



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: 1567-E	
Luminaire: 92.70.043.00	
Report No: NATA0100	Voltage(V): 9.6800
Test No: GC2019022010	Current(A): 0.4000
LampCAT: CREE CXA1304	Power (W): 3.9720
Lamp flux(lm): 384.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 21	Width(mm): 21
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 335.06
Efficiency(%): 87.25%
Lumens(lm)/Power(W): 84.59
Central intensity(cd): 206.606
Maximum intensity(cd): 210.326
Angle of maximum intensity: C=0.0 γ =15.0
Beam Angle(50%Imax): [C0/180]Total=83.6
 [C90/270]Total=83.6
Field angle(10%Imax): [C0/180]Total=102.6
 [C90/270]Total=102.6
Maximum s/h(1/2): C0_180=1.24 C90_270=1.24
Maximum s/h(1/4): C0_180=1.22 C90_270=1.22
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.49%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.086%

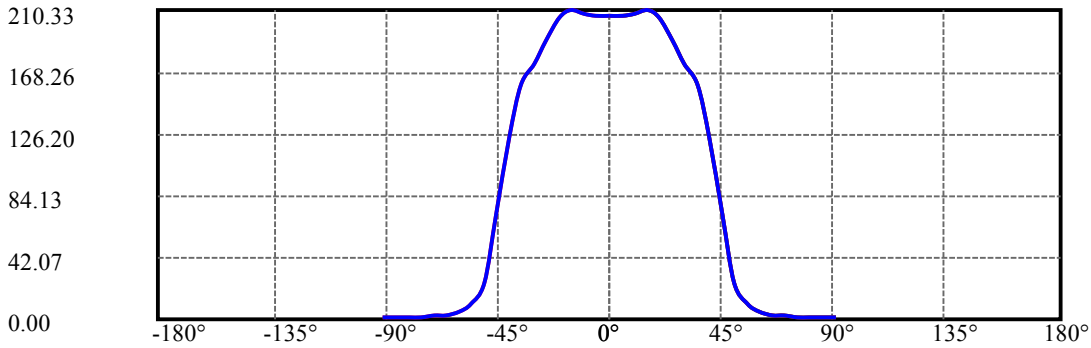
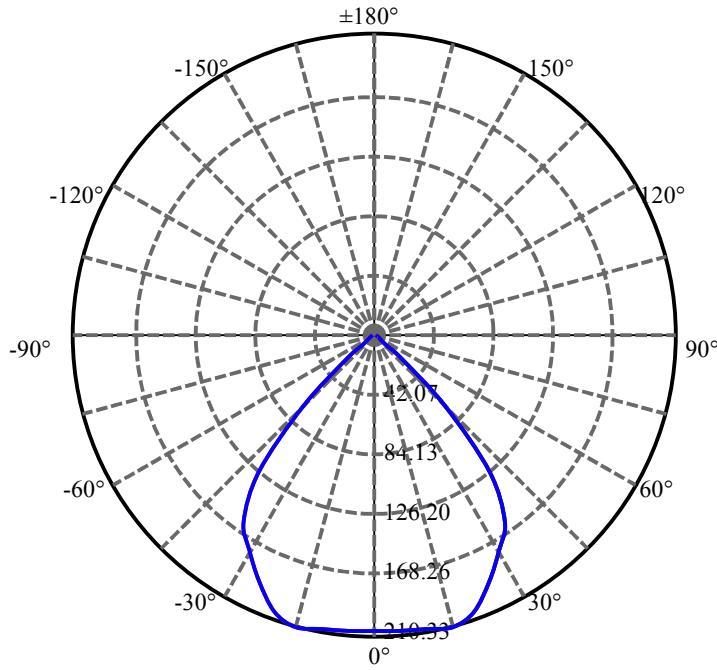
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	206.606	1.236	1.236	.322%	.369%
5.0	206.705	9.875	11.111	2.572%	3.316%
10.0	208.146	19.812	30.922	5.159%	9.229%
15.0	210.326	29.839	60.761	7.770%	18.135%
20.0	205.256	38.480	99.241	10.021%	29.619%
25.0	189.520	43.903	143.144	11.433%	42.722%
30.0	173.953	47.675	190.819	12.415%	56.951%
35.0	158.738	49.907	240.726	12.997%	71.846%
40.0	124.657	43.921	284.647	11.438%	84.955%
45.0	70.270	27.236	311.884	7.093%	93.084%
50.0	24.764	10.398	322.282	2.708%	96.187%
55.0	10.533	4.729	327.011	1.232%	97.599%
60.0	5.330	2.530	329.541	.659%	98.354%
65.0	3.115	1.547	331.089	.403%	98.816%
70.0	2.194	1.130	332.219	.294%	99.153%
75.0	1.779	0.942	333.16	.245%	99.434%
80.0	1.540	0.831	333.992	.216%	99.682%
85.0	1.399	0.764	334.756	.199%	99.910%
90.0	1.097	0.301	335.056	.078%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	190.82	49.69%	56.95%
0-40	284.65	74.13%	84.96%
0-60	329.54	85.82%	98.35%
0-90	334.76	87.18%	99.91%
0-120	334.76	87.18%	99.91%
0-180	335.06	87.25%	100.00%
60-90	7.74	2.02%	2.31%
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%
0-38.11	268.05	69.80%	80.00%

