



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: 92.70.044.00	
Report No: NATA0100	Voltage(V): 35.2000
Test No: GC2019011213	Current(A): 0.1500
LampCAT: LUMILEDS LUXEON 1202S	Power (W): 5.2800
Lamp flux(lm): 805.0	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): 709.42
Efficiency(%): 88.13%
Lumens(lm)/Power(W): 135.44
Central intensity(cd): 1068.075
Maximum intensity(cd): 1068.075
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=45.1
 [C90/270]Total=45.1
Field angle(10%Imax): [C0/180]Total=79.4
 [C90/270]Total=79.4
Maximum s/h(1/2): C0_180=0.71 C90_270=0.71
Maximum s/h(1/4): C0_180=0.75 C90_270=0.75
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.84%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.391%

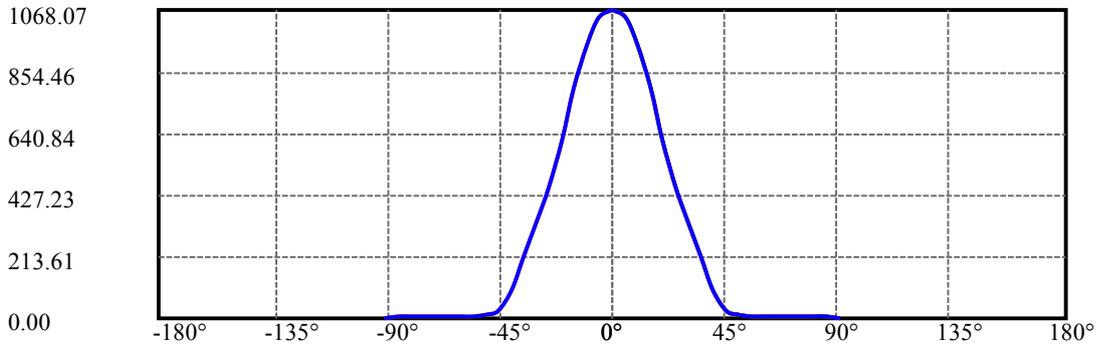
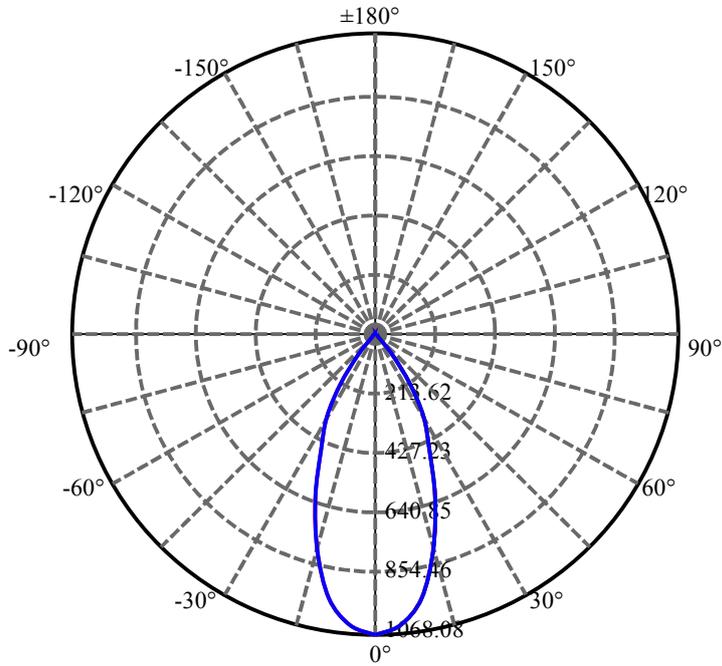
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1068.075	6.387	6.387	.793%	.900%
5.0	1038.853	49.629	56.017	6.165%	7.896%
10.0	951.912	90.606	146.623	11.255%	20.668%
15.0	796.275	112.966	259.589	14.033%	36.592%
20.0	617.878	115.836	375.425	14.390%	52.920%
25.0	454.106	105.195	480.62	13.068%	67.748%
30.0	340.277	93.259	573.879	11.585%	80.894%
35.0	214.460	67.426	641.305	8.376%	90.398%
40.0	100.280	35.332	676.638	4.389%	95.379%
45.0	24.033	9.315	685.952	1.157%	96.692%
50.0	11.208	4.706	690.659	.585%	97.355%
55.0	6.652	2.987	693.645	.371%	97.776%
60.0	5.963	2.830	696.476	.352%	98.175%
65.0	5.709	2.836	699.312	.352%	98.575%
70.0	5.618	2.894	702.206	.359%	98.983%
75.0	4.641	2.457	704.663	.305%	99.329%
80.0	3.902	2.107	706.769	.262%	99.626%
85.0	3.417	1.866	708.635	.232%	99.889%
90.0	2.869	0.786	709.421	.098%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	573.88	71.29%	80.89%
0-40	676.64	84.05%	95.38%
0-60	696.48	86.52%	98.18%
0-90	708.64	88.03%	99.89%
0-120	708.64	88.03%	99.89%
0-180	709.42	88.13%	100.00%
60-90	14.99	1.86%	2.11%
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%
0-29.66	567.54	70.50%	80.00%

