



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: 3-2116-N
Luminaire: 92.70.131.00
Report No: NATA0100
Test No: GC2019011718
LampCAT: LUMINUS CLM-14-AC30
Lamp flux(lm): 3658.0
Number of Lamps: 1
Length(mm): 80
Phm Type: C

Voltage(V): 35.2000
Current(A): 0.7000
Power (W): 24.6400
PF: 0.0000
Ballast type: DC
Width(mm): 80
Height(mm): 0

Photometric Results

Lumens(lm): 3031.76
Efficiency(%): 82.88%
Lumens(lm)/Power(W): 125.63
Central intensity(cd): 11151.840
Maximum intensity(cd): 11151.840
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.8
 [C90/270]Total=25.8
Field angle(10%Imax): [C0/180]Total=54.3
 [C90/270]Total=54.3
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.62%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.254%

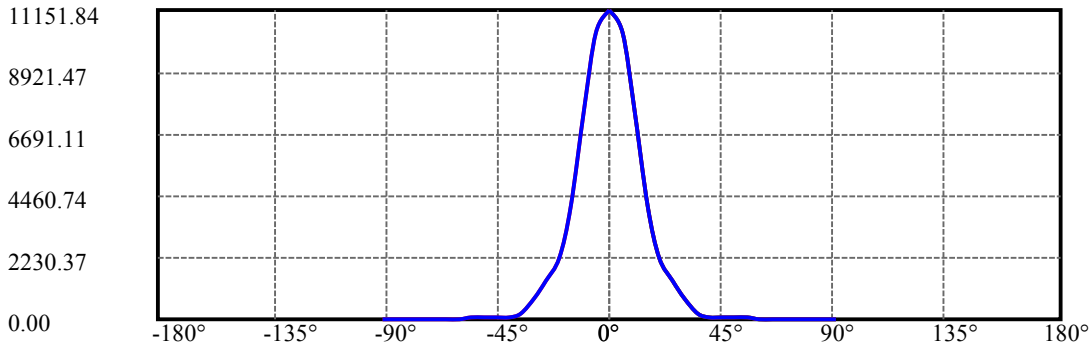
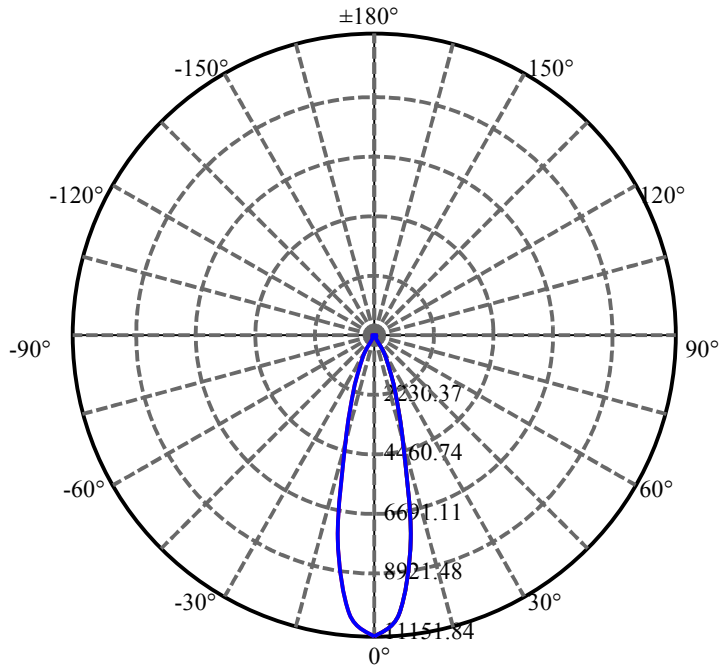
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11151.844	66.690	66.69	1.823%	2.200%
5.0	10328.625	493.433	560.123	13.489%	18.475%
10.0	7614.703	724.791	1284.914	19.814%	42.382%
15.0	4116.234	583.964	1868.877	15.964%	61.643%
20.0	2240.367	420.011	2288.888	11.482%	75.497%
25.0	1380.459	319.787	2608.675	8.742%	86.045%
30.0	758.707	207.938	2816.613	5.684%	92.904%
35.0	180.858	56.861	2873.475	1.554%	94.779%
40.0	80.037	28.200	2901.674	.771%	95.709%
45.0	64.371	24.950	2926.624	.682%	96.532%
50.0	50.541	21.222	2947.846	.580%	97.232%
55.0	37.835	16.988	2964.834	.464%	97.793%
60.0	31.092	14.759	2979.594	.403%	98.279%
65.0	24.954	12.397	2991.99	.339%	98.688%
70.0	18.591	9.576	3001.566	.262%	99.004%
75.0	17.353	9.188	3010.754	.251%	99.307%
80.0	16.453	8.882	3019.635	.243%	99.600%
85.0	15.680	8.562	3028.197	.234%	99.883%
90.0	12.987	3.559	3031.757	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2816.61	77.00%	92.90%
0-40	2901.67	79.32%	95.71%
0-60	2979.59	81.45%	98.28%
0-90	3028.20	82.78%	99.88%
0-120	3028.20	82.78%	99.88%
0-180	3031.76	82.88%	100.00%
60-90	63.36	1.73%	2.09%
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%
0-22.13	2425.41	66.30%	80.00%

