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Nata

LumCAT: 3-1547-A3
Luminaire: 99.02.73.172+92.76.365.00
Report No: NATA0100
Test No: GC2018082810
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2575.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.5000
Power (W): 17.0000
PF: 0.0000
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 2359.95
Efficiency(%): 91.65%
Lumens(lm)/Power(W): 140.33
Central intensity(cd): 4662.314
Maximum intensity(cd): 4662.314
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=39.8
 [C90/270]Total=39.8
Field angle(10%Imax): [C0/180]Total=70.3
 [C90/270]Total=70.3
Maximum s/h(1/2): C0_180=0.66 C90_270=0.66
Maximum s/h(1/4): C0_180=0.64 C90_270=0.64
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.64%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.603%

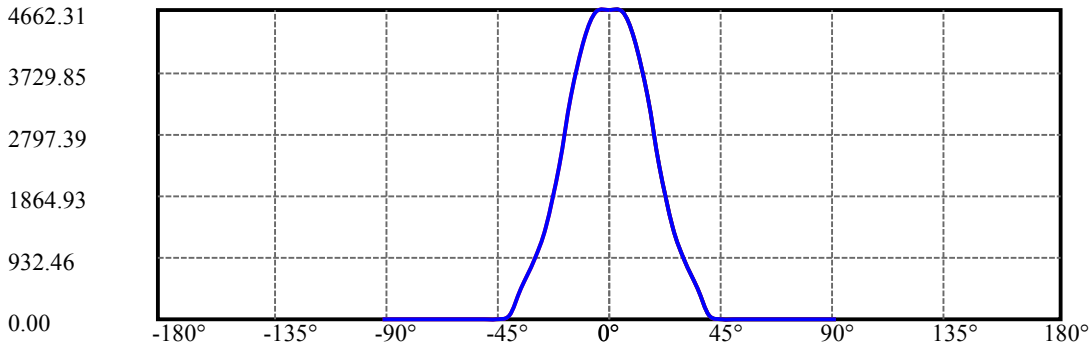
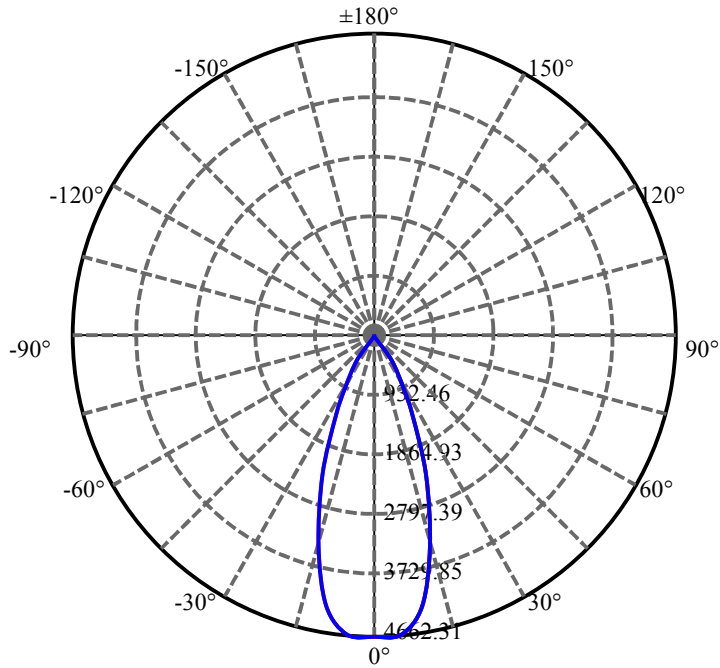
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4662.314	27.882	27.882	1.083%	1.181%
5.0	4635.611	221.459	249.34	8.600%	10.565%
10.0	4240.237	403.599	652.939	15.674%	27.668%
15.0	3370.759	478.204	1131.143	18.571%	47.931%
20.0	2307.827	432.658	1563.801	16.802%	66.264%
25.0	1381.929	320.128	1883.929	12.432%	79.829%
30.0	910.908	249.651	2133.58	9.695%	90.408%
35.0	476.857	149.923	2283.503	5.822%	96.761%
40.0	66.487	23.426	2306.929	.910%	97.753%
45.0	13.785	5.343	2312.272	.207%	97.980%
50.0	12.601	5.291	2317.563	.205%	98.204%
55.0	11.954	5.367	2322.931	.208%	98.431%
60.0	11.541	5.479	2328.409	.213%	98.664%
65.0	11.232	5.580	2333.989	.217%	98.900%
70.0	11.018	5.675	2339.664	.220%	99.140%
75.0	10.846	5.743	2345.407	.223%	99.384%
80.0	10.750	5.803	2351.21	.225%	99.630%
85.0	10.681	5.832	2357.042	.226%	99.877%
90.0	10.605	2.907	2359.948	.113%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2133.58	82.86%	90.41%
0-40	2306.93	89.59%	97.75%
0-60	2328.41	90.42%	98.66%
0-90	2357.04	91.54%	99.88%
0-120	2357.04	91.54%	99.88%
0-180	2359.95	91.65%	100.00%
60-90	34.11	1.32%	1.45%
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%
0-25.08	1887.96	73.32%	80.00%