ZONAL LUMEN SUMMARY

0-10	30.92
10-20	68.32
20-30	91.58
30-40	93.83
40-50	37.63
50-60	7.26
60-70	2.68
70-80	1.77
80-90	0.76
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: —————

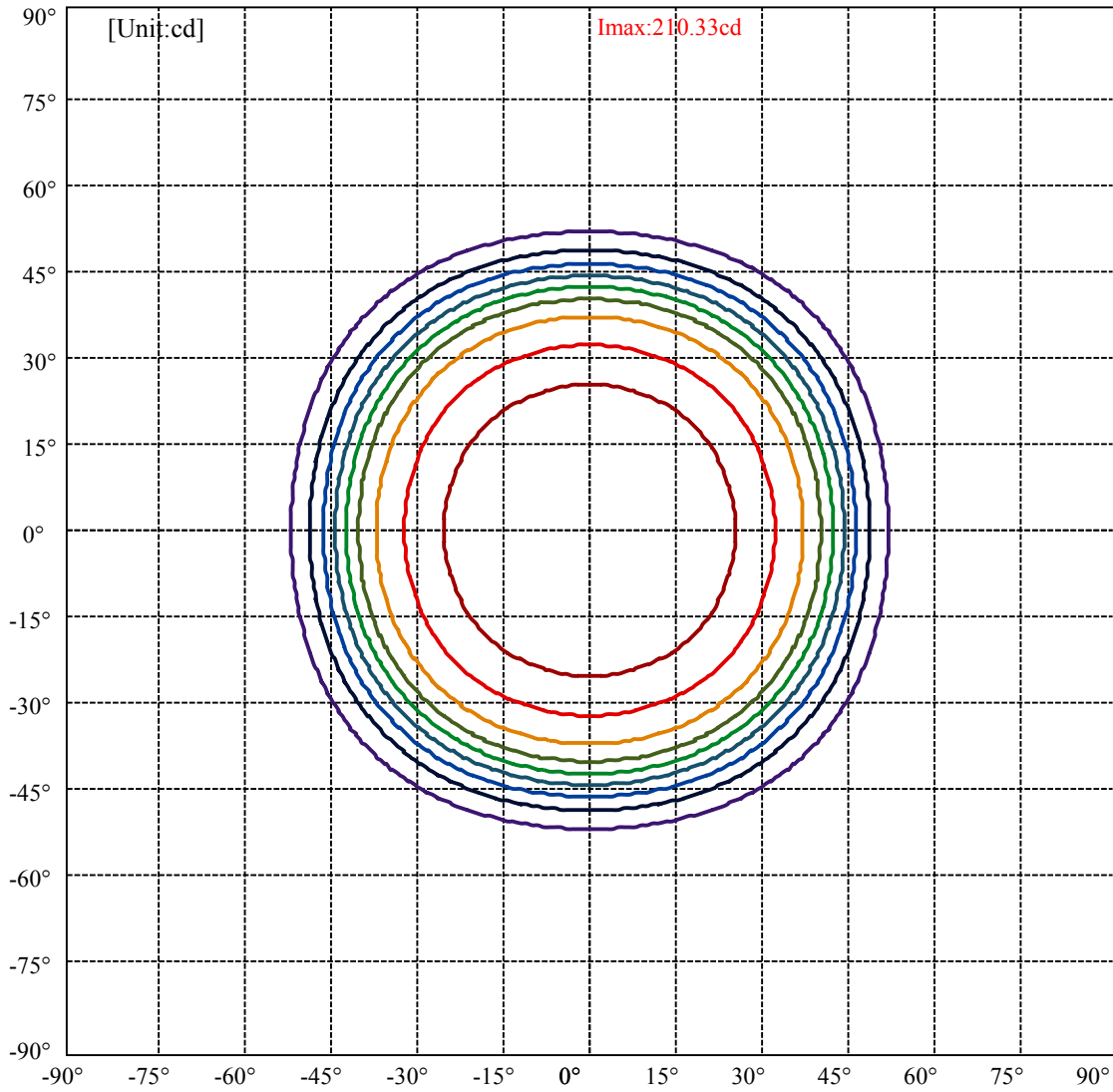
C90/C270: —————

Field angle(10%Imax):C0/180Left:66.3 Right:36.3

:C90/270Left:66.3 Right:36.3

Beam Angle(50%Imax):C0/180Left:56.8 Right:26.8