ZONAL LUMEN SUMMARY

0-10	146.62
10-20	228.80
20-30	198.45
30-40	102.76
40-50	14.02
50-60	5.82
60-70	5.73
70-80	4.56
80-90	1.87
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: —————

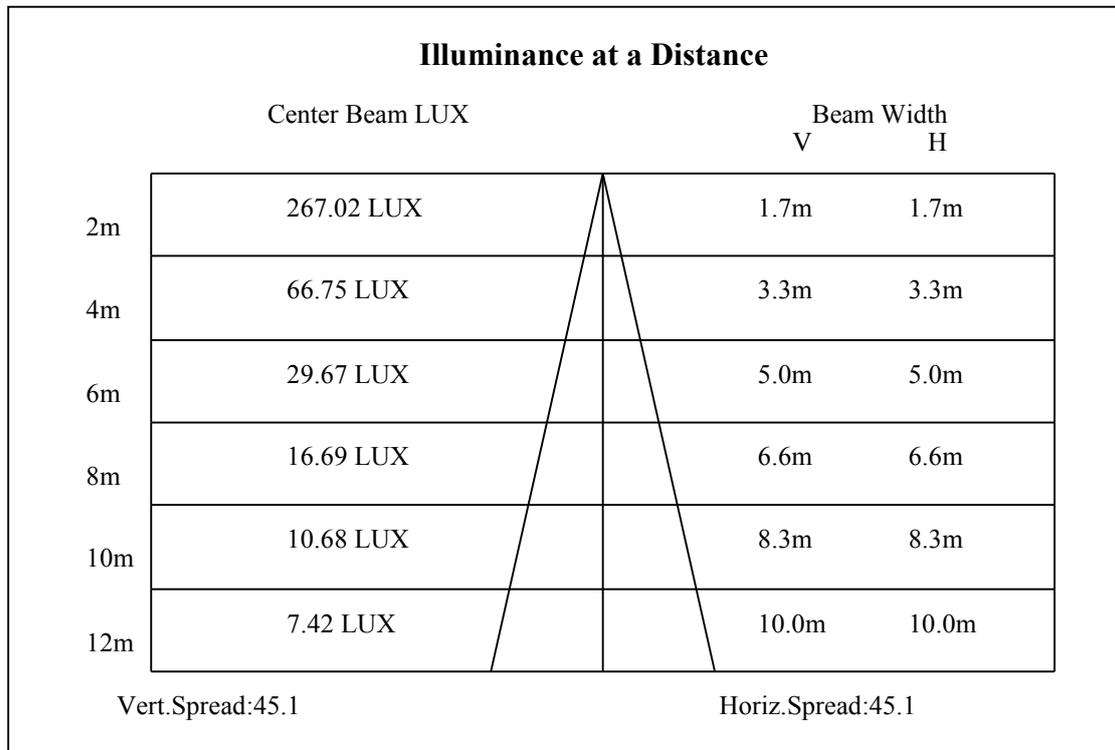