ZONAL LUMEN SUMMARY

0-10	1284.91
10-20	1003.97
20-30	527.73
30-40	85.06
40-50	46.17
50-60	31.75
60-70	21.97
70-80	18.07
80-90	8.56
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: —————

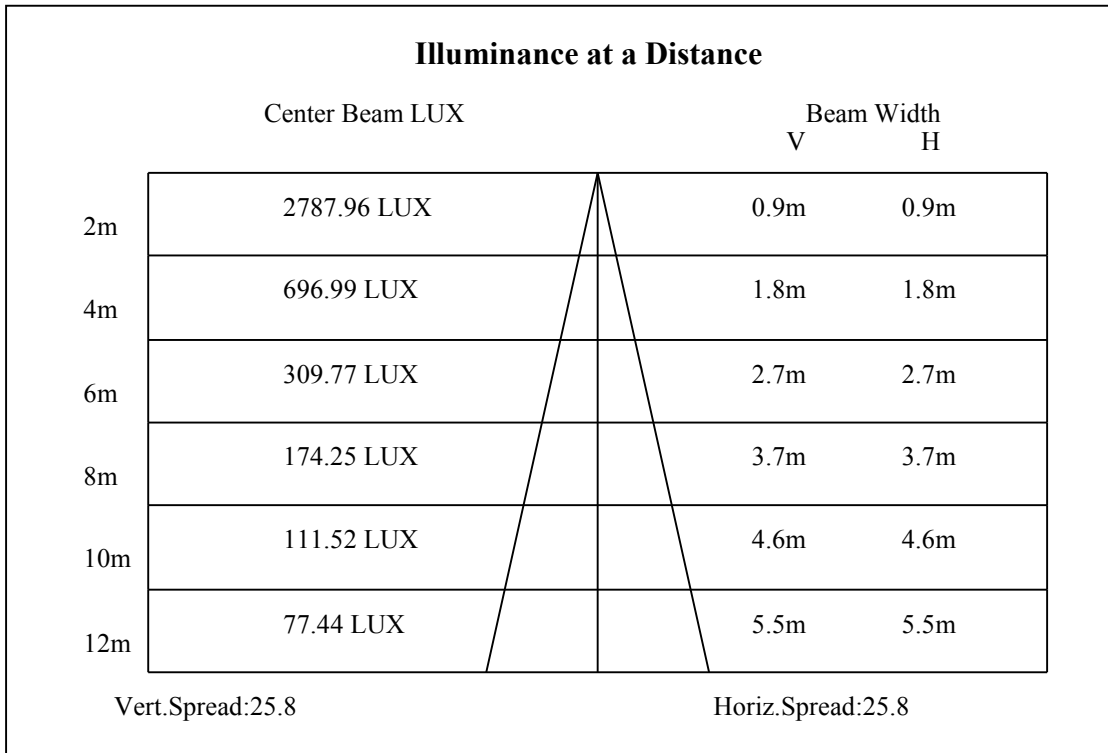