:C90/270Left:56.8 Right:26.8

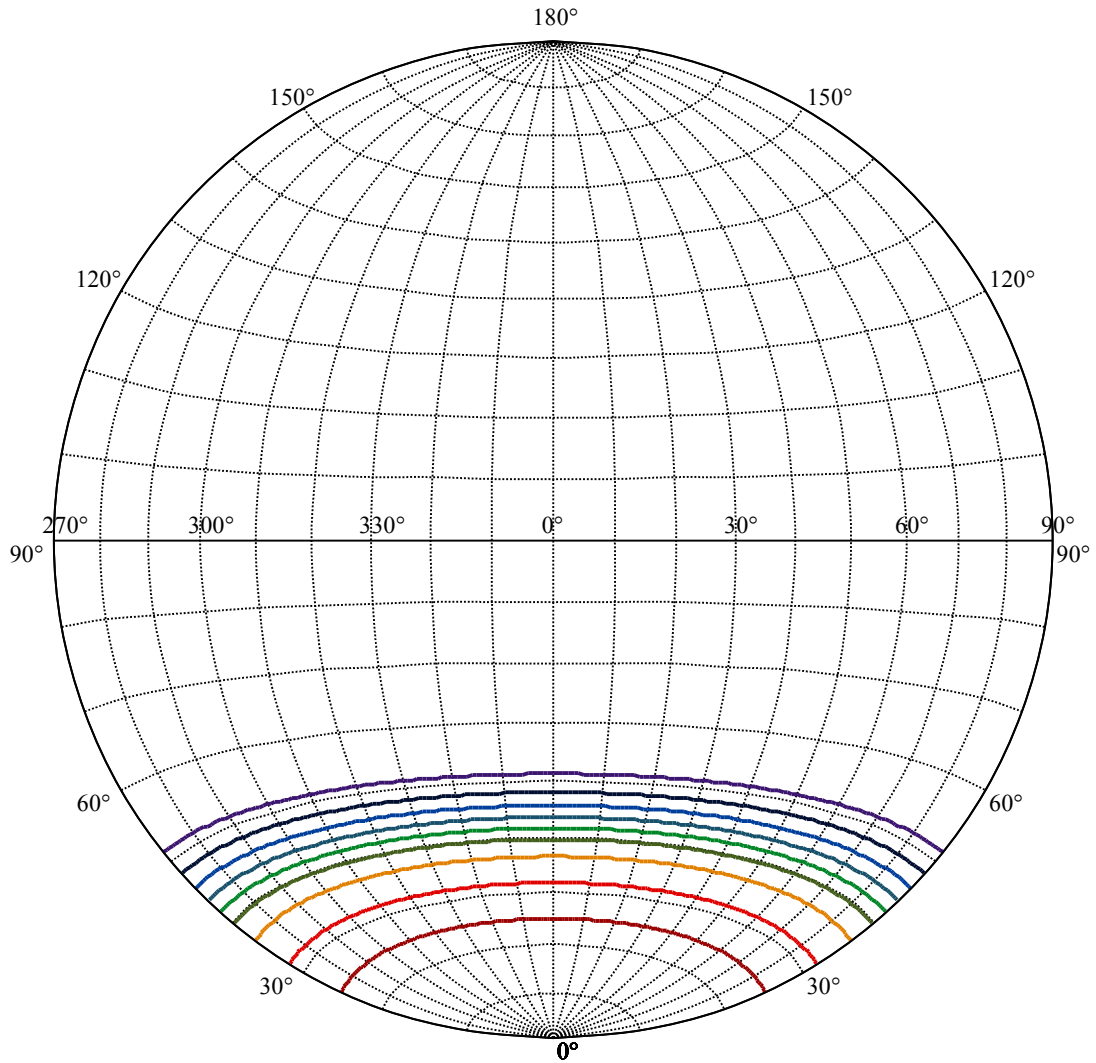


(10%Imax) 21.0326	—
(20%Imax) 42.0652	—
(30%Imax) 63.0977	—
(40%Imax) 84.1303	—
(50%Imax) 105.163	—
(60%Imax) 126.195	—
(70%Imax) 147.228	—
(80%Imax) 168.261	—
(90%Imax) 189.293	—

Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/2/20
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50