C90/C270: —————

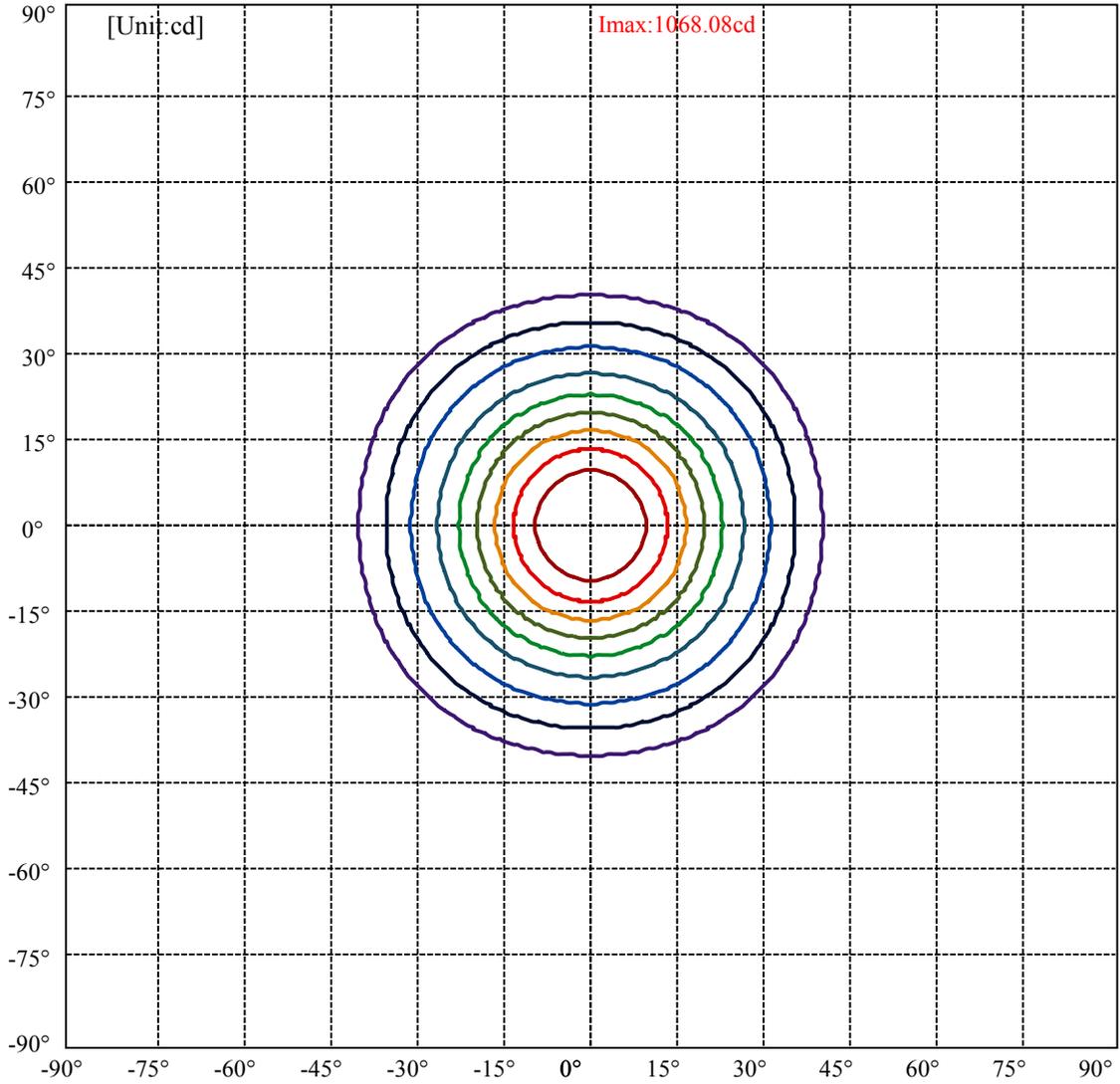
Field angle(10%Imax):C0/180Left:39.7 Right:39.7

:C90/270Left:39.7 Right:39.7

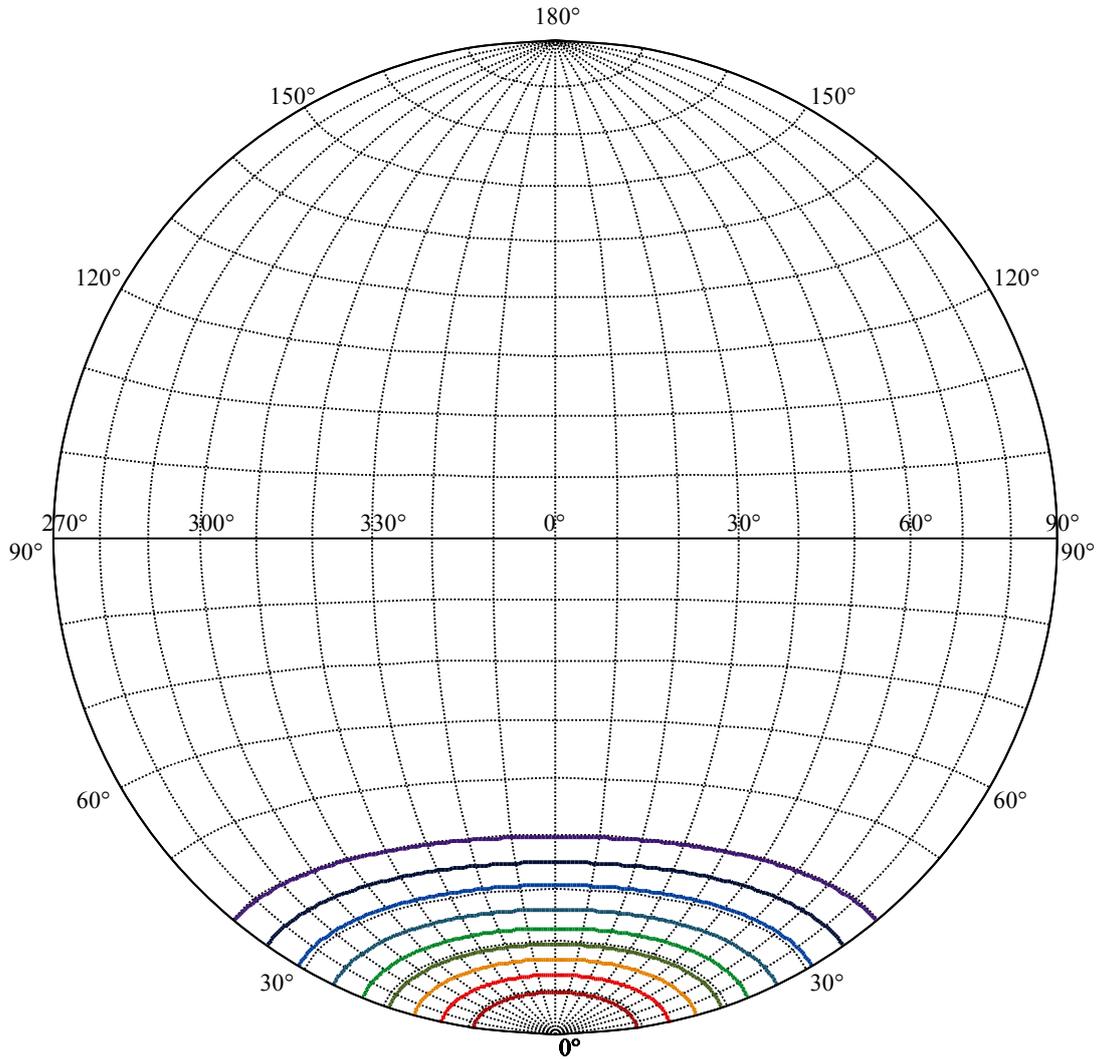
Beam Angle(50%Imax):C0/180Left:22.6 Right:22.6

