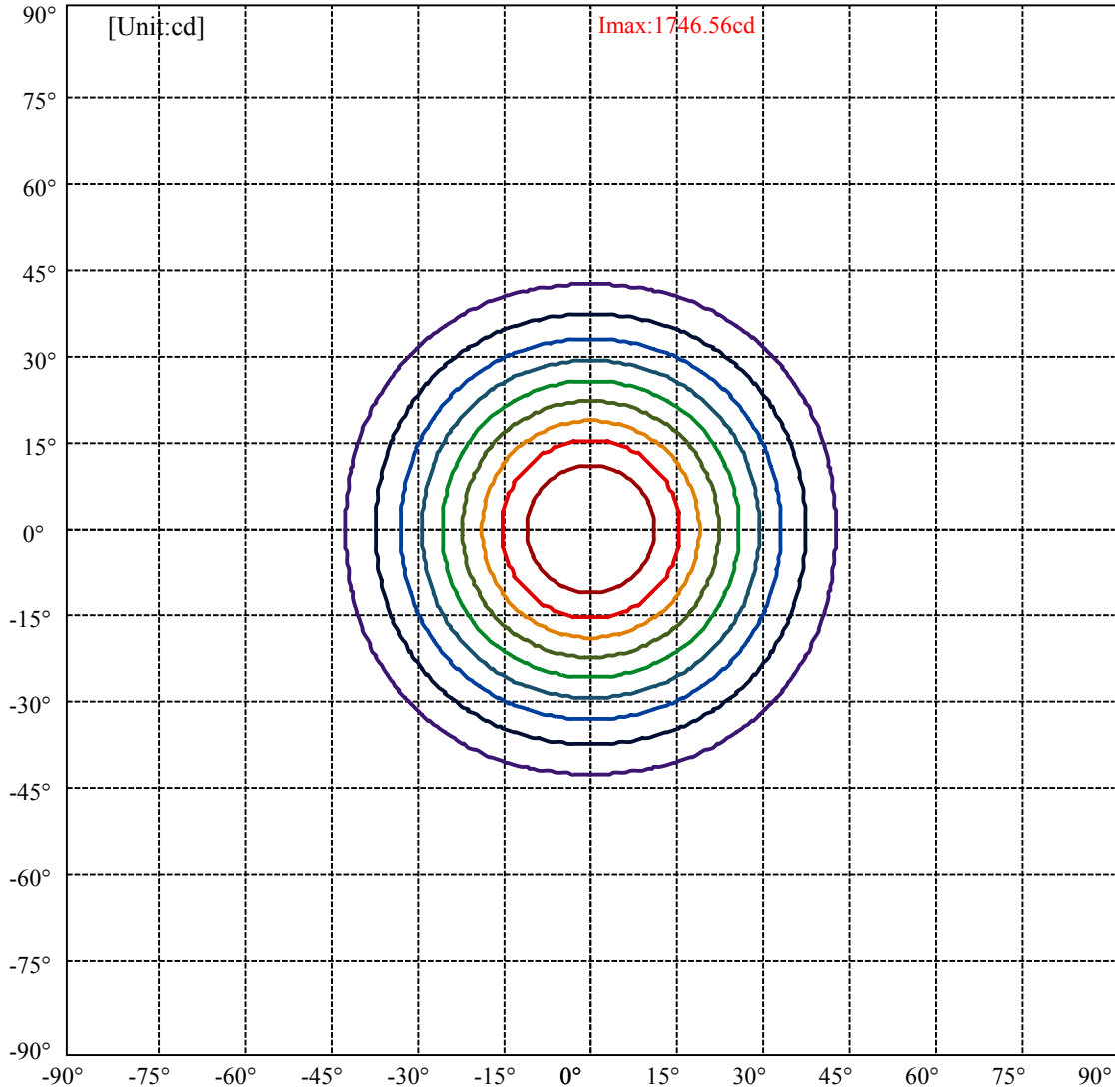


C0(Max): —————
C0/C180: —————
C90/C270: —————

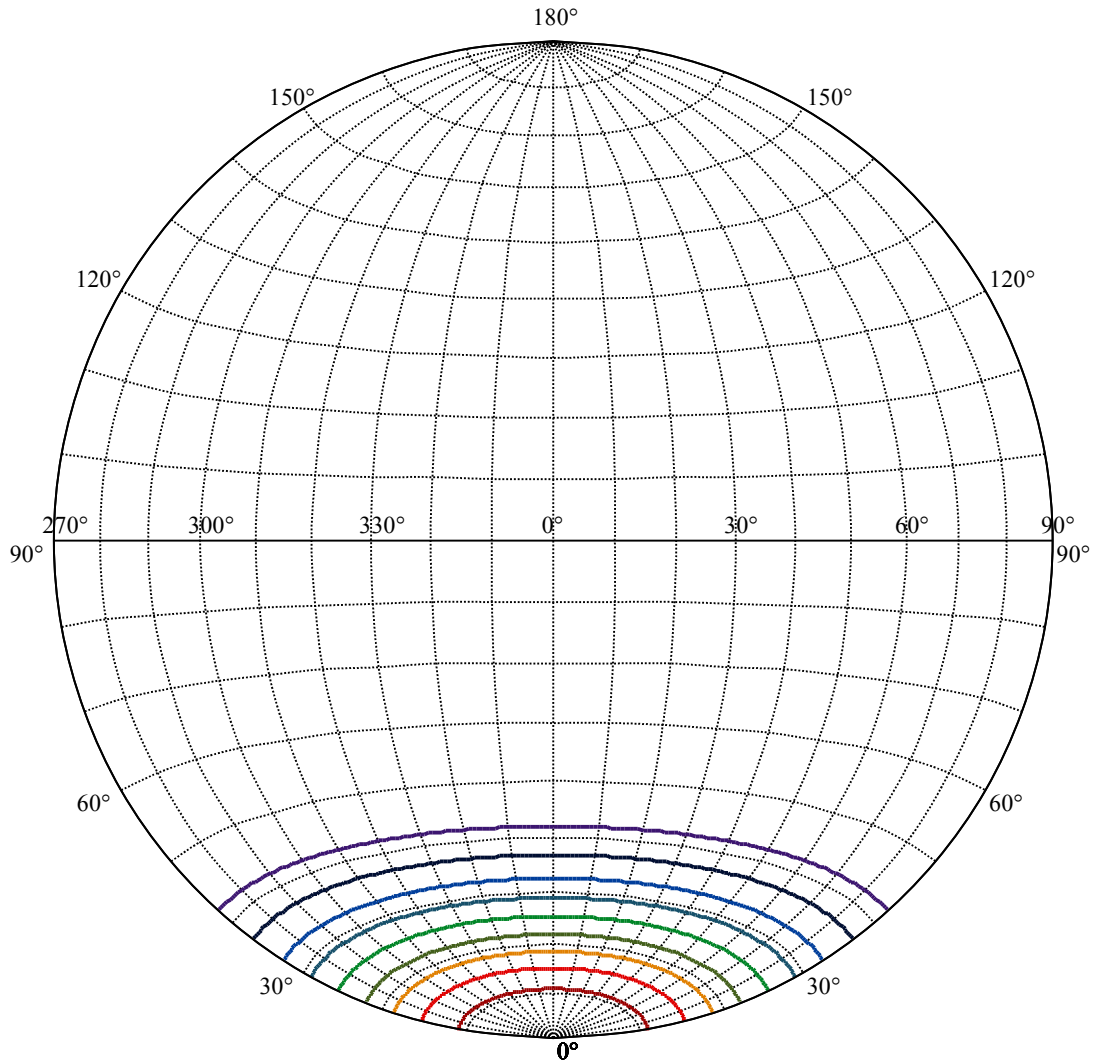
Field angle(10%Imax):C0/180Left:42.1 Right:42.1
:C90/270Left:42.1 Right:42.1

Beam Angle(50%Imax):C0/180Left:25.5 Right:25.5
:C90/270Left:25.5 Right:25.5





(10%Imax) 174.656	—
(20%Imax) 349.313	—
(30%Imax) 523.969	—
(40%Imax) 698.625	—
(50%Imax) 873.281	—
(60%Imax) 1047.94	—
(70%Imax) 1222.59	—
(80%Imax) 1397.25	—
(90%Imax) 1571.91	—