ZONAL LUMEN SUMMARY

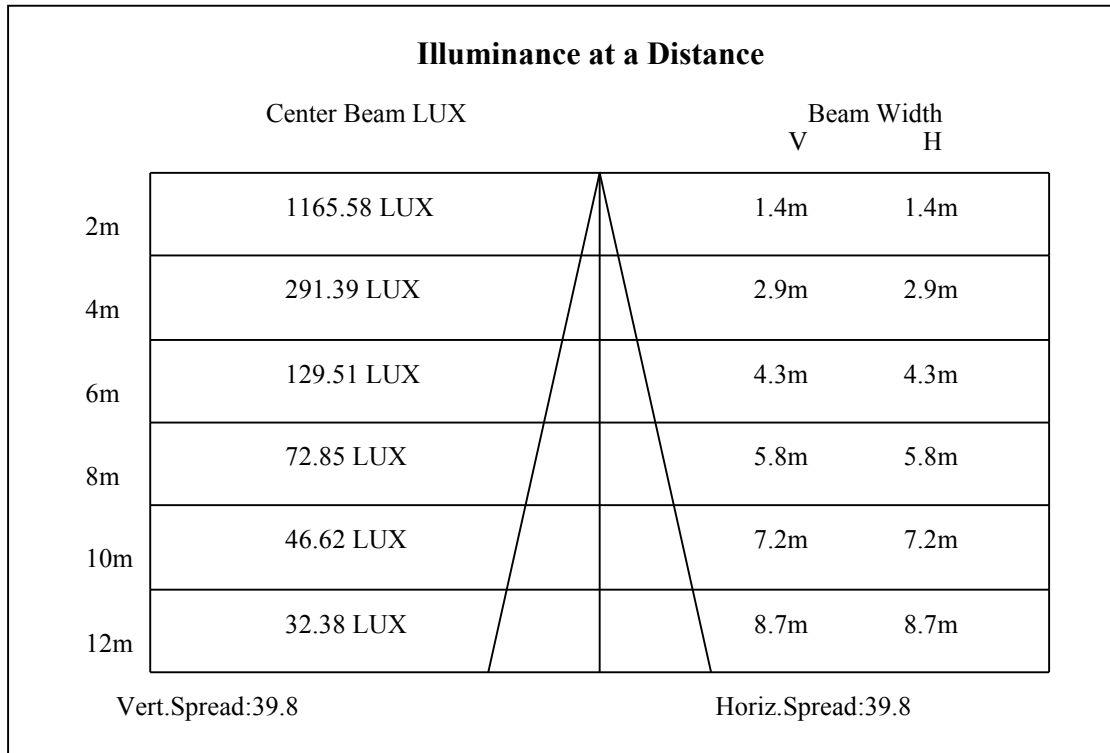
0-10	652.94
10-20	910.86
20-30	569.78
30-40	173.35
40-50	10.63
50-60	10.85
60-70	11.25
70-80	11.55
80-90	5.83
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