:C90/270Left:22.6 Right:22.6





(10%Imax) 106.807	—
(20%Imax) 213.615	—
(30%Imax) 320.422	—
(40%Imax) 427.23	—
(50%Imax) 534.037	—
(60%Imax) 640.845	—
(70%Imax) 747.652	—
(80%Imax) 854.46	—
(90%Imax) 961.267	—



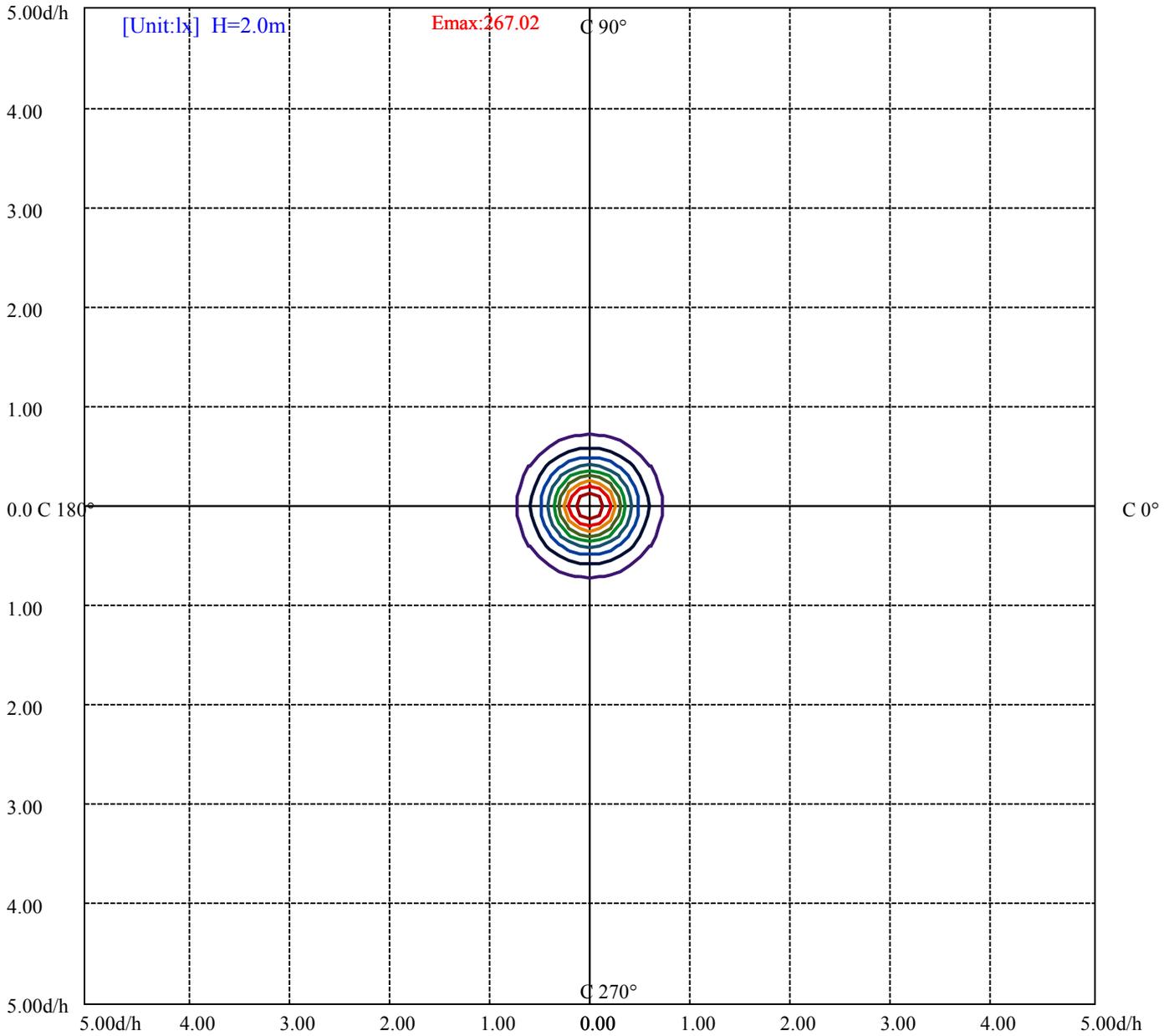
House

[Unit:cd]