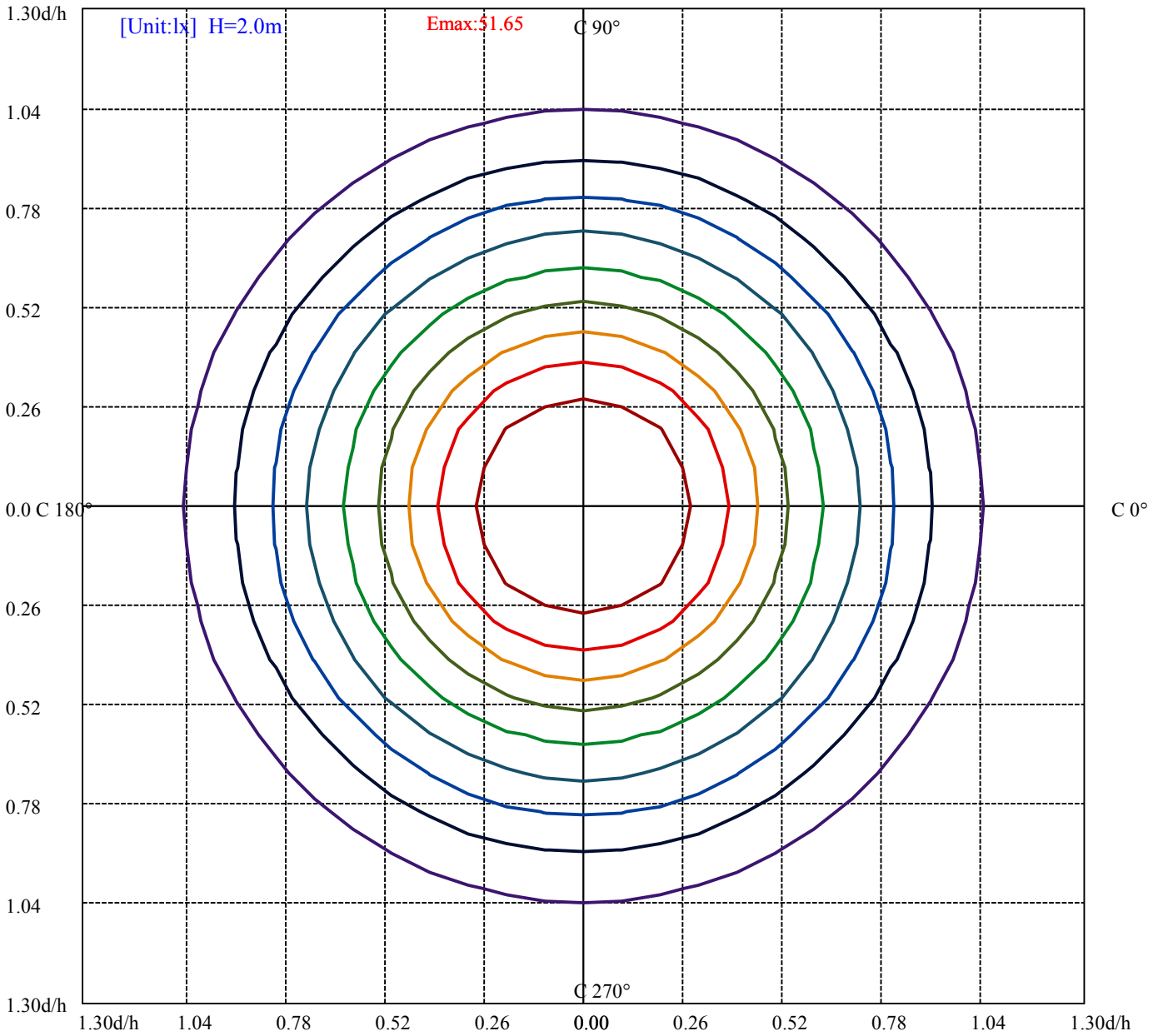
House

[Unit:cd]