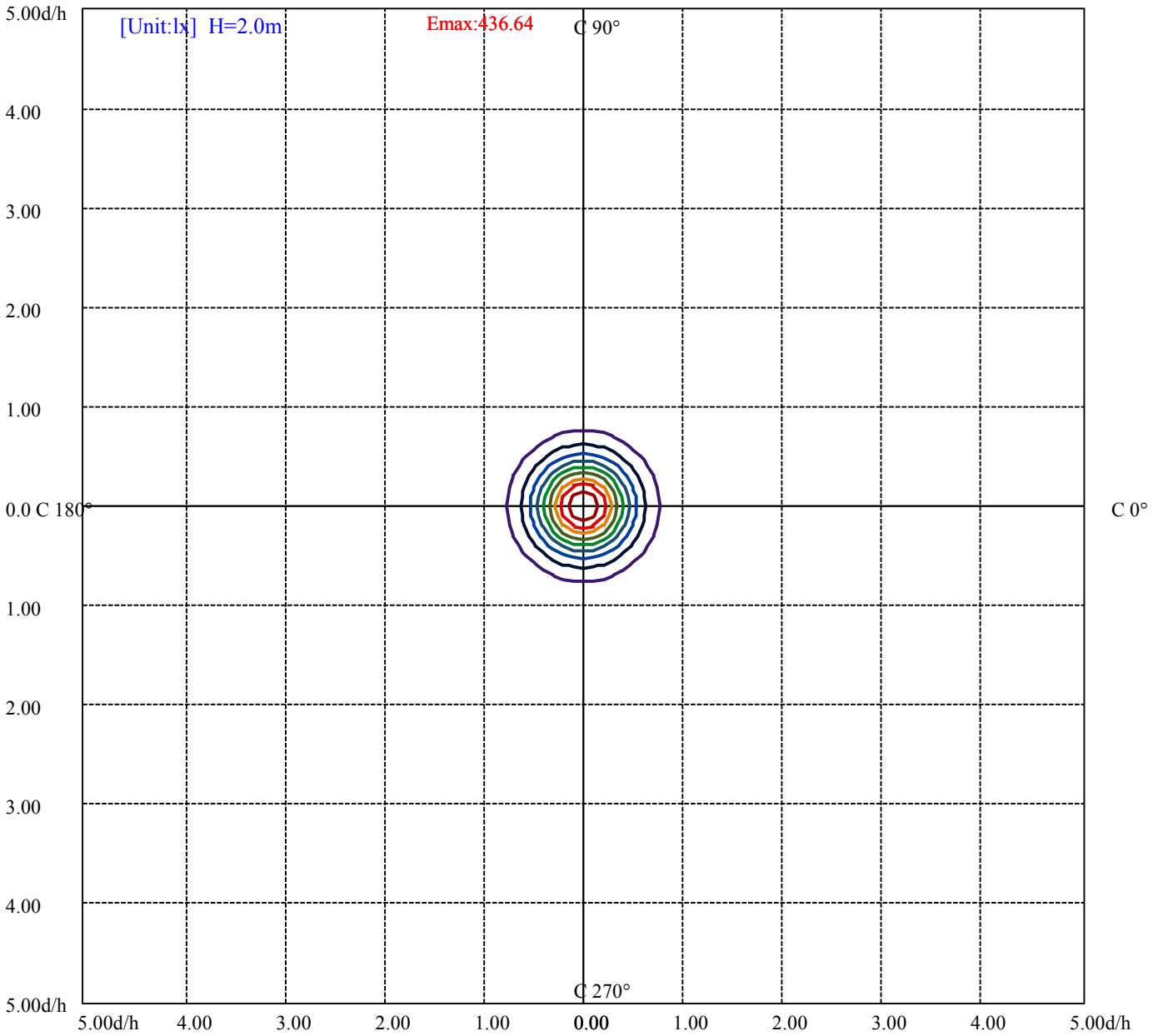
House

[Unit:cd]