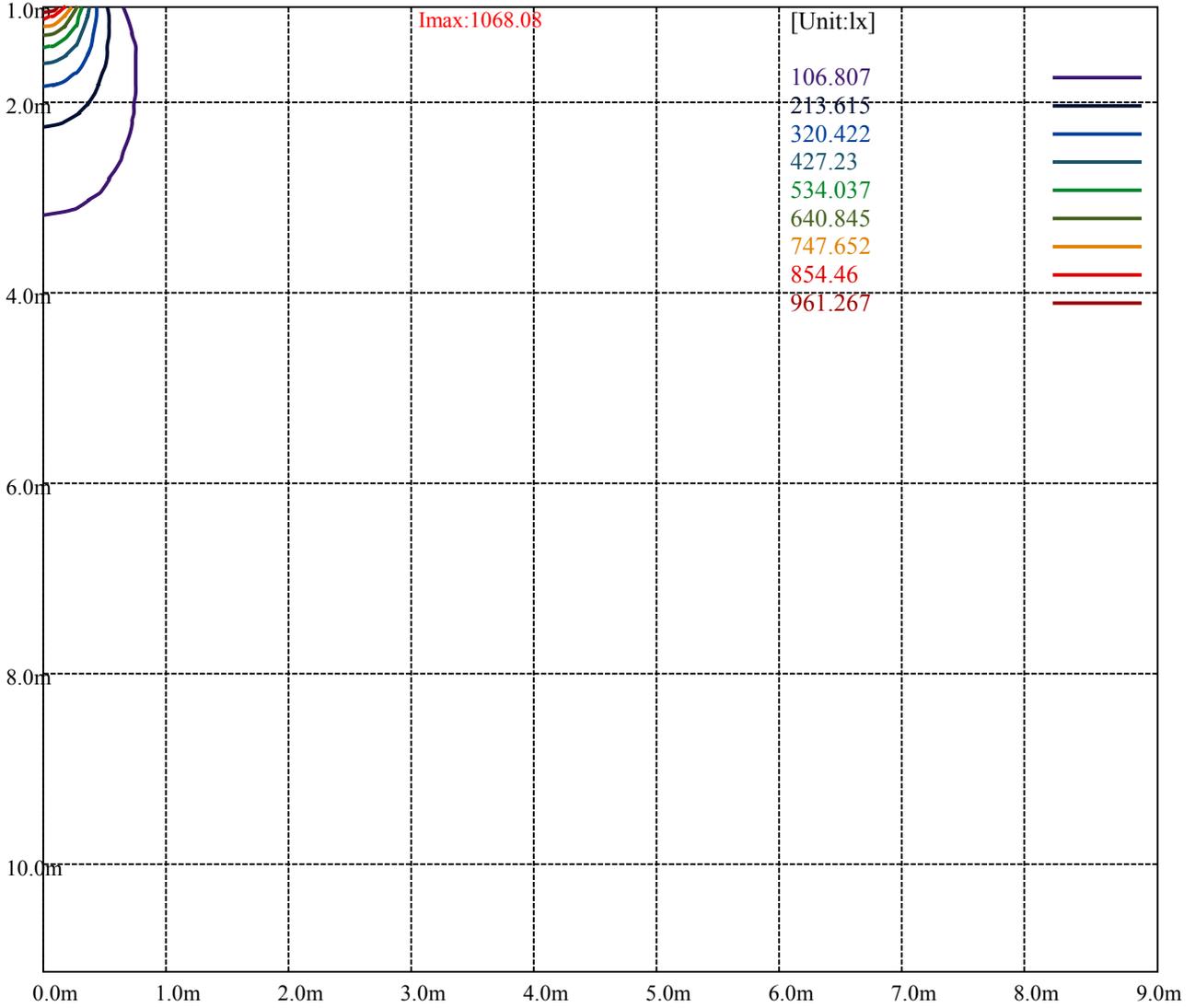
Road

Imax:1068.08

(10%Imax)	106.807	—
(20%Imax)	213.615	—
(30%Imax)	320.422	—
(40%Imax)	427.23	—
(50%Imax)	534.037	—
(60%Imax)	640.845	—
(70%Imax)	747.652	—
(80%Imax)	854.46	—
(90%Imax)	961.267	—



(10%Emax) 26.70175	—
(20%Emax) 53.40375	—
(30%Emax) 80.1055	—
(40%Emax) 106.8075	—
(50%Emax) 133.5092	—
(60%Emax) 160.211	—
(70%Emax) 186.913	—
(80%Emax) 213.6147	—
(90%Emax) 240.3168	—



