



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: 1-0804-S
Luminaire: 92.70.208.00
Report No: NATA0100
Test No: GC2019092605
LampCAT: LUMILEDS LUXEON 5050
Lamp flux(lm): 459.6
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 24.9400
Current(A): 0.1980
Power (W): 4.9400
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 400.45
Efficiency(%): 87.13%
Lumens(lm)/Power(W): 81.06
Central intensity(cd): 554.681
Maximum intensity(cd): 555.075
Angle of maximum intensity: C=270.0 γ =5.0
Beam Angle(50%Imax): [C0/180]Total=51.4
[C90/270]Total=51.1
Field angle(10%Imax): [C0/180]Total=67.2
[C90/270]Total=66.9
Maximum s/h(1/2): C0_180=0.82 C90_270=0.83
Maximum s/h(1/4): C0_180=0.73 C90_270=0.73
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.13%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.557%

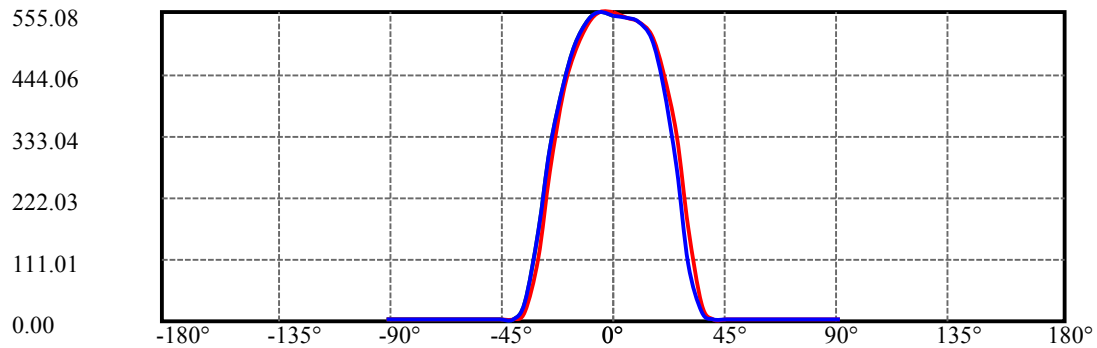
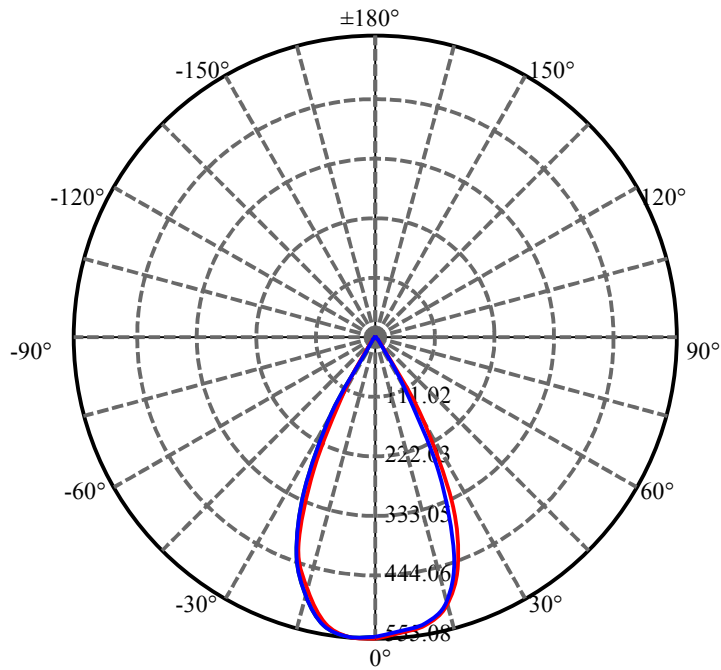
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	551.559	0.000	0	.000%	.000%
5.0	548.170	13.147	13.147	2.861%	3.283%
10.0	537.040	38.821	51.968	8.447%	12.977%
15.0	504.134	61.762	113.73	13.439%	28.401%
20.0	440.142	77.822	191.552	16.933%	47.834%
25.0	328.739	80.641	272.193	17.547%	67.972%
30.0	191.848	65.881	338.074	14.335%	84.423%
35.0	67.170	38.142	376.216	8.299%	93.948%
40.0	11.770	13.171	389.386	2.866%	97.237%
45.0	2.377	2.619	392.006	.570%	97.891%
50.0	2.074	0.899	392.905	.196%	98.116%
55.0	1.955	0.876	393.781	.191%	98.335%
60.0	1.891	0.889	394.67	.193%	98.557%
65.0	1.856	0.911	395.581	.198%	98.784%
70.0	1.842	0.936	396.518	.204%	99.018%
75.0	1.828	0.959	397.477	.209%	99.258%
80.0	1.835	0.980	398.457	.213%	99.502%
85.0	1.828	0.995	399.453	.217%	99.751%
90.0	1.814	0.997	400.45	.217%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	338.07	73.56%	84.42%
0-40	389.39	84.73%	97.24%
0-60	394.67	85.88%	98.56%
0-90	399.45	86.92%	99.75%
0-120	399.45	86.92%	99.75%
0-180	400.45	87.13%	100.00%
60-90	5.67	1.23%	1.42%
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%
0-28.66	320.36	69.71%	80.00%