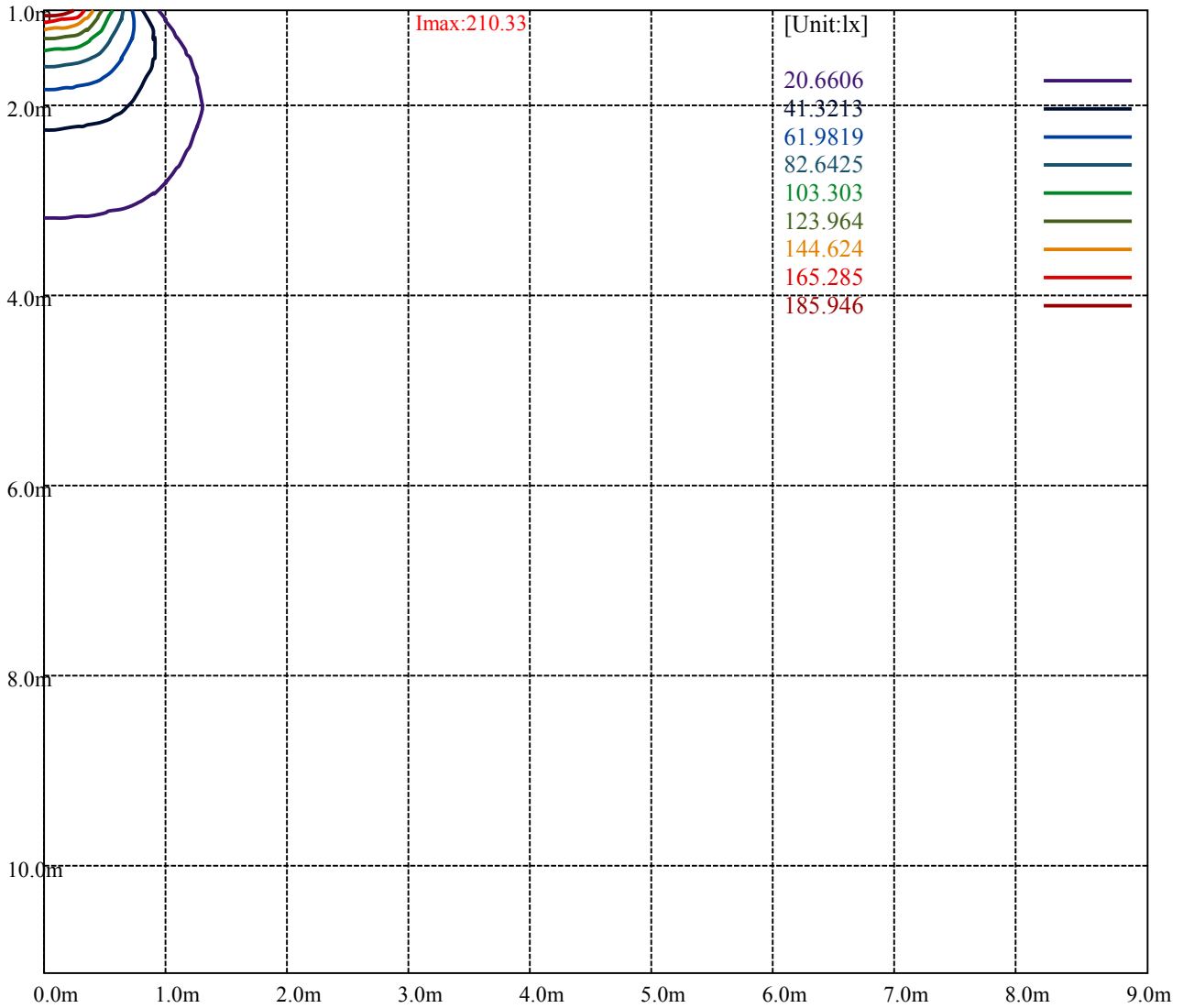
Road

Imax:210.33

(10%Imax) 21.0326	
(20%Imax) 42.0652	
(30%Imax) 63.0977	
(40%Imax) 84.1303	
(50%Imax) 105.163	
(60%Imax) 126.195	
(70%Imax) 147.228	
(80%Imax) 168.261	
(90%Imax) 189.293	



(10%Emax) 5.16515	—
(20%Emax) 10.33033	—
(30%Emax) 15.49547	—
(40%Emax) 20.66063	—
(50%Emax) 25.82575	—
(60%Emax) 30.991	—
(70%Emax) 36.156	—
(80%Emax) 41.32125	—
(90%Emax) 46.4865	—



Luminance Table

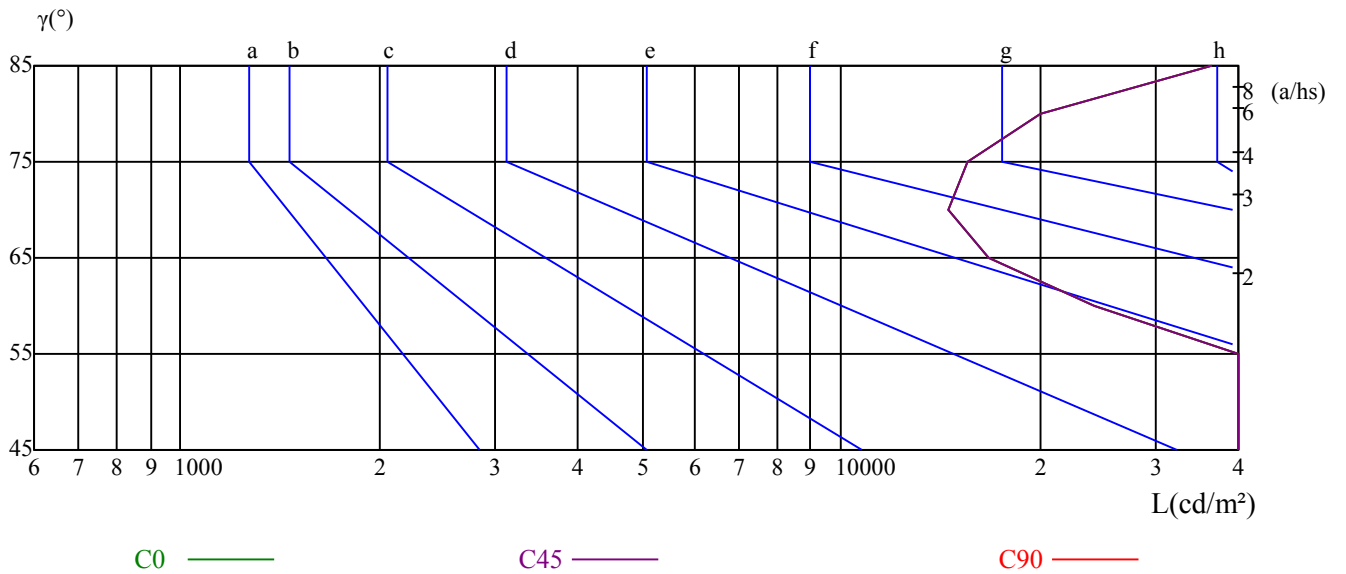
γ	45	50	55	60	65	70	75	80	85
C0	225345	87361	41640	24171	16713	14544	15585	20108	36404
C45	225345	87361	41640	24171	16713	14544	15585	20108	36404
C90	225345	87361	41640	24171	16713	14544	15585	20108	36404