Luminance Table

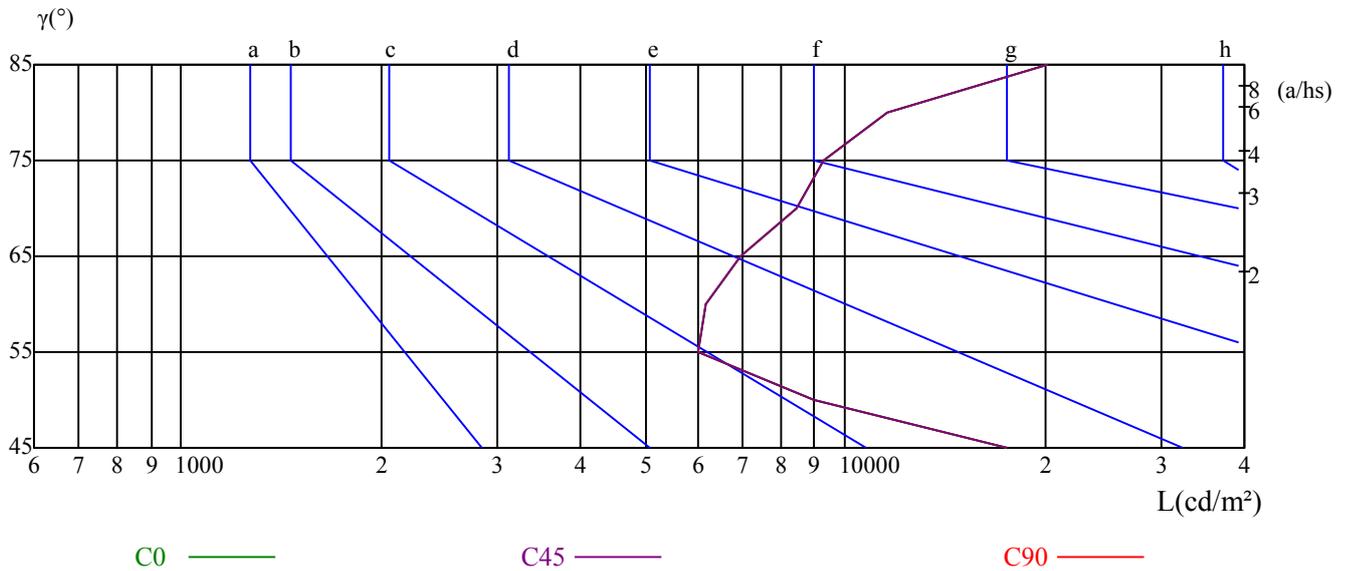
γ	45	50	55	60	65	70	75	80	85
C0	17556	9006	5990	6160	6978	8484	9261	11608	20252
C45	17556	9006	5990	6160	6978	8484	9261	11608	20252
C90	17556	9006	5990	6160	6978	8484	9261	11608	20252

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6978	6978	6978	9261	9261	9261	20252	20252	20252