ZONAL LUMEN SUMMARY

0-10	51.97
10-20	139.58
20-30	146.52
30-40	51.31
40-50	3.52
50-60	1.77
60-70	1.85
70-80	1.94
80-90	1.00
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



C270(Max): —————

C0/C180: —————

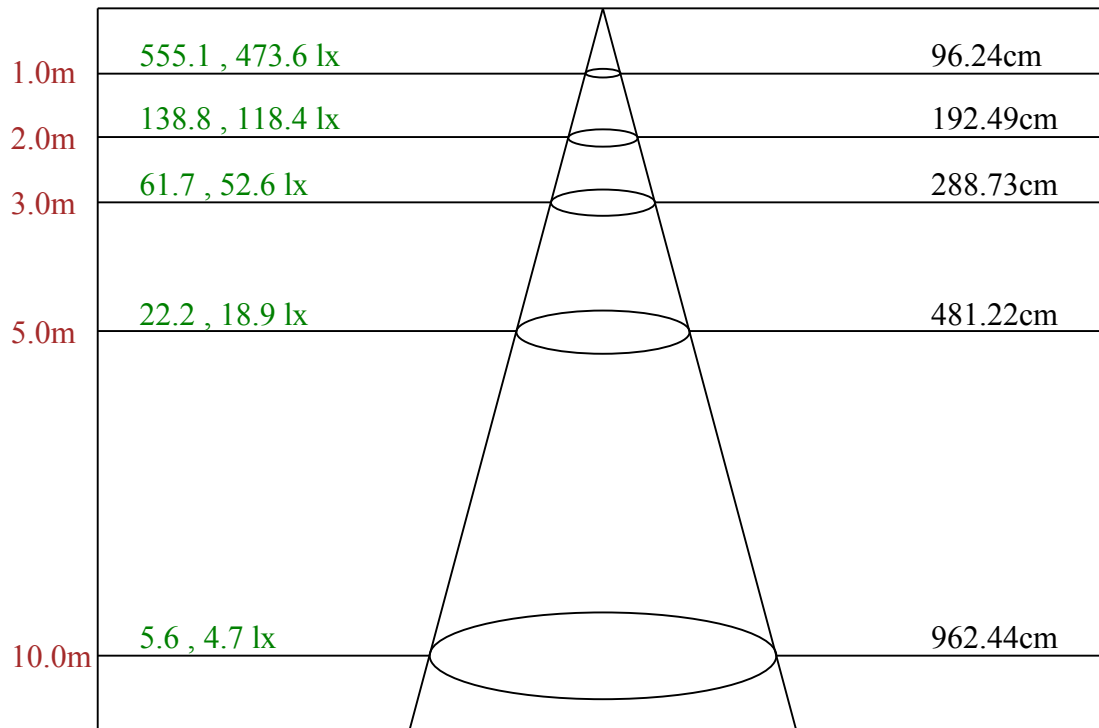