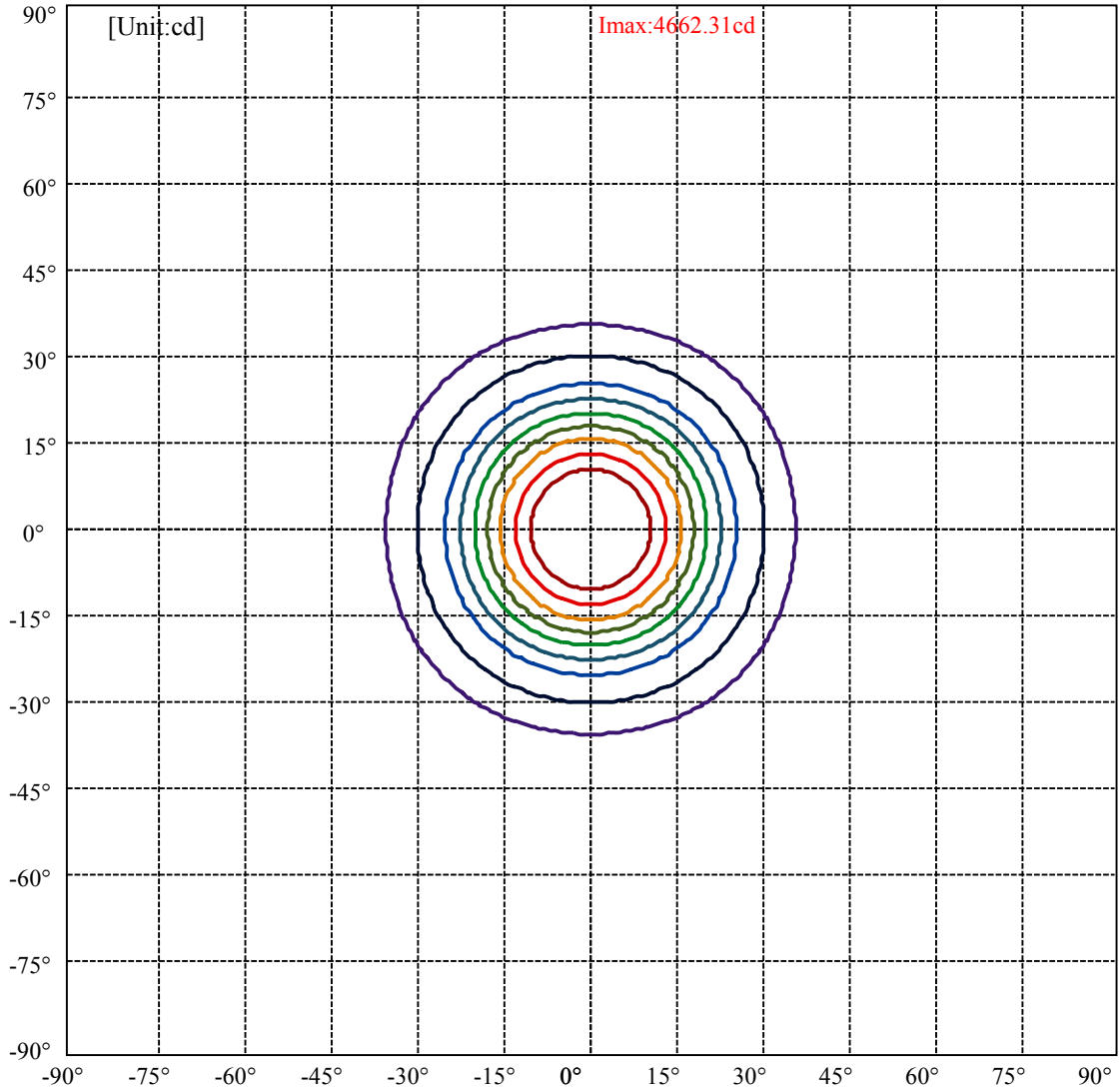


C0(Max): —————
C0/C180: —————
C90/C270: —————

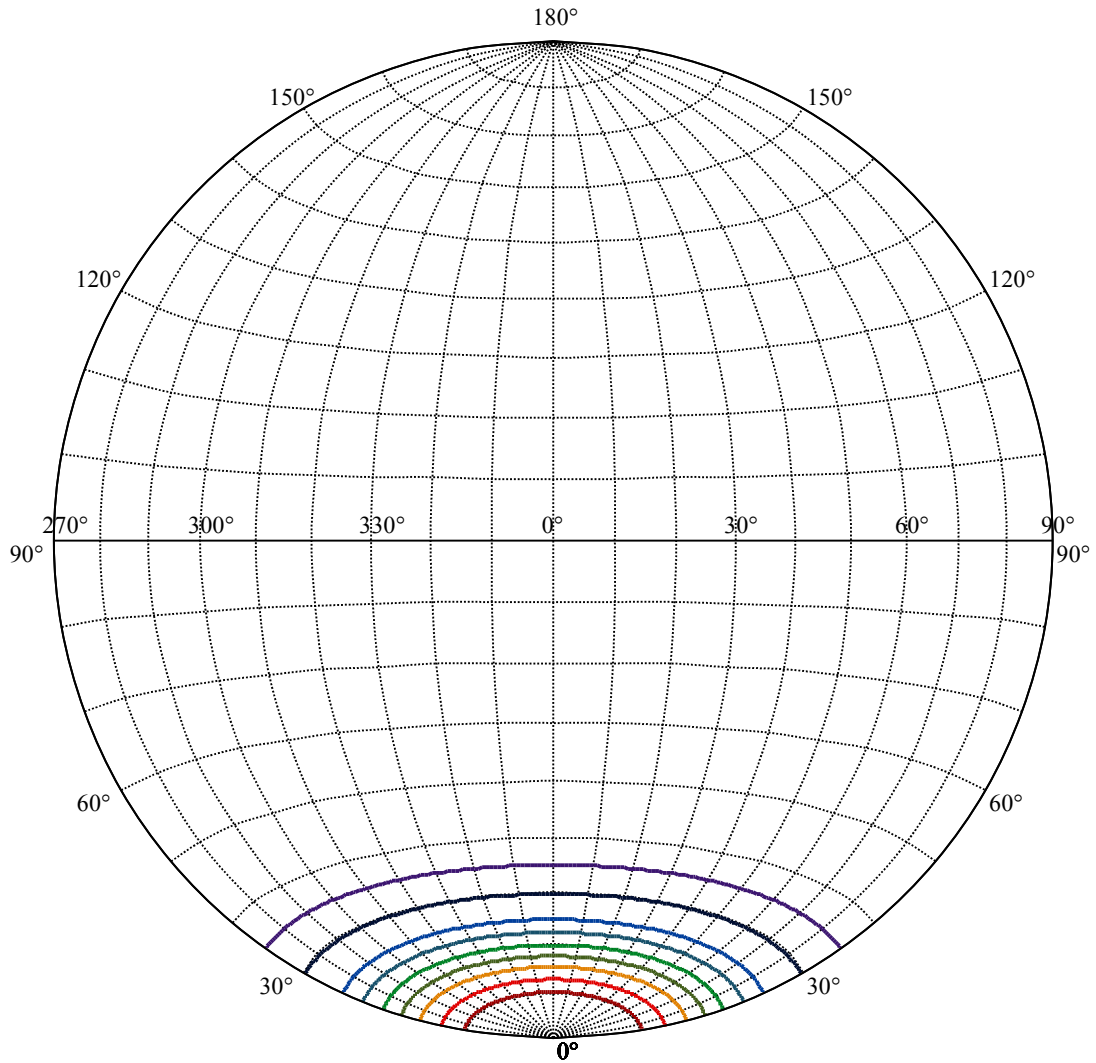
Field angle(10%Imax):C0/180Left:35.1 Right:35.1
:C90/270Left:35.1 Right:35.1