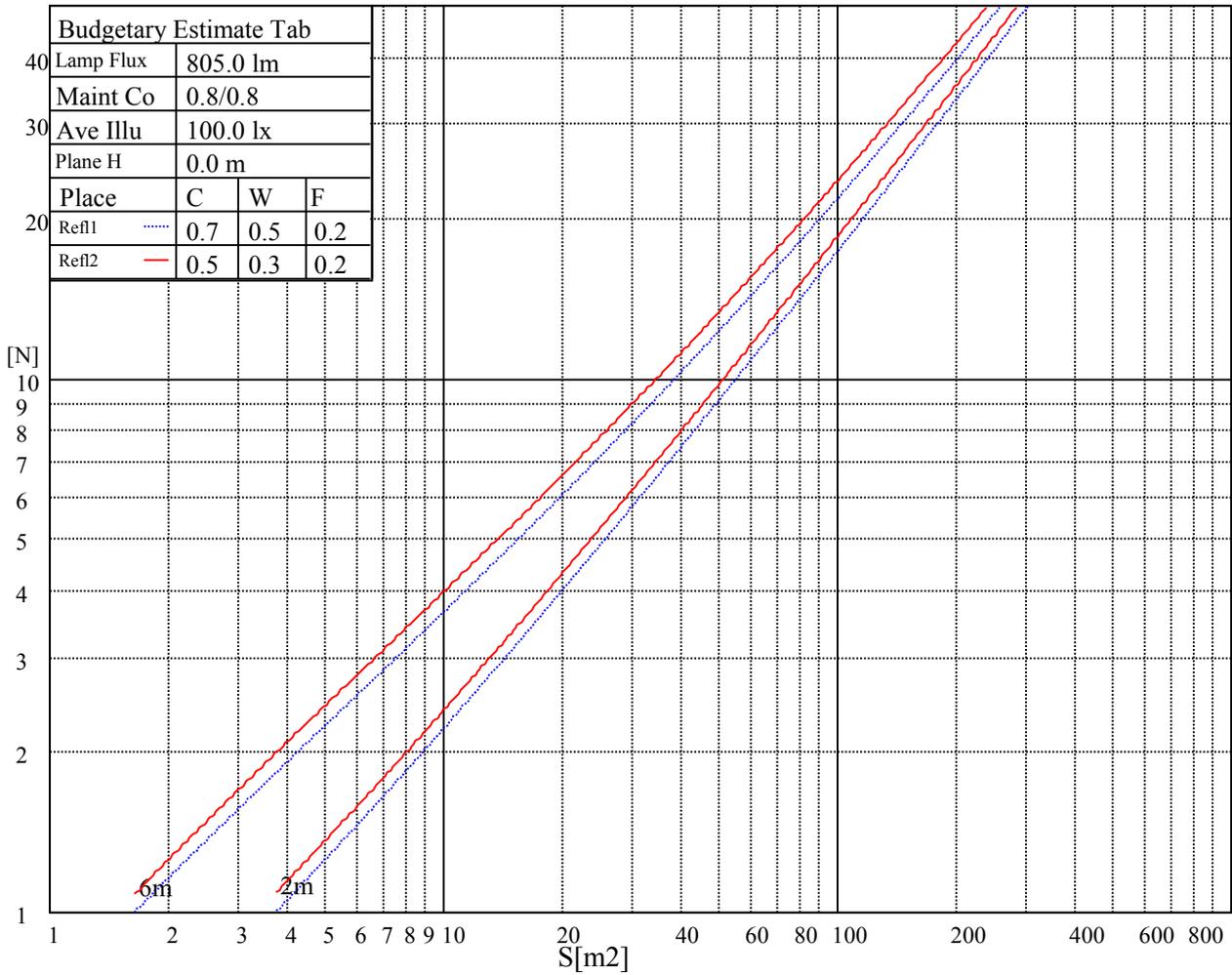
Glare Table

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

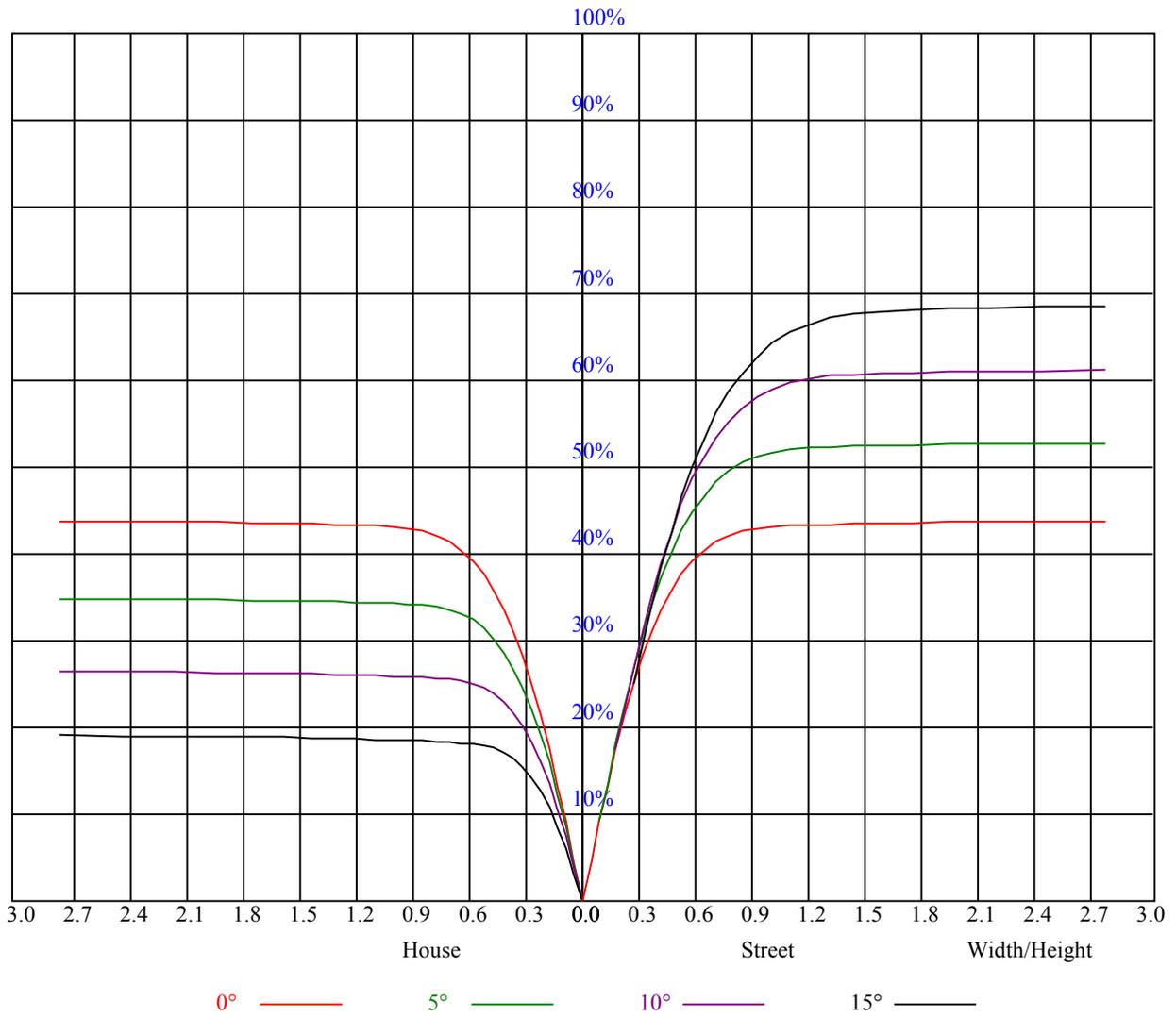
Luminance Limiting Curve



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	11.23	12.19	11.60	12.50	12.82	9.43	10.39	9.80	10.70	11.02
	3H	14.58	15.42	14.96	15.76	16.13	12.13	12.98	12.52	13.31	13.68
	4H	15.93	16.72	16.34	17.07	17.46	13.36	14.15	13.77	14.50	14.89
	6H	16.99	17.70	17.41	18.08	18.48	14.87	15.59	15.29	15.96	16.36
	8H	17.51	18.18	17.94	18.57	18.98	15.75	16.43	16.19	16.82	17.23
	12H	18.47	19.11	18.90	19.49	19.93	17.23	17.88	17.67	18.26	18.69
4H	2H	11.78	12.57	12.19	12.92	13.31	10.47	11.25	10.87	11.60	11.99
	3H	15.38	16.02	15.79	16.43	16.84	13.47	14.11	13.88	14.52	14.92
	4H	16.89	17.46	17.33	17.89	18.34	14.84	15.41	15.27	15.83	16.28
	6H	18.04	18.53	18.51	18.98	19.45	16.35	16.84	16.82	17.29	17.77
	8H	18.68	19.14	19.16	19.59	20.07	17.33	17.79	17.81	18.24	18.72
	12H	19.68	20.07	20.17	20.56	21.04	18.73	19.12	19.22	19.61	20.09
8H	4H	17.27	17.73	17.75	18.18	18.65	15.63	16.09	16.11	16.54	17.02
	6H	18.70	19.06	19.21	19.56	20.05	17.43	17.80	17.94	18.30	18.79
	8H	19.54	19.86	20.07	20.38	20.88	18.56	18.89	19.10	19.41	19.91
	12H	20.83	21.11	21.36	21.61	22.19	20.11	20.39	20.63	20.89	21.47
12H	4H	17.34	17.74	17.83	18.23	18.70	15.80	16.20	16.29	16.69	17.16
	6H	19.12	19.20	19.41	19.67	20.22	17.97	18.05	18.26	18.52	19.07
	8H	19.84	20.12	20.36	20.62	21.20	18.98	19.26	19.50	19.75	20.34
Variation with the observer position at spacings:											
S = 1.0H	4.4/-5.9					4.4/-5.9					
S = 1.5H	6.6/-4.7					6.6/-4.7					
S = 2.0H	8.1/-4.0					8.1/-4.0					
Standard tables:	BK2					BK2					
Uncorrected UGR	3.0					3.0					



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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.98	0.95	0.93	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.82
2	0.92	0.88	0.85	0.90	0.87	0.84	0.87	0.85	0.82	0.85	0.82	0.81	0.82	0.80	0.79	0.77