C90/C270: —————

Field angle(10%Imax):C0/180Left:33.0 Right:34.2

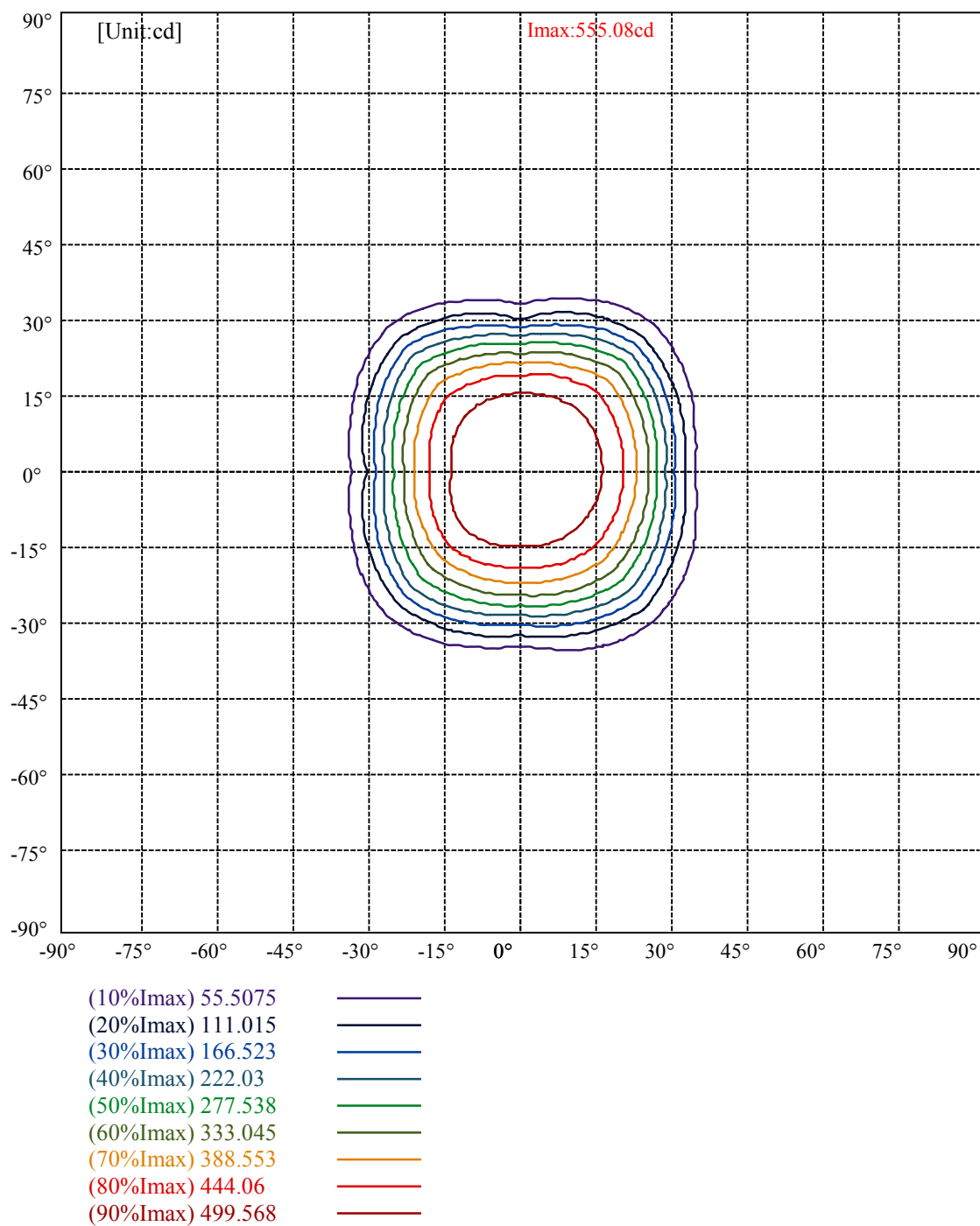
:C90/270Left:29.1 Right:37.8

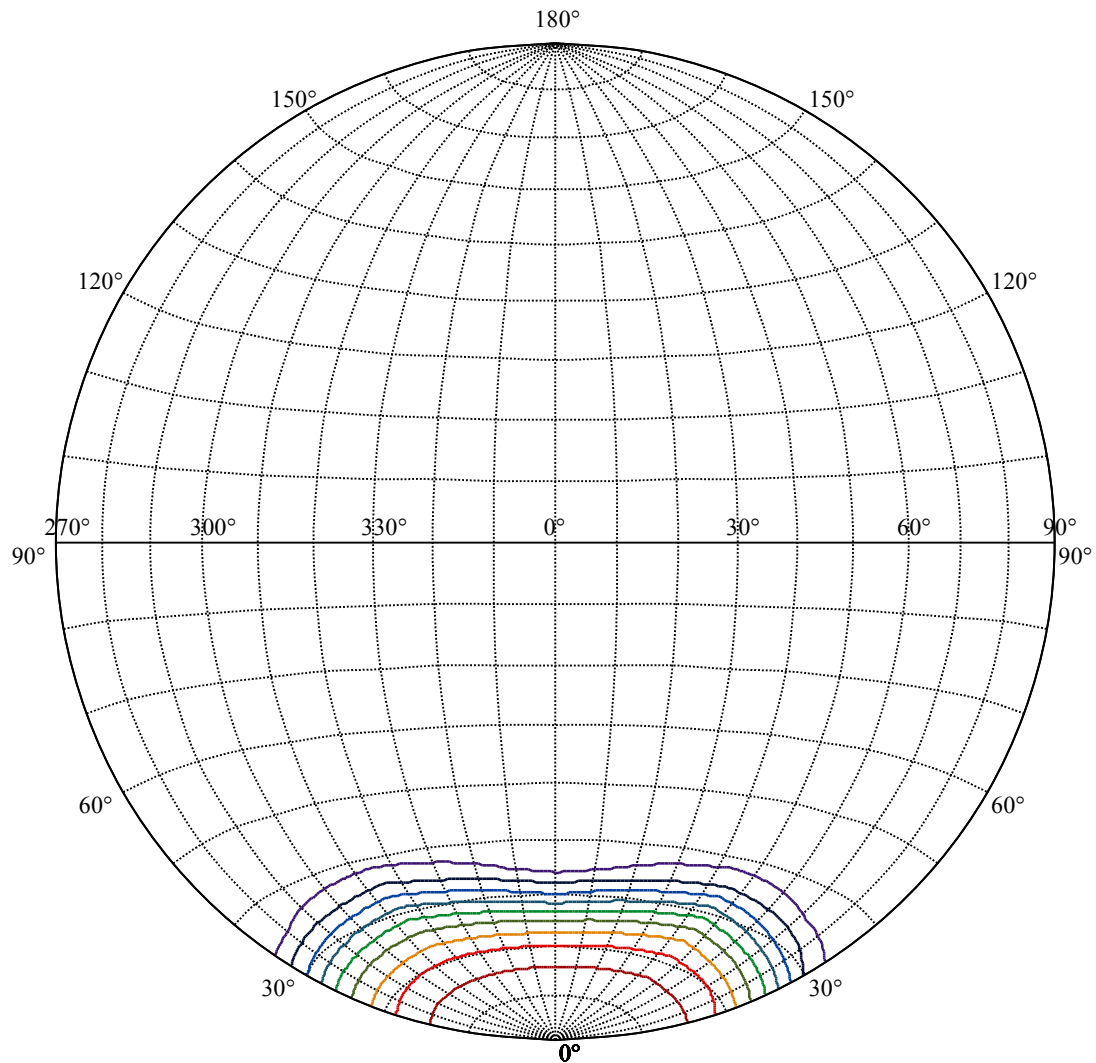
Beam Angle(50%Imax):C0/180Left:24.7 Right:26.7