Beam Angle(50%Imax):C0/180Left:19.9 Right:19.9
:C90/270Left:19.9 Right:19.9





(10%Imax) 466.231	—
(20%Imax) 932.463	—
(30%Imax) 1398.69	—
(40%Imax) 1864.93	—
(50%Imax) 2331.16	—
(60%Imax) 2797.39	—
(70%Imax) 3263.62	—
(80%Imax) 3729.85	—
(90%Imax) 4196.08	—



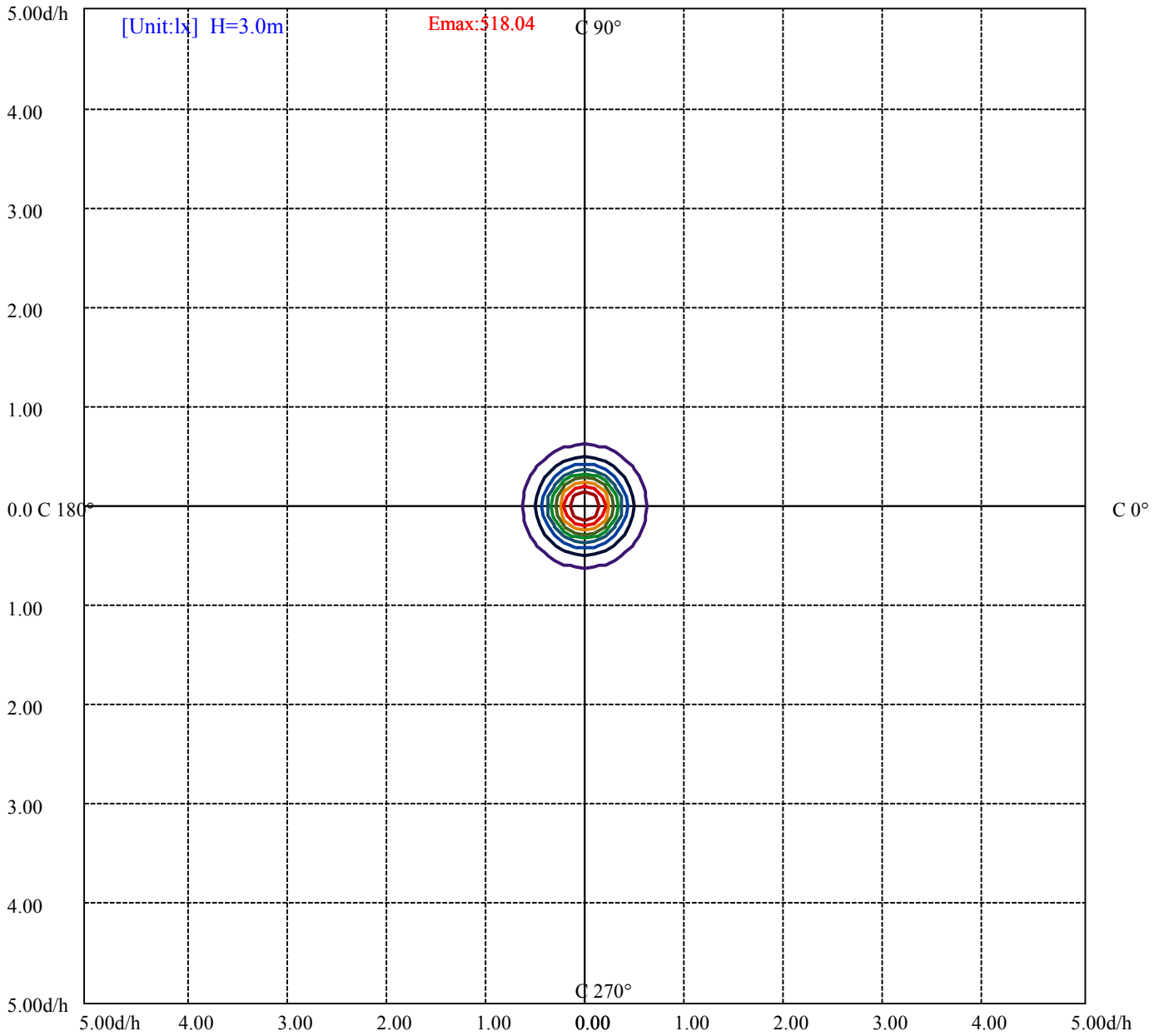
House

[Unit:cd]