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
16713	16713	16713	15585	15585	15585	36404	36404	36404

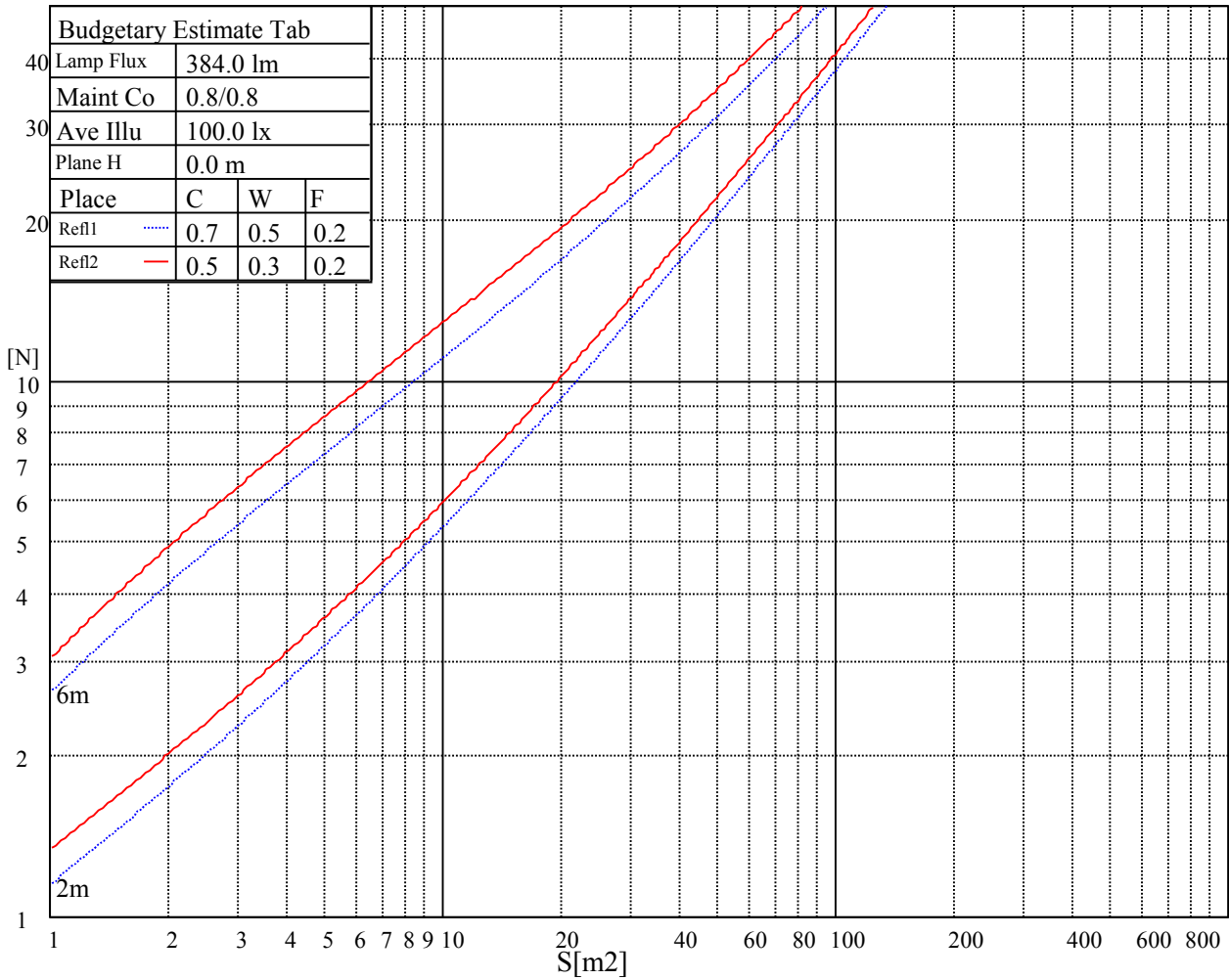
Glare Table

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

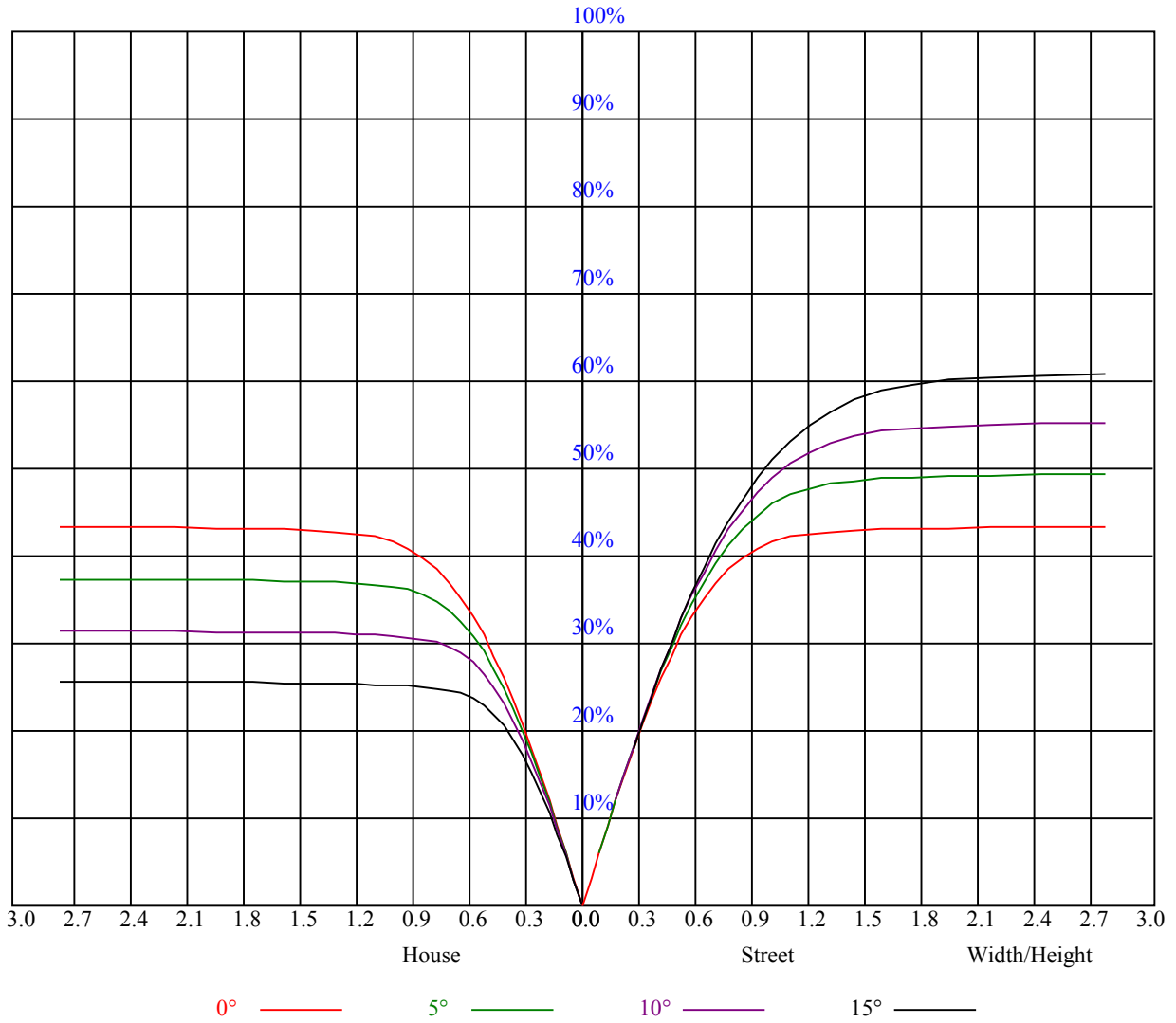
Luminance Limiting Curve



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	22.04	23.20	22.40	23.51	23.83	21.76	22.92	22.13	23.23	23.55
	3H	22.47	23.49	22.85	23.83	24.19	22.23	23.25	22.61	23.58	23.94
	4H	22.72	23.66	23.12	24.02	24.40	22.51	23.45	22.91	23.81	24.19
	6H	23.07	23.94	23.49	24.31	24.70	22.91	23.78	23.33	24.15	24.55
	8H	23.32	24.13	23.75	24.52	24.93	23.20	24.02	23.64	24.41	24.82
	12H	23.85	24.63	24.28	25.01	25.44	23.83	24.61	24.27	24.99	25.43
4H	2H	22.04	22.98	22.44	23.34	23.72	21.78	22.73	22.19	23.08	23.47
	3H	22.65	23.41	23.06	23.82	24.23	22.43	23.20	22.84	23.60	24.01
	4H	23.03	23.71	23.46	24.13	24.58	22.86	23.54	23.29	23.96	24.41
	6H	23.52	24.11	23.99	24.56	25.03	23.41	24.00	23.88	24.45	24.92
	8H	23.91	24.45	24.38	24.90	25.37	23.85	24.39	24.32	24.84	25.32
	12H	24.57	25.05	25.06	25.54	26.01	24.62	25.09	25.10	25.58	26.06
8H	4H	23.15	23.70	23.62	24.14	24.62	22.99	23.54	23.46	23.99	24.46
	6H	23.86	24.31	24.37	24.81	25.29	23.78	24.22	24.28	24.72	25.20
	8H	24.42	24.82	24.95	25.34	25.84	24.40	24.80	24.92	25.31	25.81