:C90/270Left:21.1 Right:29.9



Max , Ave Beam angle of C270 plane 51.39





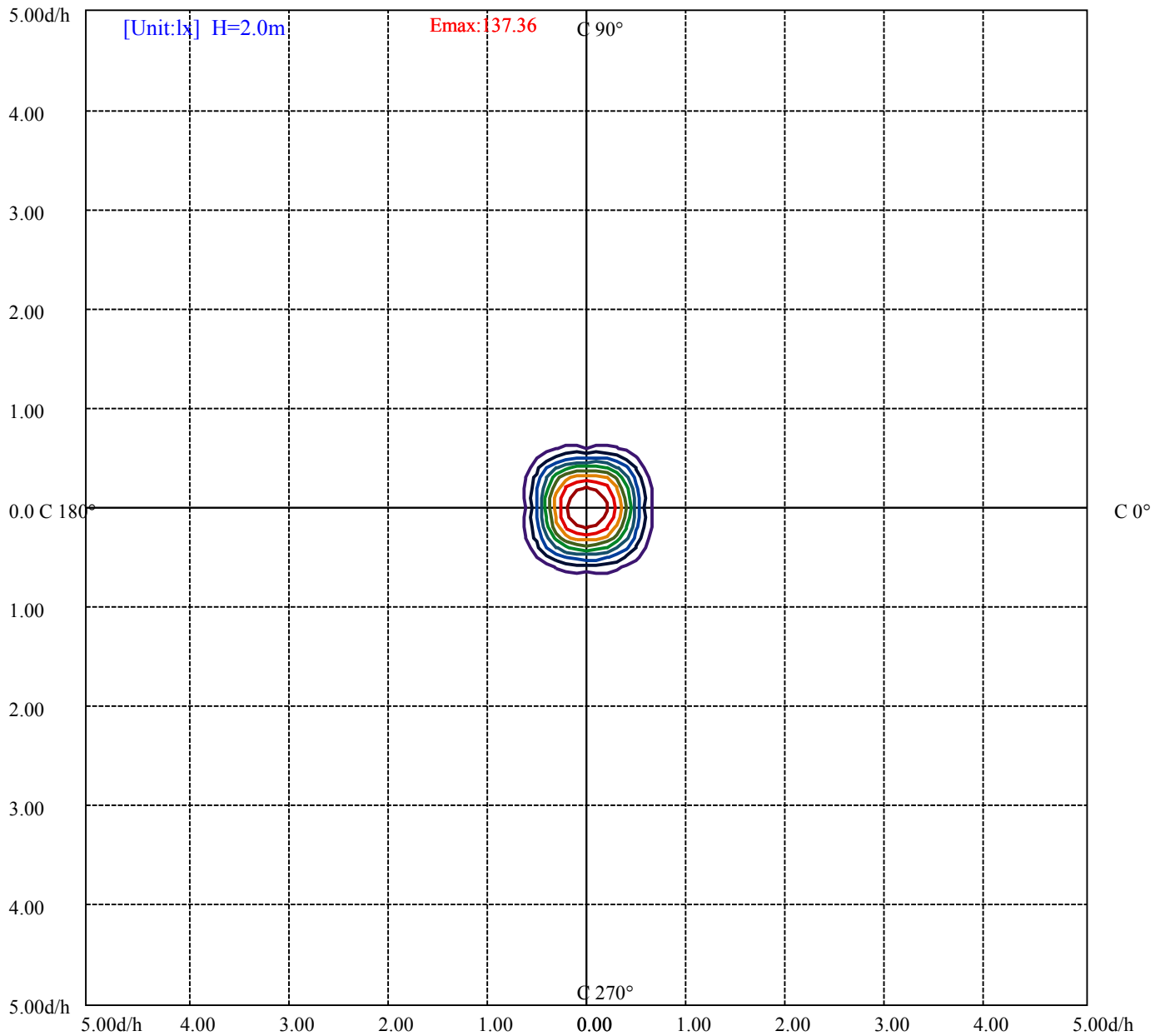
House

[Unit:cd]