C90/C270: —————

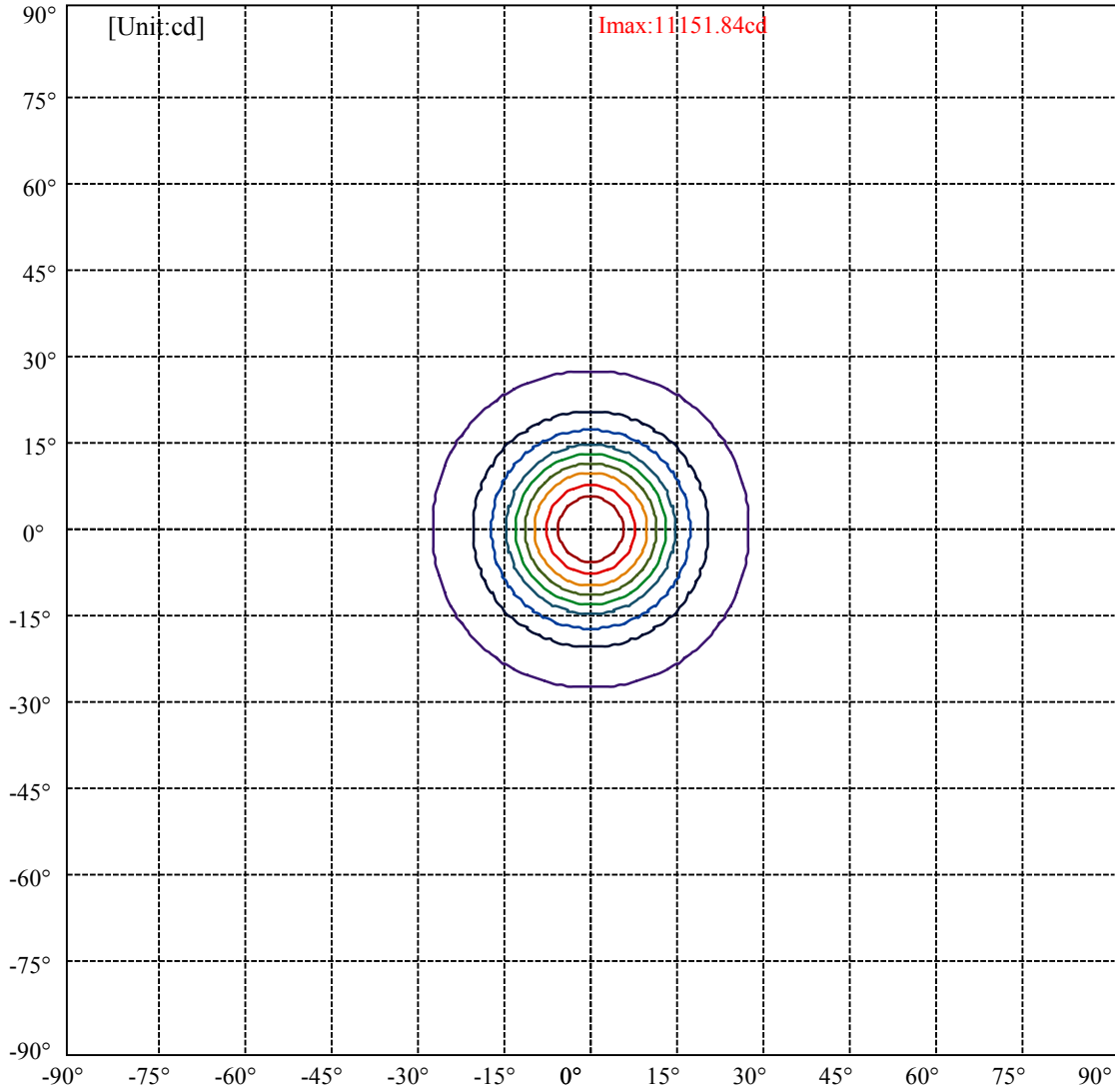
Field angle(10%Imax):C0/180Left:27.1 Right:27.1

:C90/270Left:27.1 Right:27.1

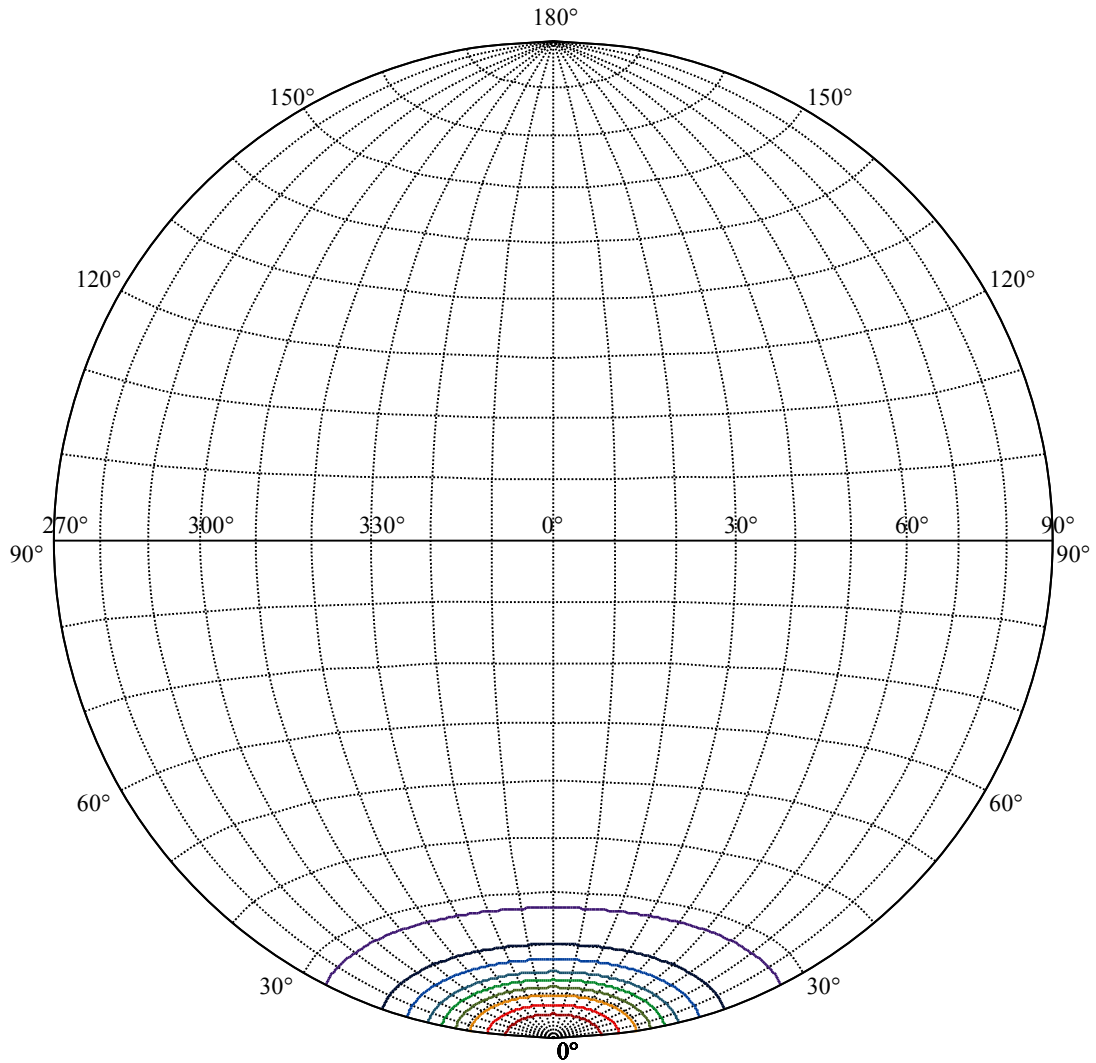
Beam Angle(50%Imax):C0/180Left:12.9 Right:12.9