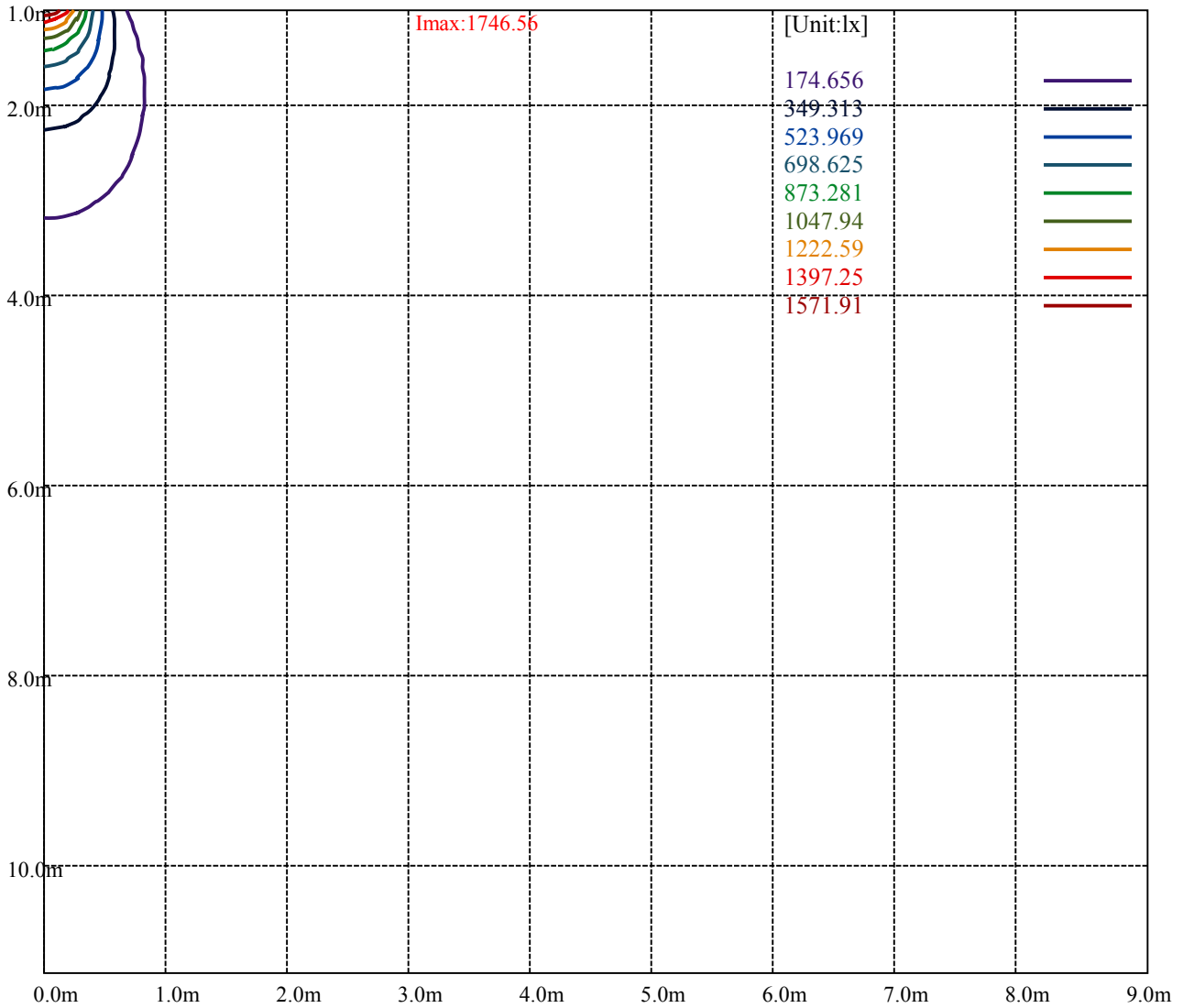
Road

Imax:1746.56

(10%Imax)	174.656	—
(20%Imax)	349.313	—
(30%Imax)	523.969	—
(40%Imax)	698.625	—
(50%Imax)	873.281	—
(60%Imax)	1047.94	—
(70%Imax)	1222.59	—
(80%Imax)	1397.25	—
(90%Imax)	1571.91	—