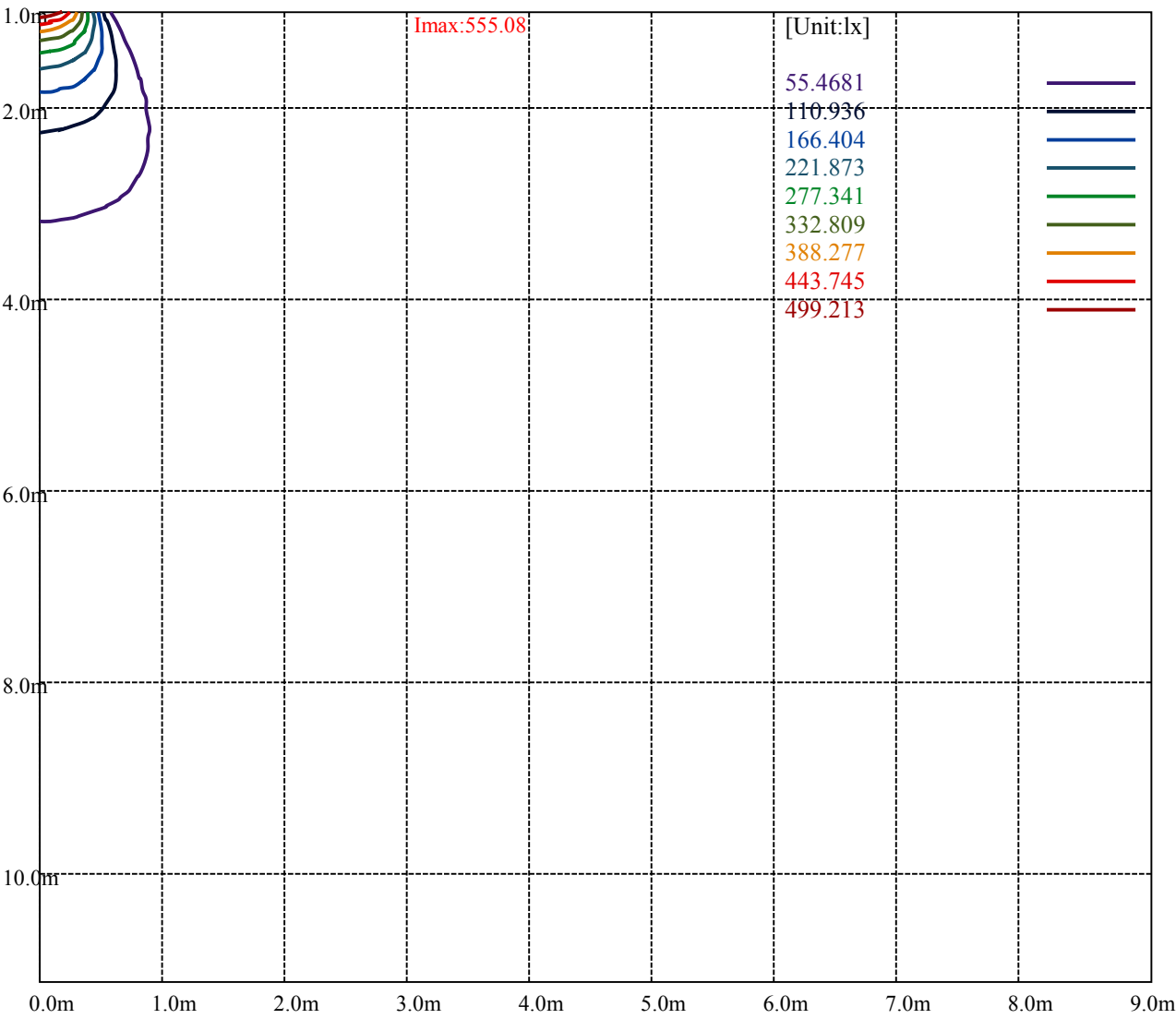
Road

Imax:555.08
(10%Imax) 55.5075
(20%Imax) 111.015
(30%Imax) 166.523
(40%Imax) 222.03
(50%Imax) 277.538
(60%Imax) 333.045
(70%Imax) 388.553
(80%Imax) 444.06
(90%Imax) 499.568





(10%Emax) 13.73625	—
(20%Emax) 27.4725	—