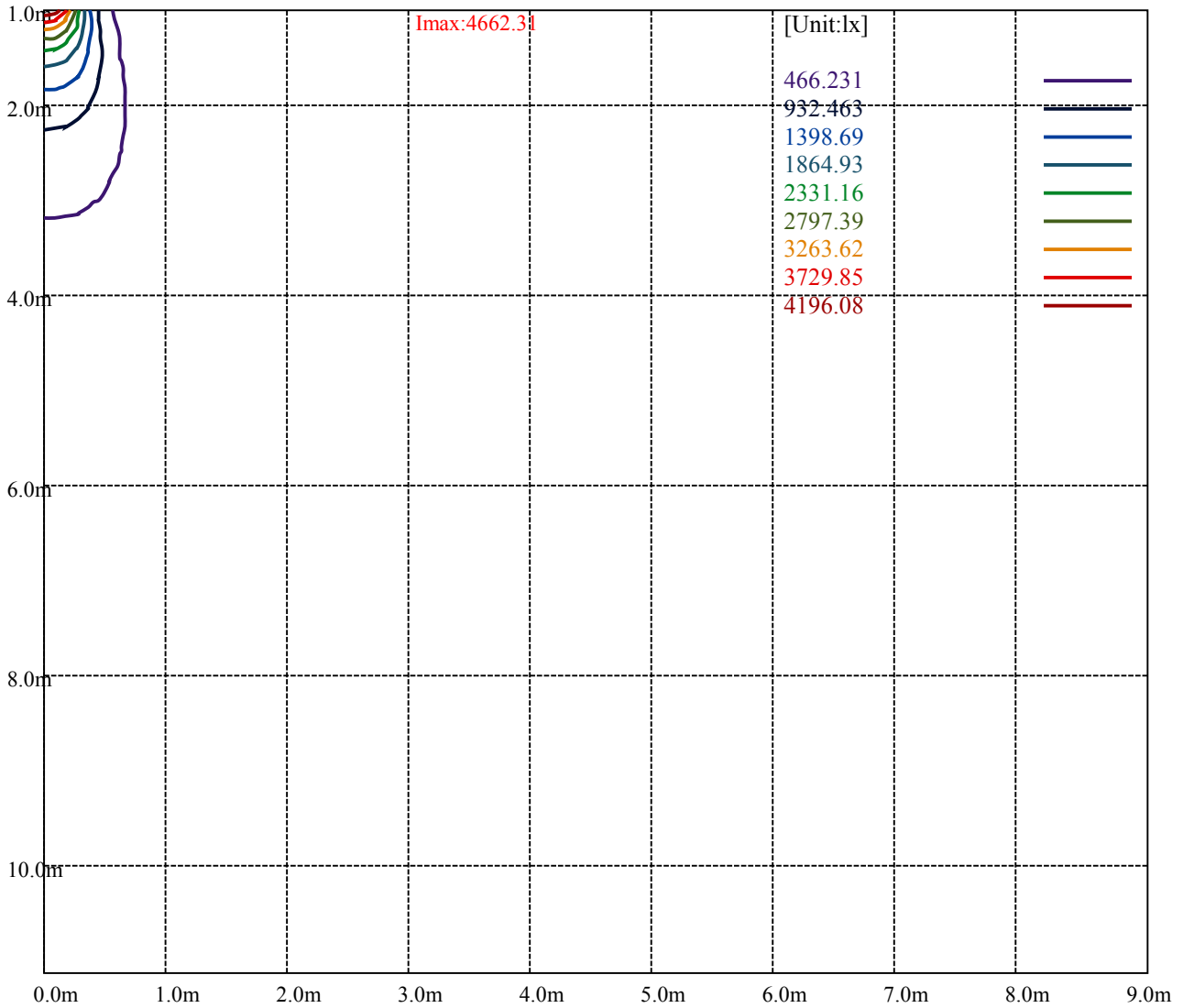
Road

I_{max}:4662.31

(10%I _{max}) 466.231	—
(20%I _{max}) 932.463	—
(30%I _{max}) 1398.69	—
(40%I _{max}) 1864.93	—
(50%I _{max}) 2331.16	—
(60%I _{max}) 2797.39	—
(70%I _{max}) 3263.62	—
(80%I _{max}) 3729.85	—
(90%I _{max}) 4196.08	—



- (10%Emax) 51.80344
- (20%Emax) 103.607
- (30%Emax) 155.41
- (40%Emax) 207.2144
- (50%Emax) 259.0178
- (60%Emax) 310.8211
- (70%Emax) 362.6245
- (80%Emax) 414.4278
- (90%Emax) 466.2311