:C90/270Left:12.9 Right:12.9





(10%Imax) 1115.18	—
(20%Imax) 2230.37	—
(30%Imax) 3345.55	—
(40%Imax) 4460.74	—
(50%Imax) 5575.92	—
(60%Imax) 6691.11	—
(70%Imax) 7806.29	—
(80%Imax) 8921.47	—
(90%Imax) 10036.7	—



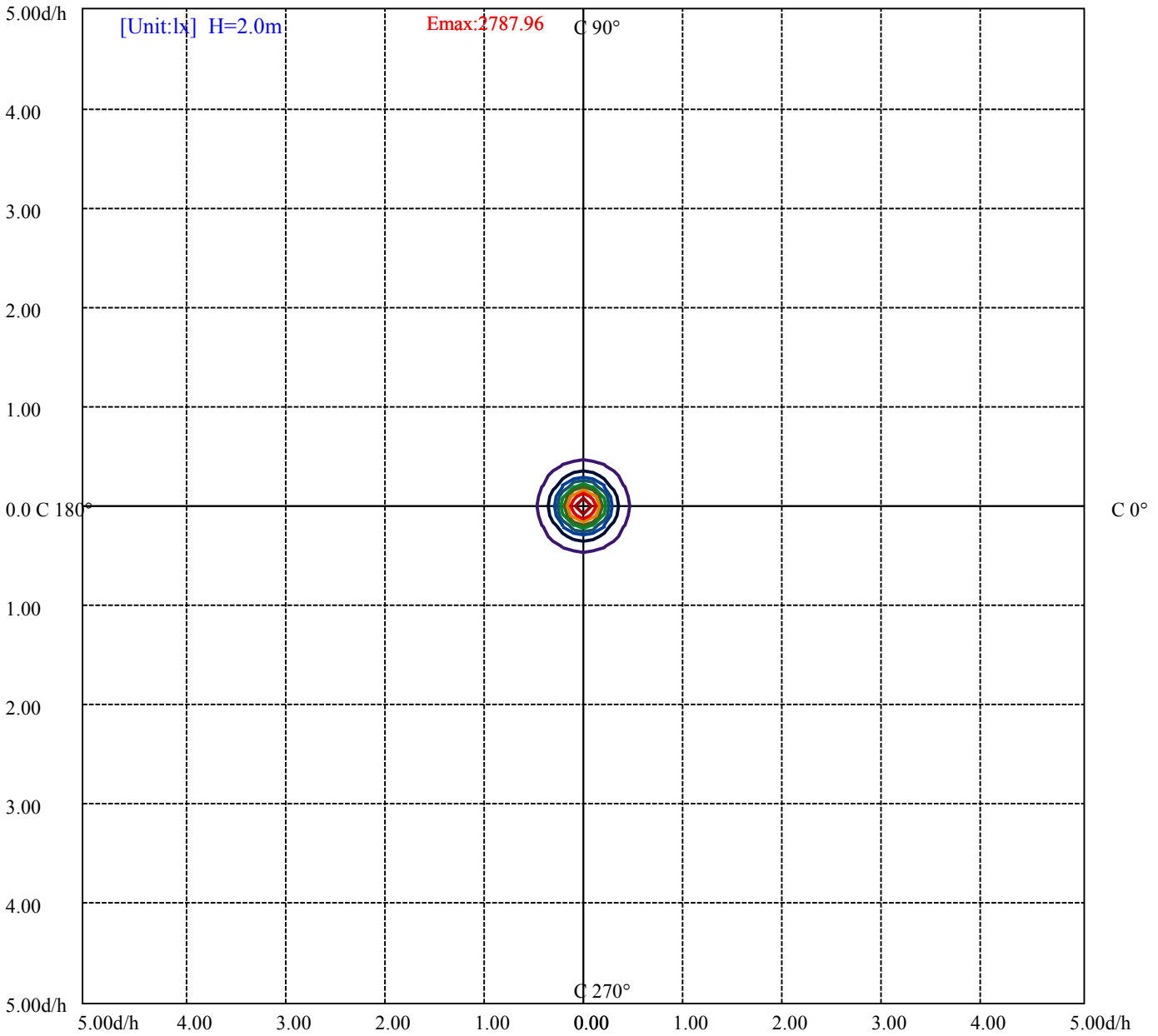
House

[Unit:cd]