(30%Emax) 41.20875	—
(40%Emax) 54.945	—
(50%Emax) 68.68125	—
(60%Emax) 82.4175	—
(70%Emax) 96.15375	—
(80%Emax) 109.89	—
(90%Emax) 123.6263	—



Luminance Table

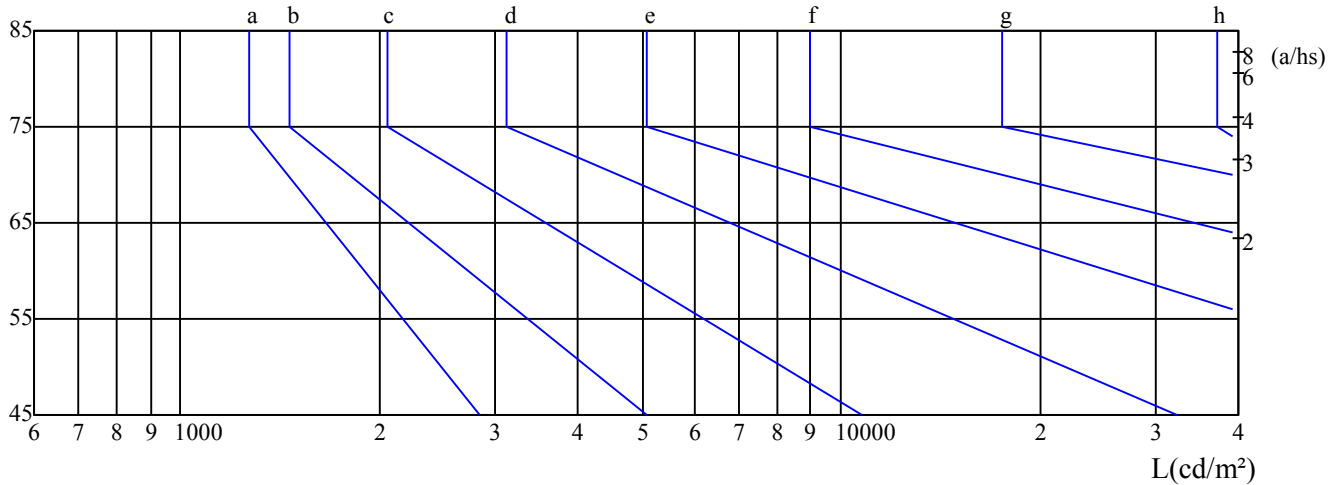
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