Luminance Table

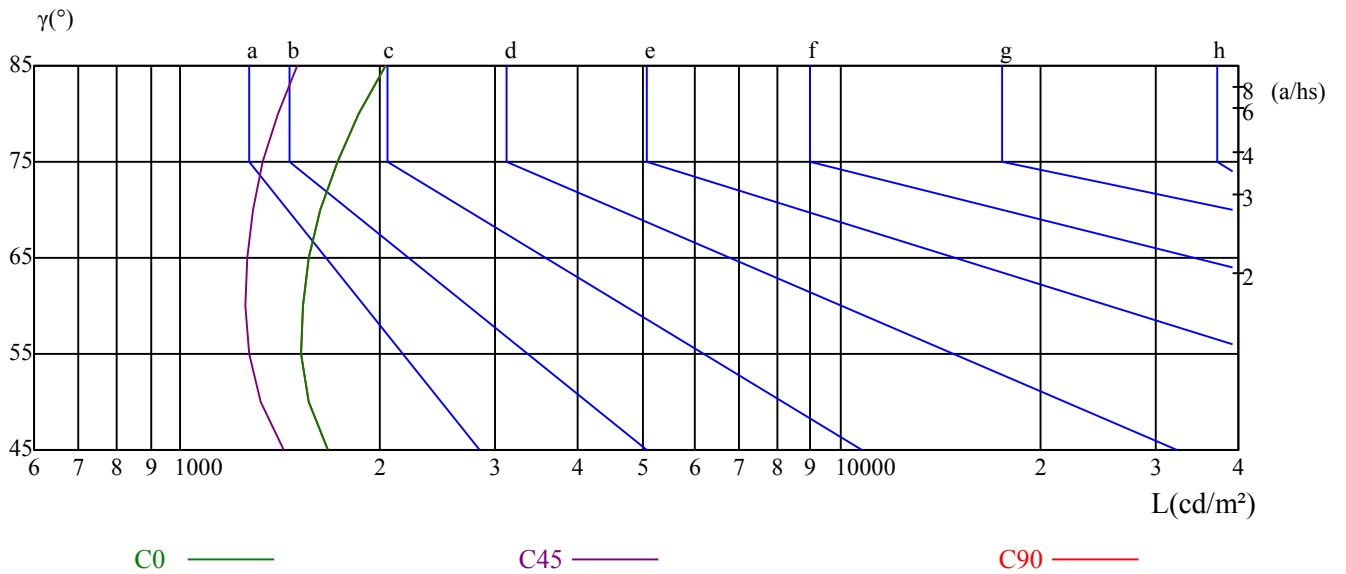
γ	45	50	55	60	65	70	75	80	85
C0	1670	1561	1526	1533	1567	1631	1725	1861	2047
C45	1435	1321	1272	1256	1261	1288	1333	1403	1499
C90	1670	1561	1526	1533	1567	1631	1725	1861	2047

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3766	3766	3766	5939	5939	5939	17368	17368	17368