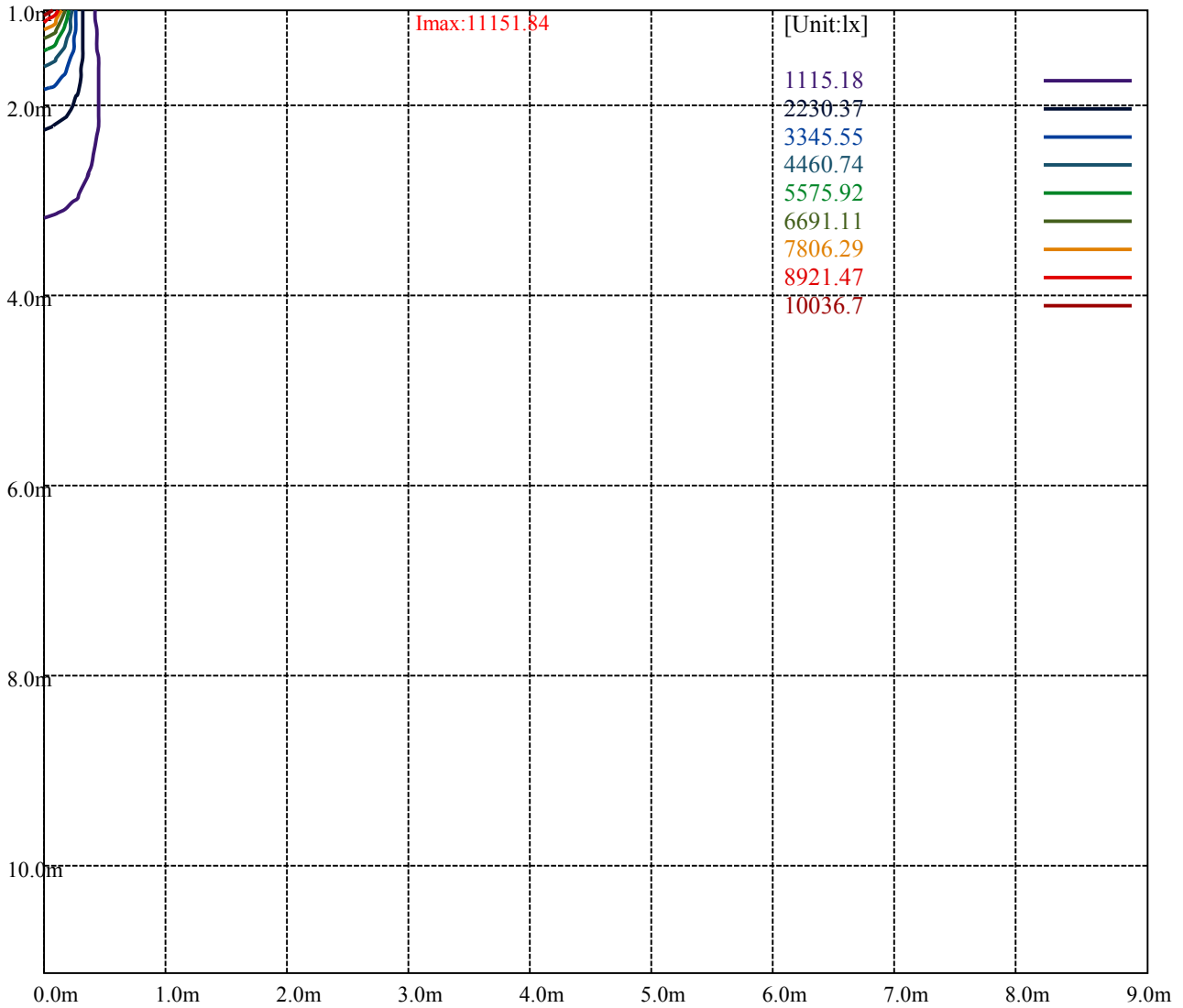
Road

Imax:11151.84

(10%Imax) 1115.18	—
(20%Imax) 2230.37	—
(30%Imax) 3345.55	—
(40%Imax) 4460.74	—
(50%Imax) 5575.92	—
(60%Imax) 6691.11	—
(70%Imax) 7806.29	—
(80%Imax) 8921.47	—
(90%Imax) 10036.7	—



(10%Emax) 278.795	—
(20%Emax) 557.59	—
(30%Emax) 836.3875	—
(40%Emax) 1115.182	—
(50%Emax) 1393.978	—
(60%Emax) 1672.772	—
(70%Emax) 1951.568	—
(80%Emax) 2230.365	—
(90%Emax) 2509.15	—