(10%Emax) 43.664	—
(20%Emax) 87.328	—
(30%Emax) 130.9922	—
(40%Emax) 174.6563	—
(50%Emax) 218.3203	—
(60%Emax) 261.985	—
(70%Emax) 305.6475	—
(80%Emax) 349.3125	—
(90%Emax) 392.9775	—



Luminance Table

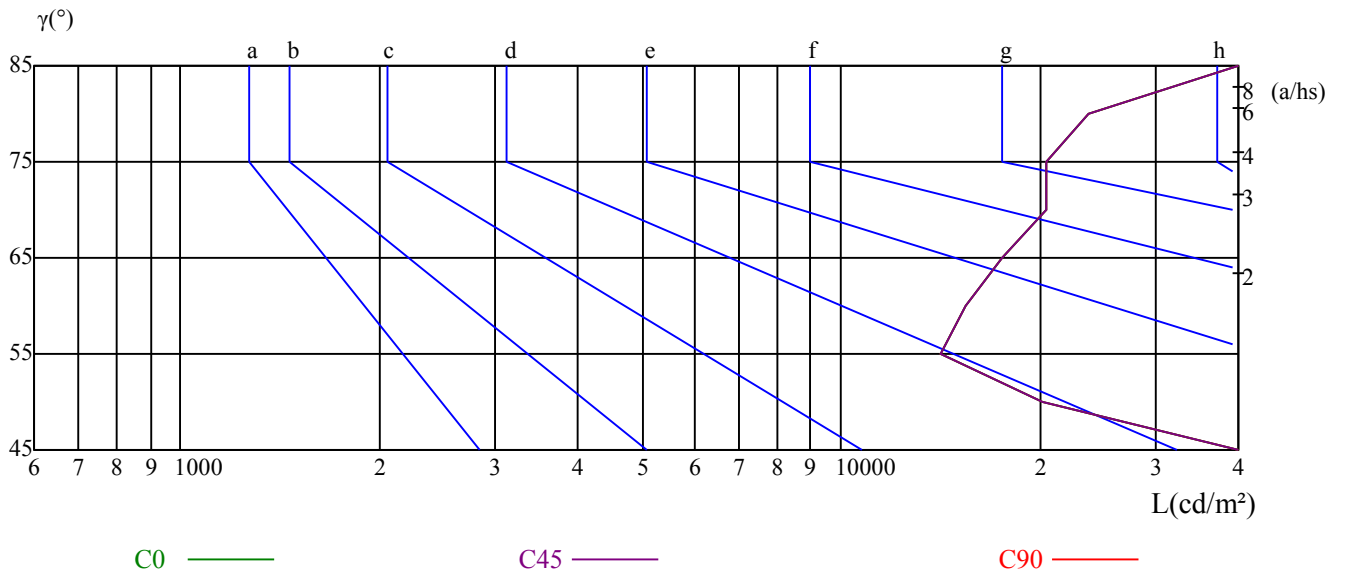
γ	45	50	55	60	65	70	75	80	85
C0	52086	20205	14165	15428	17600	20484	20431	23676	41712
C45	52086	20205	14165	15428	17600	20484	20431	23676	41712
C90	52086	20205	14165	15428	17600	20484	20431	23676	41712

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
17600	17600	17600	20431	20431	20431	41712	41712	41712