	12H	25.49	25.85	26.01	26.35	26.92	25.56	25.91	26.08	26.41	26.98
12H	4H	23.17	23.65	23.66	24.13	24.61	23.01	23.49	23.50	23.98	24.45
	6H	24.40	24.37	24.50	24.84	25.39	24.32	24.29	24.42	24.76	25.30
	8H	24.64	24.99	25.16	25.49	26.07	24.62	24.97	25.13	25.47	26.04
Variation with the observer position at spacings:											
S = 1.0H	2.6/-7.4					2.6/-7.4					
S = 1.5H	4.4/-8.8					4.4/-8.8					
S = 2.0H	6.2/-8.3					6.2/-8.3					
Standard tables:	BK0					BK0					
Uncorrected UGR	9.2					9.2					



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	0.93	0.91	0.94	0.92	0.89	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.82	0.80
2	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.78	0.81	0.79	0.76	0.79	0.77	0.75	0.73
3	0.81	0.76	0.73	0.80	0.76	0.72	0.78	0.74	0.71	0.76	0.72	0.70	0.74	0.71	0.69	0.67
4	0.75	0.70	0.66	0.74	0.69	0.65	0.72	0.68	0.65	0.70	0.67	0.64	0.69	0.66	0.63	0.62
5	0.70	0.64	0.60	0.69	0.64	0.60	0.67	0.63	0.59	0.66	0.62	0.58	0.64	0.61	0.58	0.57
6	0.65	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
7	0.60	0.55	0.50	0.60	0.54	0.50	0.59	0.54	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.48
8	0.56	0.51	0.47	0.56	0.50	0.47	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.45
9	0.53	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.41
10	0.50	0.44	0.40	0.49	0.44	0.40	0.48	0.43	0.40	0.48	0.43	0.40	0.47	0.43	0.40	0.39