Luminance Table

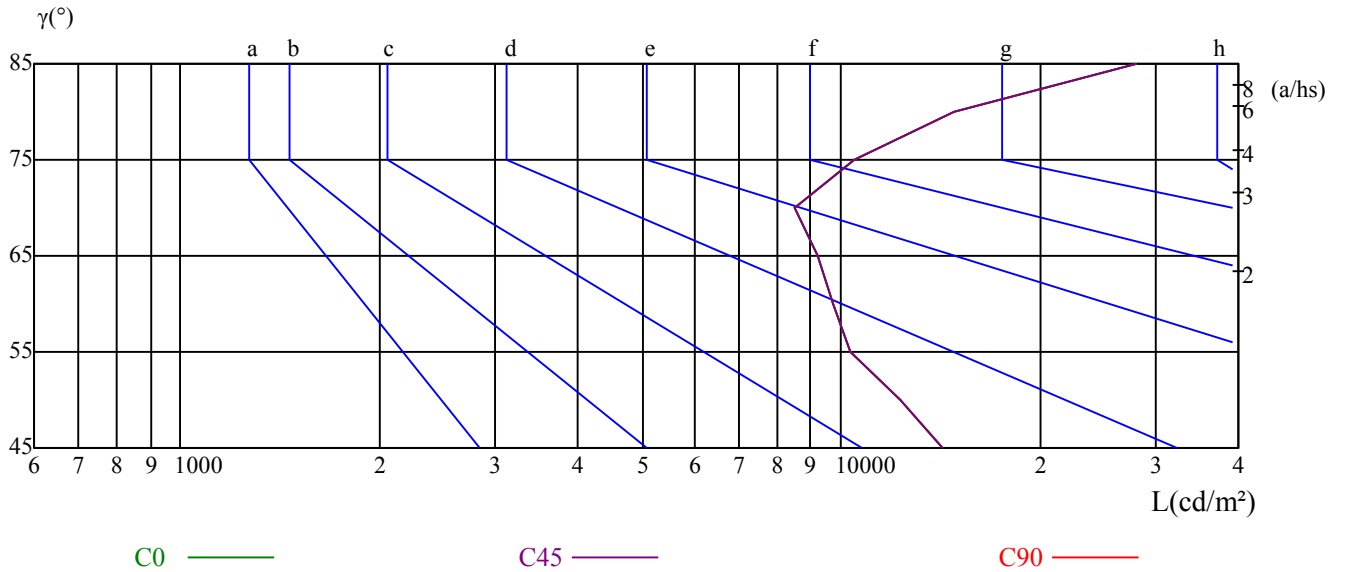
γ	45	50	55	60	65	70	75	80	85
C0	14224	12286	10307	9716	9226	8493	10476	14805	28110
C45	14224	12286	10307	9716	9226	8493	10476	14805	28110
C90	14224	12286	10307	9716	9226	8493	10476	14805	28110

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9226	9226	9226	10476	10476	10476	28110	28110	28110