3	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.76	0.74	0.73
4	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.70	0.69
5	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
6	0.73	0.68	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.62
7	0.70	0.65	0.61	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
8	0.66	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.56
9	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.54
10	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52



NATA 1497-E

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	1066.89	1049.46	981.96	826.71	654.24	491.74	372.15	248.68	132.69
45.0	1070.04	1035.56	934.59	781.65	599.68	429.69	324.62	201.83	95.68
90.0	1067.96	1014.58	902.36	737.33	555.81	415.41	304.26	180.68	73.80
135.0	1067.40	1031.23	945.73	789.47	607.84	444.26	334.91	204.69	86.63
180.0	1066.89	1029.77	929.19	772.93	588.49	429.47	322.71	193.73	75.43
225.0	1070.04	1044.96	959.91	804.26	631.58	467.61	352.07	219.49	105.75
270.0	1067.96	1055.98	986.57	846.84	672.24	483.41	354.66	236.53	126.45
315.0	1067.40	1049.29	974.98	811.01	633.15	471.26	356.85	230.06	105.81
360.0	1066.89	1049.46	981.96	826.71	654.24	491.74	372.15	248.68	132.69
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	27.45	13.44	6.19	4.78	4.28	3.99	3.60	3.88	3.54
45.0	21.83	10.58	6.64	5.91	5.46	5.29	4.84	5.34	3.77
90.0	20.36	10.29	8.72	8.78	8.89	8.83	6.58	4.11	3.66
135.0	21.15	8.94	5.57	4.95	4.95	5.18	3.88	3.54	3.49
180.0	19.46	7.99	5.12	4.56	4.33	4.39	3.38	3.32	3.32
225.0	22.84	10.91	8.10	7.82	7.71	7.99	6.75	4.22	3.15
270.0	35.49	16.54	7.65	6.47	6.13	5.68	4.78	3.54	3.15
315.0	23.68	10.97	5.23	4.44	3.94	3.60	3.32	3.26	3.26
360.0	27.45	13.44	6.19	4.78	4.28	3.99	3.60	3.88	3.54
C/ γ (°)	90.0								
0.0	2.98								
45.0	2.81								
90.0	2.81								
135.0	2.81								
180.0	2.87								
225.0	2.87								
270.0	2.87								
315.0	2.93								
360.0	2.98								