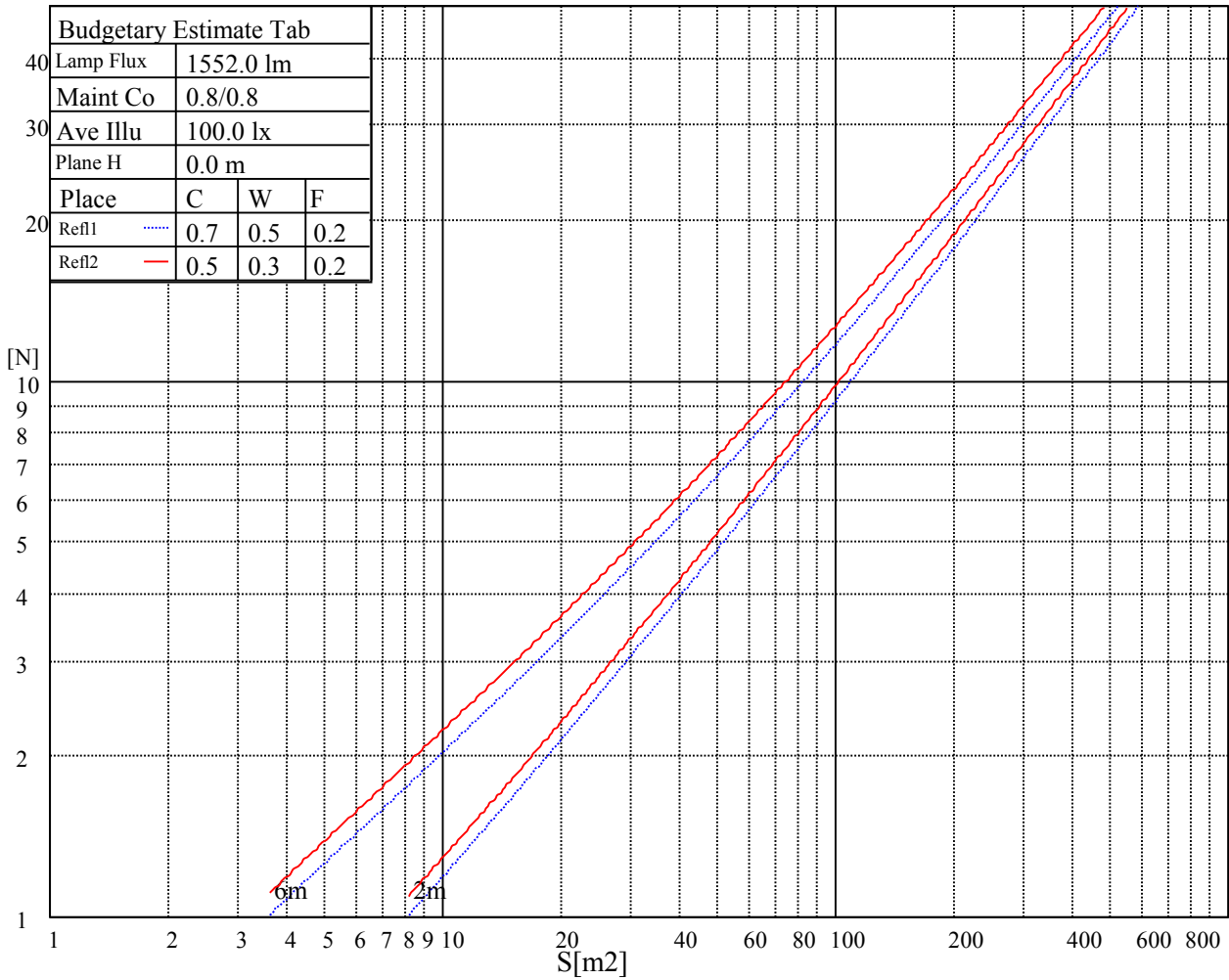
Glare Table

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

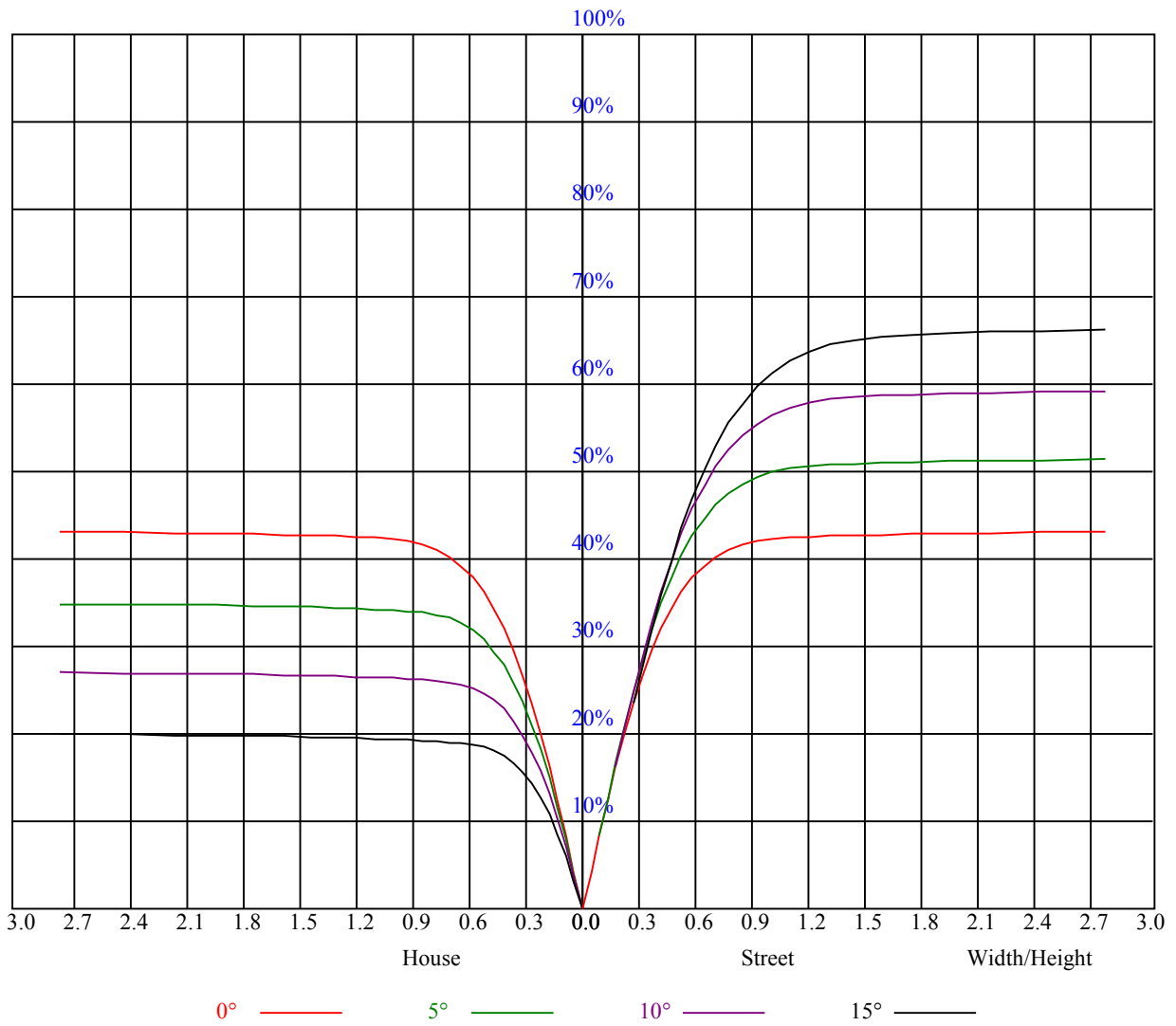
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	13.04	14.03	13.40	14.34	14.65	10.99	11.98	11.35	12.29	12.61
	3H	16.28	17.16	16.67	17.49	17.86	13.91	14.78	14.29	15.11	15.48
	4H	17.48	18.29	17.89	18.64	19.03	15.04	15.85	15.45	16.20	16.59
	6H	18.38	19.12	18.80	19.50	19.90	16.29	17.03	16.71	17.41	17.80
	8H	18.82	19.52	19.26	19.91	20.32	17.03	17.72	17.46	18.12	18.53
	12H	19.64	20.30	20.07	20.69	21.12	18.32	18.99	18.76	19.37	19.80
4H	2H	13.60	14.41	14.01	14.77	15.16	12.13	12.94	12.53	13.29	13.68
	3H	17.05	17.71	17.46	18.12	18.53	15.20	15.87	15.62	16.27	16.68
	4H	18.36	18.96	18.80	19.38	19.83	16.42	17.01	16.86	17.44	17.89
	6H	19.34	19.85	19.81	20.30	20.77	17.67	18.18	18.15	18.63	19.11