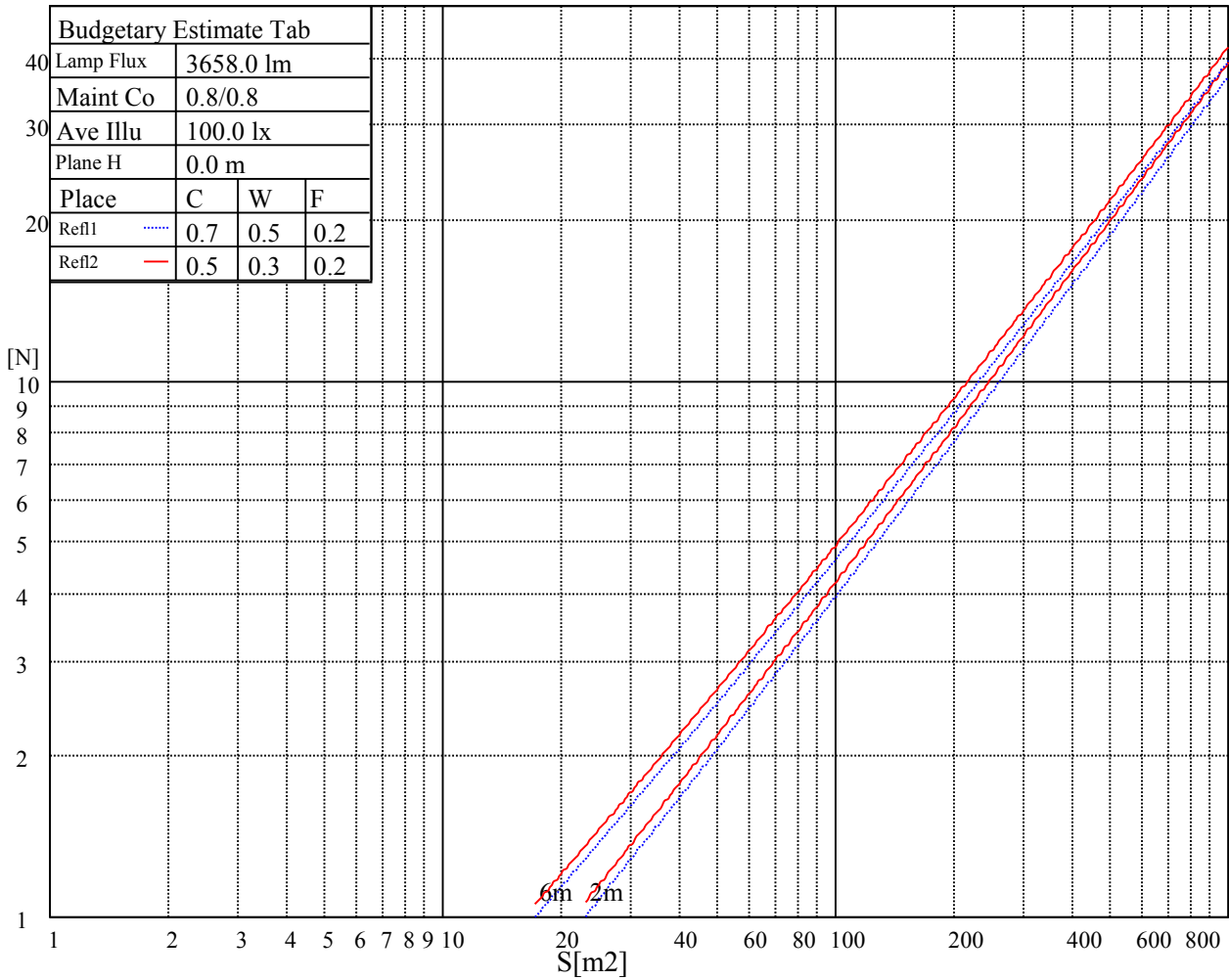
Glare Table

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

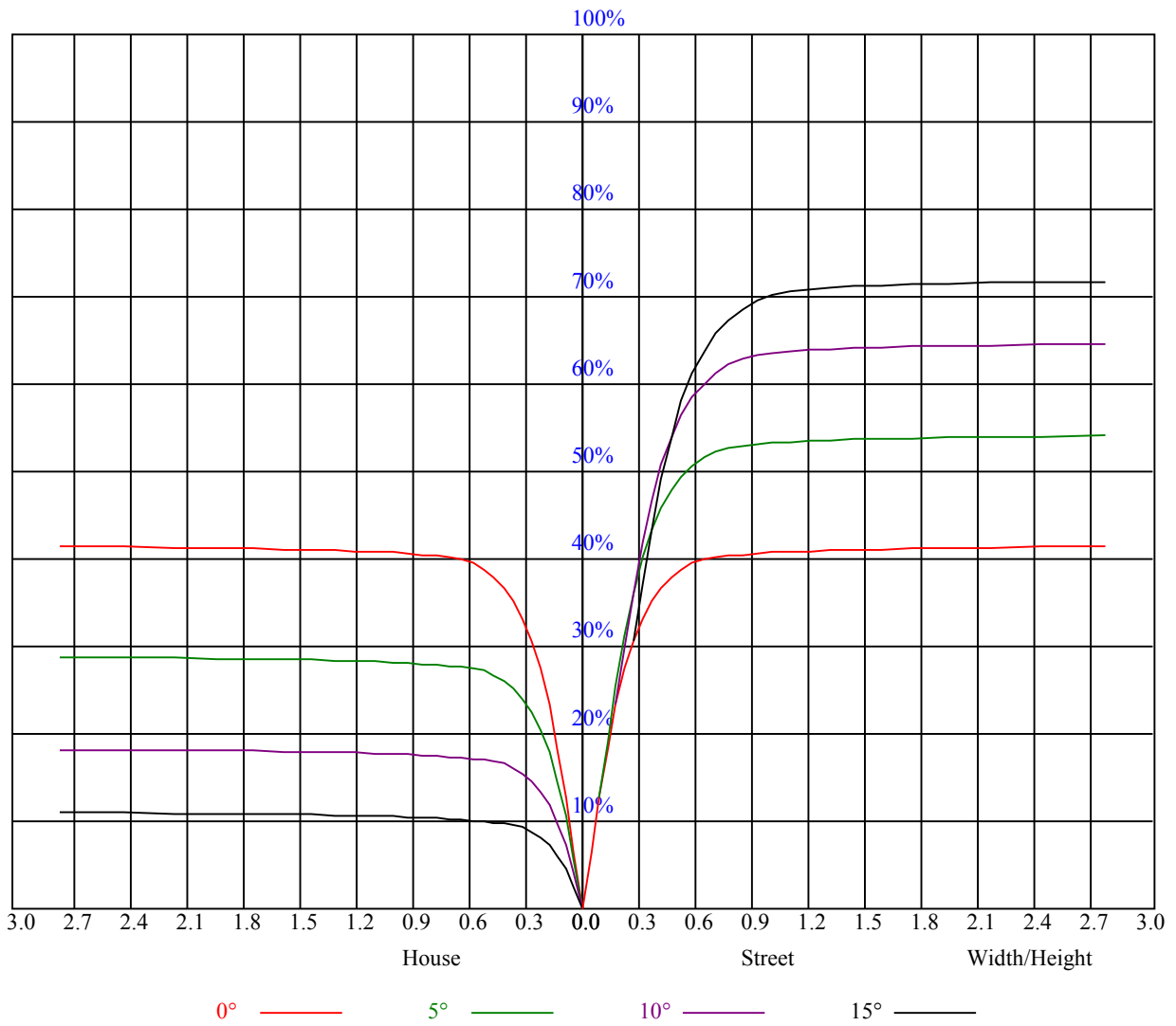
Luminance Limiting Curve



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	7.93	8.88	8.29	9.19	9.51	7.87	8.83	8.24	9.14	9.45
	3H	9.57	10.41	9.95	10.74	11.11	9.43	10.27	9.81	10.60	10.97
	4H	10.54	11.31	10.94	11.67	12.06	10.36	11.14	10.77	11.49	11.88
	6H	11.77	12.49	12.19	12.86	13.26	11.63	12.34	12.05	12.71	13.11
	8H	12.52	13.19	12.96	13.58	13.99	12.41	13.08	12.84	13.47	13.88
	12H	13.85	14.48	14.28	14.87	15.30	13.79	14.42	14.22	14.81	15.24
4H	2H	8.42	9.20	8.83	9.55	9.94	8.38	9.16	8.79	9.51	9.90
	3H	10.28	10.92	10.70	11.33	11.74	10.16	10.80	10.58	11.21	11.62
	4H	11.46	12.03	11.90	12.46	12.91	11.31	11.88	11.75	12.31	12.76
	6H	12.85	13.33	13.32	13.79	14.26	12.73	13.21	13.20	13.66	14.14
	8H	13.76	14.21	14.24	14.66	15.14	13.67	14.12	14.15	14.58	15.05
	12H	15.11	15.50	15.60	15.99	16.47	15.07	15.46	15.56	15.95	16.42
8H	4H	11.90	12.36	12.38	12.81	13.28	11.78	12.23	12.25	12.68	13.16
	6H	13.62	13.98	14.13	14.48	14.97	13.52	13.88	14.04	14.39	14.87
	8H	14.74	15.06	15.27	15.58	16.08	14.68	15.00	15.21	15.52	16.02
	12H	16.37	16.64	16.89	17.14	17.72	16.34	16.61	16.86	17.11	17.69
12H	4H	12.02	12.41	12.51	12.90	13.38	11.90	12.30	12.40	12.79	13.26
	6H	14.10	14.18	14.39	14.65	15.20	14.01	14.10	14.31	14.57	15.12
	8H	15.12	15.39	15.64	15.89	16.47	15.06	15.34	15.59	15.84	16.42
Variation with the observer position at spacings:											
S = 1.0H	3.4/-1.7					3.4/-1.7					
S = 1.5H	4.4/-1.5					4.4/-1.5					
S = 2.0H	5.0/-1.3					5.0/-1.3					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	3.3					3.3					



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	1.01	1.01	1.01	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.85
1	0.93	0.90	0.88	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.88	0.85	0.82	0.87	0.84	0.81	0.84	0.82	0.80	0.81	0.80	0.78	0.79	0.78	0.76	0.75