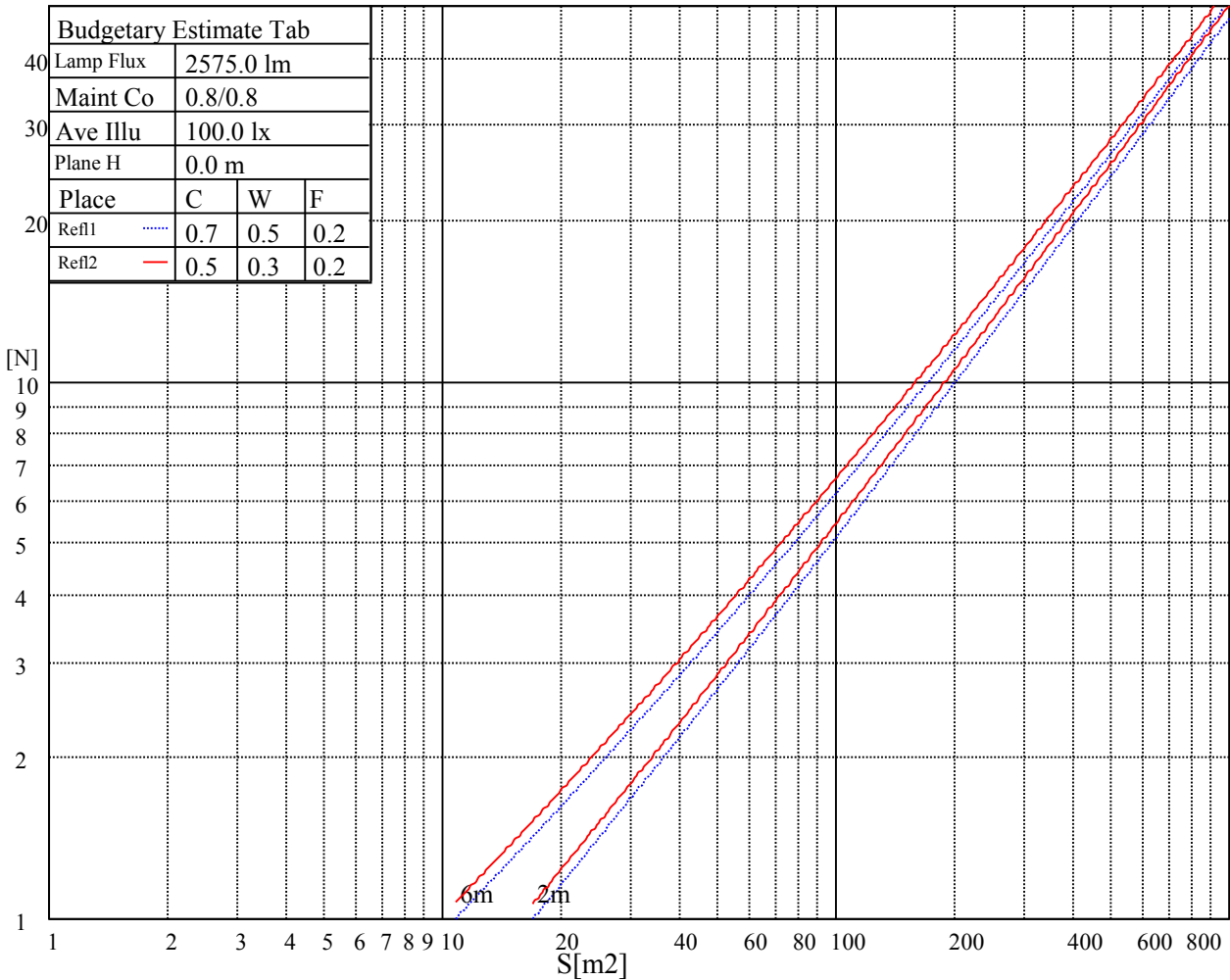
Glare Table

Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
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