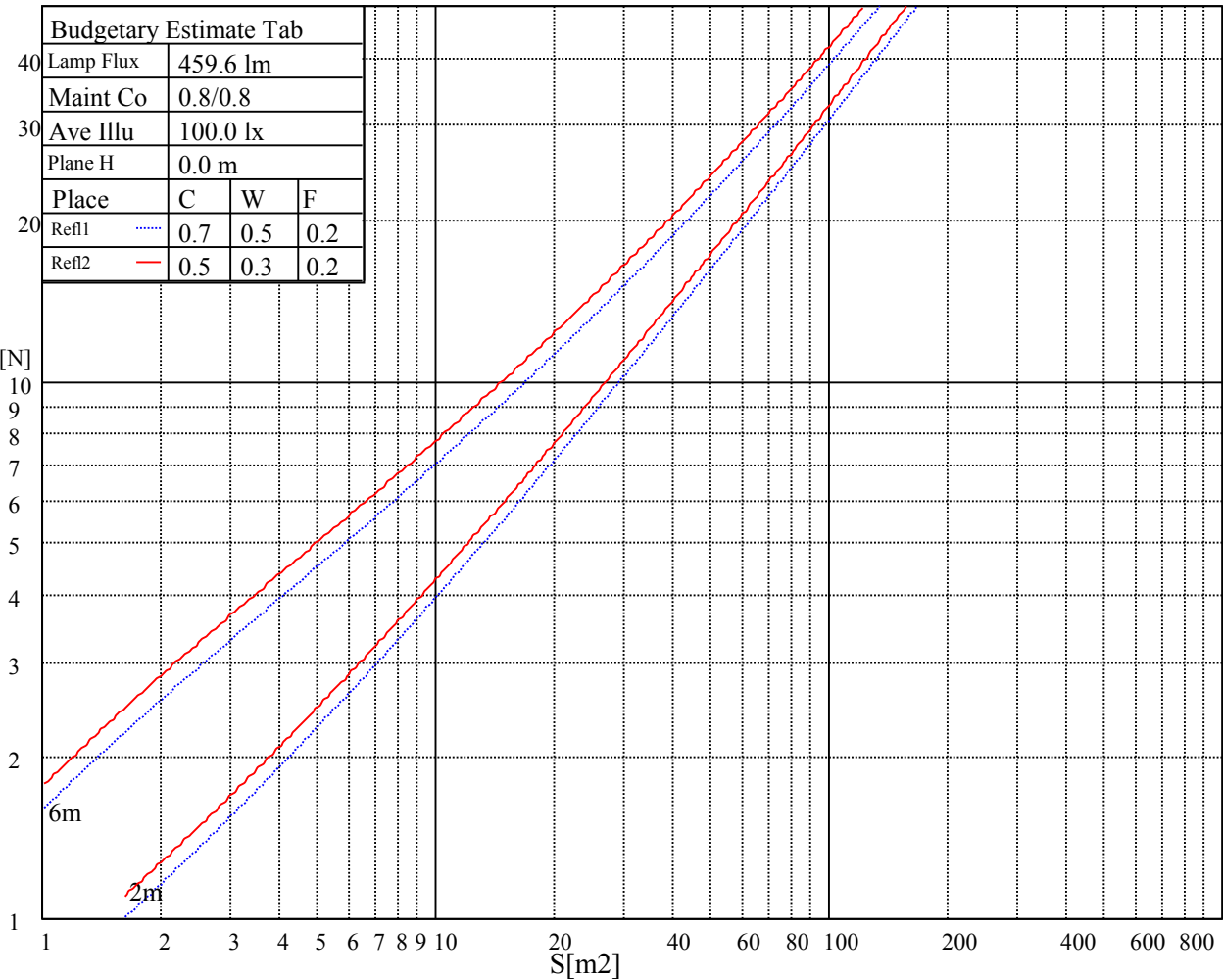
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