NATA 1567-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	206.66	205.76	205.37	205.88	203.01	187.59	174.54	160.82	124.76
45.0	205.99	204.86	201.83	201.15	198.00	182.64	167.06	149.18	112.78
90.0	207.45	206.94	205.14	205.54	199.52	182.87	164.25	145.01	109.07
135.0	206.33	207.62	208.41	211.39	206.66	189.51	173.81	159.75	128.36
180.0	206.66	208.29	211.95	214.26	208.46	193.05	179.16	165.26	131.29
225.0	205.99	207.73	213.69	217.24	209.98	195.08	178.48	164.08	131.91
270.0	207.45	207.06	210.71	215.27	211.61	196.54	180.23	165.88	136.58
315.0	206.33	205.37	208.07	211.89	204.81	188.89	174.09	159.92	122.51
360.0	206.66	205.76	205.37	205.88	203.01	187.59	174.54	160.82	124.76

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	73.74	24.69	10.52	5.51	3.26	2.25	1.86	1.63	1.52
45.0	61.43	23.51	10.58	5.18	3.15	2.25	1.86	1.69	1.52
90.0	56.08	20.76	10.86	4.95	2.87	2.14	1.69	1.46	1.35
135.0	73.13	25.88	11.70	5.63	3.15	2.19	1.80	1.52	1.41
180.0	70.71	23.57	10.01	4.89	2.93	2.14	1.74	1.46	1.35
225.0	75.60	25.37	10.41	5.29	3.09	2.14	1.74	1.52	1.41
270.0	84.38	32.46	11.08	6.19	3.54	2.31	1.80	1.52	1.29
315.0	67.11	21.88	9.11	5.01	2.93	2.14	1.74	1.52	1.35
360.0	73.74	24.69	10.52	5.51	3.26	2.25	1.86	1.63	1.52

C/γ(°)	90.0
0.0	1.18
45.0	1.13
90.0	1.07
135.0	1.07
180.0	1.01
225.0	1.13
270.0	1.07
315.0	1.13
360.0	1.18