3	0.84	0.80	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.72
4	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.76	0.74	0.72	0.75	0.73	0.71	0.70
5	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.68
6	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.64
8	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.66	0.63	0.68	0.65	0.63	0.62
9	0.68	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.62	0.61
10	0.67	0.63	0.61	0.66	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59



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	11115.56	10787.06	8753.06	5090.06	2833.88	1677.94	1103.63	299.25	85.28
45.0	11171.25	10504.13	7936.88	4222.69	2269.69	1509.19	844.31	289.13	81.34
90.0	11136.38	10058.06	6873.75	3501.00	1958.63	1081.80	581.34	103.78	76.89
135.0	11189.81	10098.56	7359.75	3839.06	2090.25	1445.06	658.69	103.16	77.74
180.0	11115.56	9776.81	6413.63	3356.44	1892.25	1117.69	502.20	95.85	74.64
225.0	11160.00	10246.50	7255.69	3750.19	2124.00	1283.06	638.16	109.58	78.02
270.0	11136.38	10648.69	8276.06	4762.69	2395.69	1441.13	866.25	301.50	86.40
315.0	11189.81	10509.19	8048.81	4407.75	2358.56	1487.81	875.08	144.62	79.99
360.0	11115.56	10787.06	8753.06	5090.06	2833.88	1677.94	1103.63	299.25	85.28

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	69.02	56.53	40.73	32.06	26.55	18.68	17.49	16.71	16.71
45.0	65.42	51.92	38.25	30.21	26.83	18.34	17.04	16.03	15.64
90.0	61.65	47.93	36.84	30.99	22.89	19.58	18.28	16.48	14.74
135.0	61.48	46.80	35.83	30.38	24.24	17.94	16.99	15.98	14.57
180.0	58.11	44.83	35.61	29.81	21.21	18.11	16.93	16.43	15.02
225.0	63.06	49.95	37.80	32.29	24.30	18.73	17.38	16.43	15.64
270.0	69.86	54.00	40.39	32.06	27.17	19.07	17.61	16.76	16.59
315.0	66.38	52.37	37.24	30.94	26.44	18.28	17.10	16.82	16.54
360.0	69.02	56.53	40.73	32.06	26.55	18.68	17.49	16.71	16.71

C/γ(°)	90.0
0.0	13.56
45.0	12.83
90.0	12.71
135.0	12.88
180.0	12.88
225.0	12.77
270.0	12.99
315.0	13.28
360.0	13.56