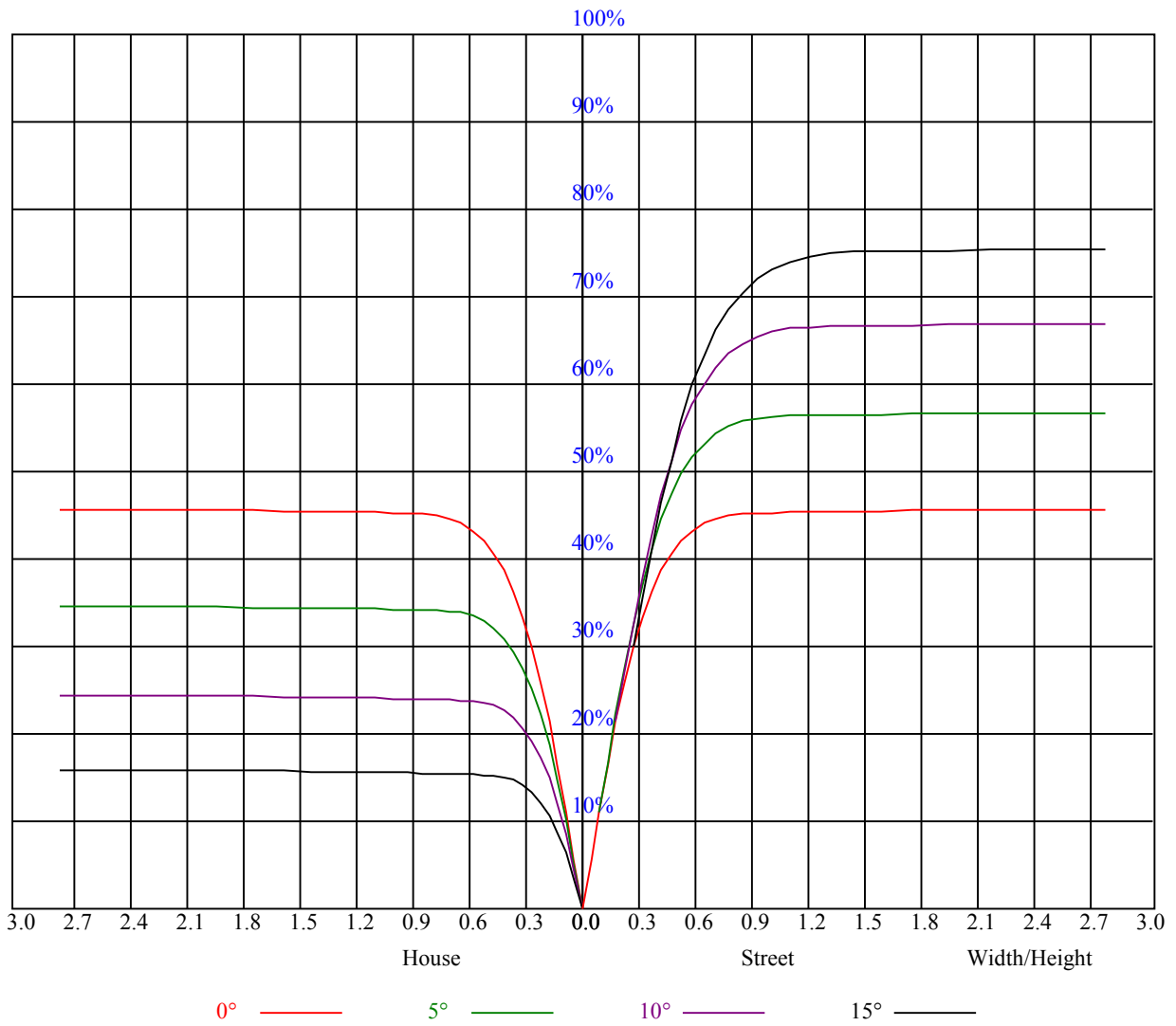
Luminance Limiting Curve



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	-0.17	0.74	0.20	1.05	1.37	-0.17	0.74	0.19	1.05	1.37
	3H	2.12	2.93	2.51	3.26	3.63	2.12	2.92	2.50	3.26	3.63
	4H	3.36	4.10	3.77	4.46	4.85	3.35	4.10	3.76	4.45	4.84
	6H	4.66	5.34	5.08	5.72	6.11	4.66	5.34	5.07	5.71	6.11
	8H	5.31	5.95	5.74	6.34	6.75	5.31	5.95	5.74	6.34	6.75
	12H	6.31	6.92	6.75	7.31	7.74	6.31	6.92	6.75	7.31	7.74
4H	2H	0.32	1.07	0.73	1.42	1.81	0.32	1.06	0.72	1.42	1.81
	3H	2.90	3.52	3.32	3.93	4.33	2.90	3.51	3.32	3.92	4.33
	4H	4.31	4.86	4.75	5.28	5.73	4.31	4.85	4.74	5.28	5.73
	6H	5.71	6.18	6.18	6.63	7.11	5.71	6.18	6.18	6.63	7.11
	8H	6.47	6.91	6.95	7.36	7.84	6.47	6.91	6.95	7.36	7.84
8H	12H	7.47	7.85	7.97	8.34	8.82	7.47	7.85	7.96	8.34	8.82
	4H	4.74	5.18	5.22	5.63	6.11	4.74	5.18	5.22	5.63	6.10
	6H	6.38	6.73	6.90	7.23	7.72	6.38	6.73	6.89	7.23	7.72
	8H	7.30	7.60	7.83	8.13	8.62	7.30	7.60	7.83	8.13	8.62
12H	12H	8.43	8.69	8.95	9.19	9.77	8.43	8.69	8.95	9.19	9.77
	4H	4.83	5.21	5.33	5.70	6.18	4.83	5.20	5.32	5.69	6.17
	6H	6.76	6.86	7.09	7.33	7.88	6.76	6.86	7.09	7.33	7.88
	8H	7.56	7.82	8.09	8.32	8.91	7.56	7.82	8.09	8.32	8.91
Variation with the observer position at spacings:											
S = 1.0H	5.7/-7.6					5.7/-7.6					
S = 1.5H	8.1/-6.0					8.1/-6.0					
S = 2.0H	9.7/-4.7					9.7/-4.7					
Standard tables:	BK2					BK2					
Uncorrected UGR	-3.5					-3.5					



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	1.10	1.10	1.10	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	1.00	0.98	1.00	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.90	0.87	0.89	0.87	0.86	0.87	0.85	0.84	0.82
3	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.83	0.81	0.84	0.82	0.80	0.79
4	0.88	0.83	0.80	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.78	0.81	0.79	0.77	0.75
5	0.84	0.79	0.76	0.83	0.79	0.75	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.74	0.72
6	0.80	0.76	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.66	0.63	0.62
10	0.69	0.65	0.62	0.68	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60



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	4657.22	4597.21	4261.92	3428.91	2347.05	1411.65	929.35	507.62	36.12
45.0	4668.23	4588.95	4184.29	3258.24	2255.66	1340.62	871.54	481.74	29.46
90.0	4653.92	4556.47	4030.13	3072.70	1994.69	1095.18	840.16	296.04	25.22
135.0	4669.88	4615.93	4223.38	3419.55	2351.46	1428.71	911.18	501.01	41.68
180.0	4657.22	4662.18	4255.86	3373.86	2266.67	1407.24	896.59	441.22	37.71
225.0	4668.23	4693.01	4330.74	3440.47	2386.69	1435.32	917.51	522.60	50.10
270.0	4653.92	4705.67	4407.26	3682.72	2576.09	1575.16	1029.55	627.64	279.14
315.0	4669.88	4665.48	4228.33	3289.62	2284.29	1361.54	891.36	436.98	32.48
360.0	4657.22	4597.21	4261.92	3428.91	2347.05	1411.65	929.35	507.62	36.12
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.76	12.55	11.89	11.51	11.23	11.01	10.85	10.74	10.68
45.0	13.32	12.44	11.84	11.45	11.18	10.96	10.79	10.68	10.63
90.0	13.32	12.44	11.89	11.51	11.18	11.01	10.85	10.68	10.68
135.0	13.76	12.77	12.11	11.67	11.34	11.12	10.90	10.79	10.68
180.0	13.60	12.55	11.95	11.56	11.23	11.01	10.85	10.79	10.68
225.0	13.93	12.61	11.89	11.45	11.18	10.96	10.79	10.74	10.63
270.0	14.87	12.83	12.06	11.62	11.29	11.07	10.90	10.79	10.74
315.0	13.71	12.61	12.00	11.56	11.23	11.01	10.85	10.79	10.74
360.0	13.76	12.55	11.89	11.51	11.23	11.01	10.85	10.74	10.68
C/ γ (°)	90.0								
0.0	10.63								
45.0	10.57								
90.0	10.57								
135.0	10.63								
180.0	10.63								
225.0	10.57								
270.0	10.63								
315.0	10.63								
360.0	10.63								