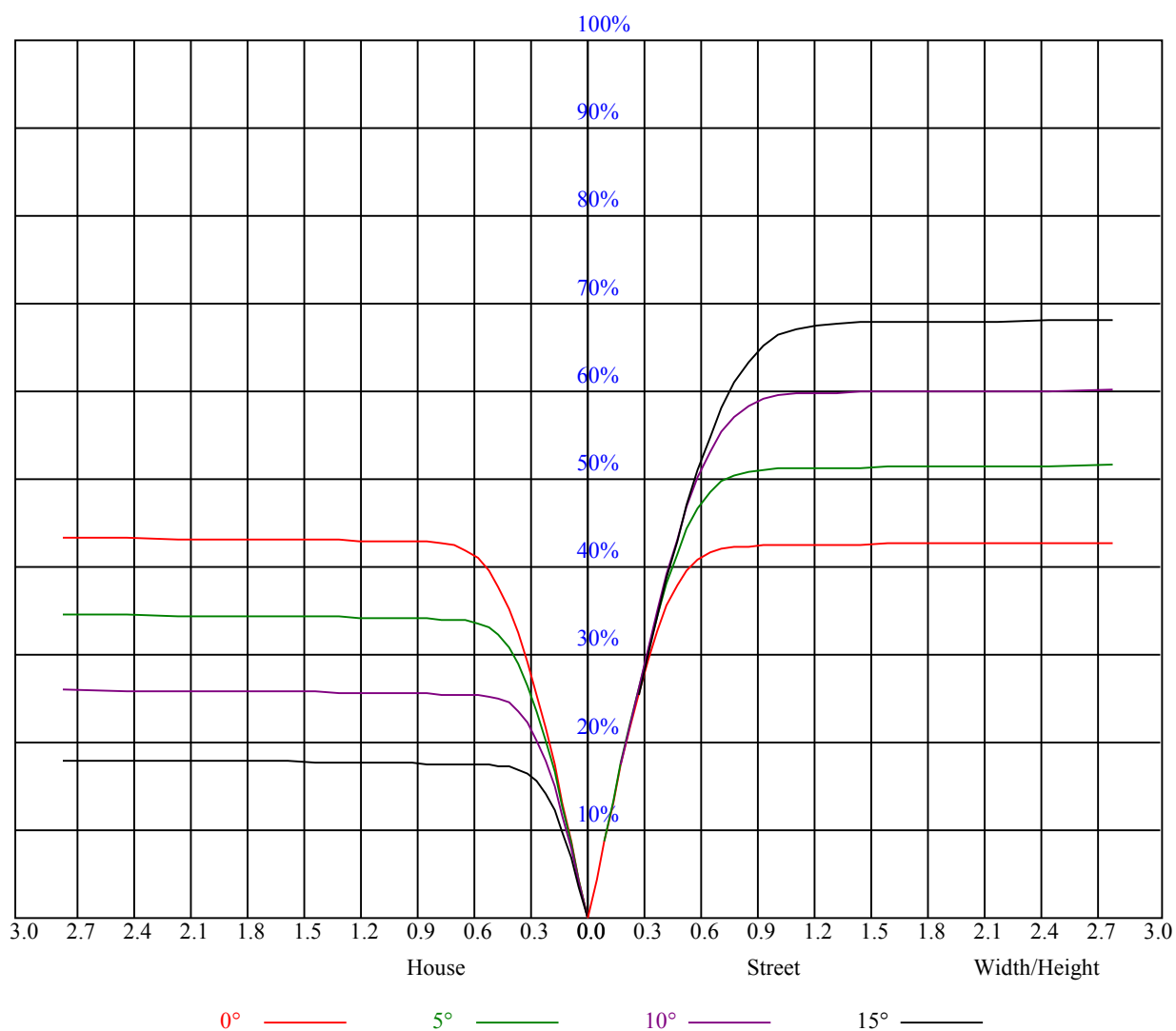
C0 ———

C45 ———

C90 ———



RHOC	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	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.91	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.78	0.77
3	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.73
4	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.70	0.68
5	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
6	0.72	0.67	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.61
7	0.68	0.63	0.60	0.68	0.63	0.60	0.67	0.62	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.58
8	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.55
9	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.52
10	0.59	0.54	0.51	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.49



Intensity data(cd)										Appendix Page: 14 Total:14
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	
0.0	554.68	546.08	536.79	512.16	448.09	333.68	168.58	32.34	3.32	
45.0	549.45	542.36	536.12	514.63	469.63	380.59	257.63	111.21	23.34	
90.0	549.79	544.73	536.46	505.80	423.96	274.89	104.12	16.88	3.71	
135.0	552.32	548.78	537.86	505.46	450.23	358.20	239.51	101.14	16.20	
180.0	554.68	553.84	533.53	484.20	409.16	270.00	112.67	18.84	2.87	
225.0	549.45	550.07	539.78	508.73	444.26	340.54	240.24	101.19	16.37	
270.0	549.79	555.08	539.89	495.51	424.29	311.96	161.38	33.75	3.32	
315.0	552.32	544.44	535.89	506.59	451.52	360.06	250.65	122.01	25.03	
360.0	554.68	546.08	536.79	512.16	448.09	333.68	168.58	32.34	3.32	
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	2.31	2.03	1.91	1.86	1.86	1.80	1.80	1.80	1.80	
45.0	2.59	2.08	2.03	1.91	1.91	1.91	1.86	1.86	1.86	
90.0	2.48	2.19	2.03	1.86	1.86	1.80	1.80	1.86	1.80	
135.0	2.25	2.03	1.91	1.91	1.86	1.86	1.86	1.86	1.86	
180.0	2.14	1.97	1.86	1.86	1.80	1.80	1.80	1.80	1.80	
225.0	2.36	2.08	1.97	1.91	1.86	1.86	1.86	1.86	1.86	
270.0	2.42	2.08	1.97	1.91	1.86	1.86	1.80	1.80	1.80	
315.0	2.48	2.14	1.97	1.91	1.86	1.86	1.86	1.86	1.86	
360.0	2.31	2.03	1.91	1.86	1.86	1.80	1.80	1.80	1.80	
C/ γ (°)	90.0									
0.0	1.80									
45.0	1.86									
90.0	1.80									
135.0	1.86									
180.0	1.80									
225.0	1.80									
270.0	1.80									
315.0	1.80									
360.0	1.80									