	8H	19.89	20.36	20.36	20.81	21.29	18.50	18.97	18.98	19.43	19.90
8H	12H	20.75	21.16	21.25	21.65	22.13	19.74	20.15	20.23	20.64	21.12
	4H	18.64	19.12	19.12	19.57	20.04	17.03	17.51	17.51	17.96	18.43
	6H	19.85	20.23	20.36	20.73	21.21	18.54	18.91	19.05	19.42	19.90
	8H	20.58	20.92	21.11	21.44	21.94	19.53	19.87	20.06	20.39	20.89
12H	12H	21.82	22.11	22.34	22.61	23.19	21.02	21.31	21.54	21.81	22.39
	4H	18.68	19.09	19.17	19.58	20.06	17.14	17.55	17.64	18.04	18.52
	6H	20.25	20.31	20.51	20.78	21.33	19.03	19.09	19.29	19.57	20.11
	8H	20.82	21.11	21.34	21.61	22.19	19.87	20.16	20.39	20.66	21.24
Variation with the observer position at spacings:											
S = 1.0H	3.8/-5.3					3.8/-5.3					
S = 1.5H	6.0/-4.2					6.0/-4.2					
S = 2.0H	7.5/-3.7					7.5/-3.7					
Standard tables:	BK2					BK2					
Uncorrected UGR	6.0					6.0					



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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.96	0.94	0.92	0.94	0.92	0.90	0.91	0.89	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.90	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	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.77	0.75	0.79	0.76	0.74	0.77	0.74	0.72	0.71
4	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.73	0.70	0.68	0.67
5	0.75	0.70	0.66	0.74	0.70	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.64	0.63
6	0.71	0.66	0.62	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.60
7	0.67	0.62	0.59	0.67	0.62	0.59	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.57
8	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.54
9	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.51
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.49



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	1748.25	1728.56	1652.06	1485.56	1261.69	976.50	716.63	484.88	291.94
45.0	1745.44	1708.88	1607.63	1421.44	1175.63	910.69	691.31	434.81	291.94
90.0	1744.31	1690.88	1560.38	1338.19	1067.68	813.49	567.51	346.05	185.74
135.0	1748.25	1711.13	1599.19	1387.13	1139.63	898.31	649.13	408.94	290.81
180.0	1748.25	1711.69	1577.25	1360.13	1117.80	863.83	608.06	386.61	197.27
225.0	1745.44	1719.56	1604.25	1390.50	1120.22	868.95	619.71	380.19	215.04
270.0	1744.31	1734.19	1647.00	1460.81	1209.94	925.88	677.81	438.19	288.56
315.0	1748.25	1725.75	1627.88	1454.63	1109.98	923.01	676.69	426.54	233.21
360.0	1748.25	1728.56	1652.06	1485.56	1261.69	976.50	716.63	484.88	291.94
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	86.12	35.78	12.94	11.98	12.09	11.87	7.65	7.26	7.09
45.0	78.58	34.82	19.58	18.96	18.00	17.27	13.67	9.11	7.37
90.0	56.59	25.99	20.36	19.58	18.11	15.98	11.59	8.27	7.43
135.0	66.54	23.34	14.06	12.32	11.76	11.08	8.89	7.71	6.41
180.0	59.68	17.94	12.43	11.36	10.41	9.45	8.94	8.33	7.43
225.0	62.16	17.33	14.06	13.44	12.38	11.70	9.00	7.59	7.03
270.0	89.44	27.39	19.58	19.46	19.63	18.51	14.34	8.61	6.81
315.0	71.33	18.56	12.83	12.38	12.83	12.66	7.82	6.81	6.75
360.0	86.12	35.78	12.94	11.98	12.09	11.87	7.65	7.26	7.09
C/ γ (°)	90.0								
0.0	5.96								
45.0	5.74								
90.0	5.57								
135.0	5.74								
180.0	5.96								
225.0	5.74								
270.0	5.63								
315.0	5.74								
360.0	5.96								