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Nata

LumCAT: 4-2220-A	
Luminaire: BJB47.319.2030	
Report No: NT2017092002	Voltage(V): 50.8000
Test No: GC2017092002	Current(A): 0.8000
LampCAT: Bridgelux V22B	Power (W): 40.6400
Lamp flux(lm): 5885.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 5271.51
Efficiency(%): 89.58%
Lumens(lm)/Power(W): 129.71
Central intensity(cd): 17168.650
Maximum intensity(cd): 17168.650
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=27.1
 [C90/270]Total=27.1
Field angle(10%Imax): [C0/180]Total=61.2
 [C90/270]Total=61.2
Maximum s/h(1/2): C0_180=0.46 C90_270=0.46
Maximum s/h(1/4): C0_180=0.47 C90_270=0.47
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.23%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.878%

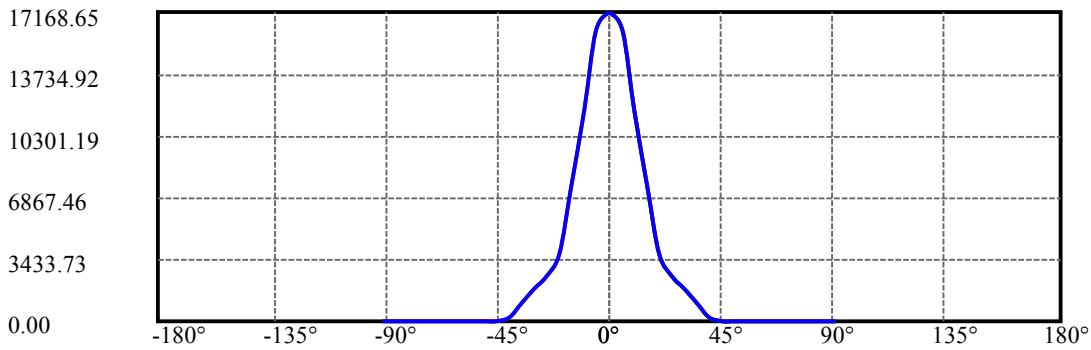
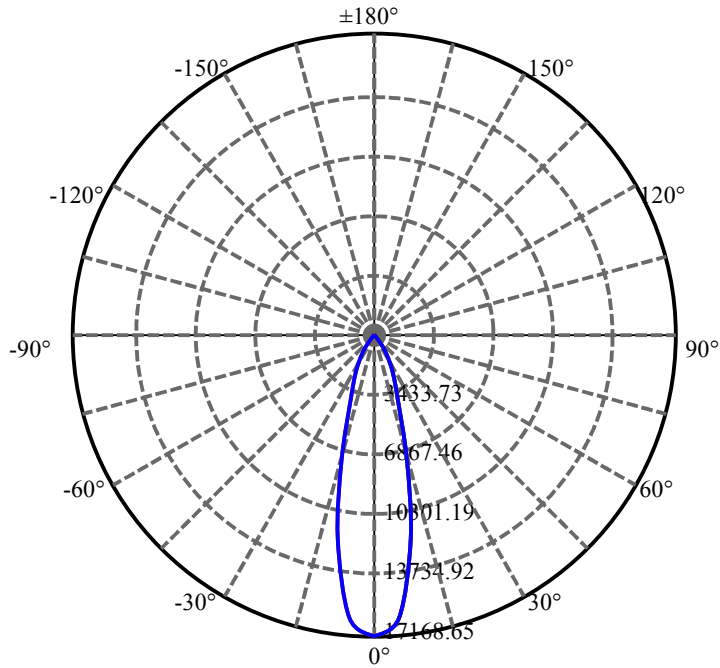
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	17168.650	102.672	102.672	1.745%	1.948%
5.0	16118.449	770.032	872.704	13.085%	16.555%
10.0	11743.805	1117.811	1990.515	18.994%	37.760%
15.0	7320.712	1038.578	3029.093	17.648%	57.462%
20.0	3686.164	691.060	3720.153	11.743%	70.571%
25.0	2482.562	575.093	4295.245	9.772%	81.480%
30.0	1830.281	501.623	4796.868	8.524%	90.996%
35.0	916.627	288.186	5085.054	4.897%	96.463%
40.0	191.466	67.460	5152.515	1.146%	97.743%
45.0	36.303	14.071	5166.585	.239%	98.010%
50.0	27.535	11.562	5178.147	.196%	98.229%
55.0	25.808	11.588	5189.735	.197%	98.449%
60.0	24.851	11.797	5201.532	.200%	98.672%
65.0	24.314	12.079	5213.611	.205%	98.902%
70.0	24.087	12.407	5226.018	.211%	99.137%
75.0	23.998	12.706	5238.723	.216%	99.378%
80.0	25.402	13.712	5252.436	.233%	99.638%
85.0	23.599	12.886	5265.322	.219%	99.883%
90.0	22.587	6.190	5271.512	.105%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	4796.87	81.51%	91.00%
0-40	5152.51	87.55%	97.74%
0-60	5201.53	88.39%	98.67%
0-90	5265.32	89.47%	99.88%
0-120	5265.32	89.47%	99.88%
0-180	5271.51	89.58%	100.00%
60-90	75.59	1.28%	1.43%
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%
0-24.32	4217.21	71.66%	80.00%

ZONAL LUMEN SUMMARY

0-10	1990.52
10-20	1729.64
20-30	1076.72
30-40	355.65
40-50	25.63
50-60	23.38
60-70	24.49
70-80	26.42
80-90	12.89
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: ———

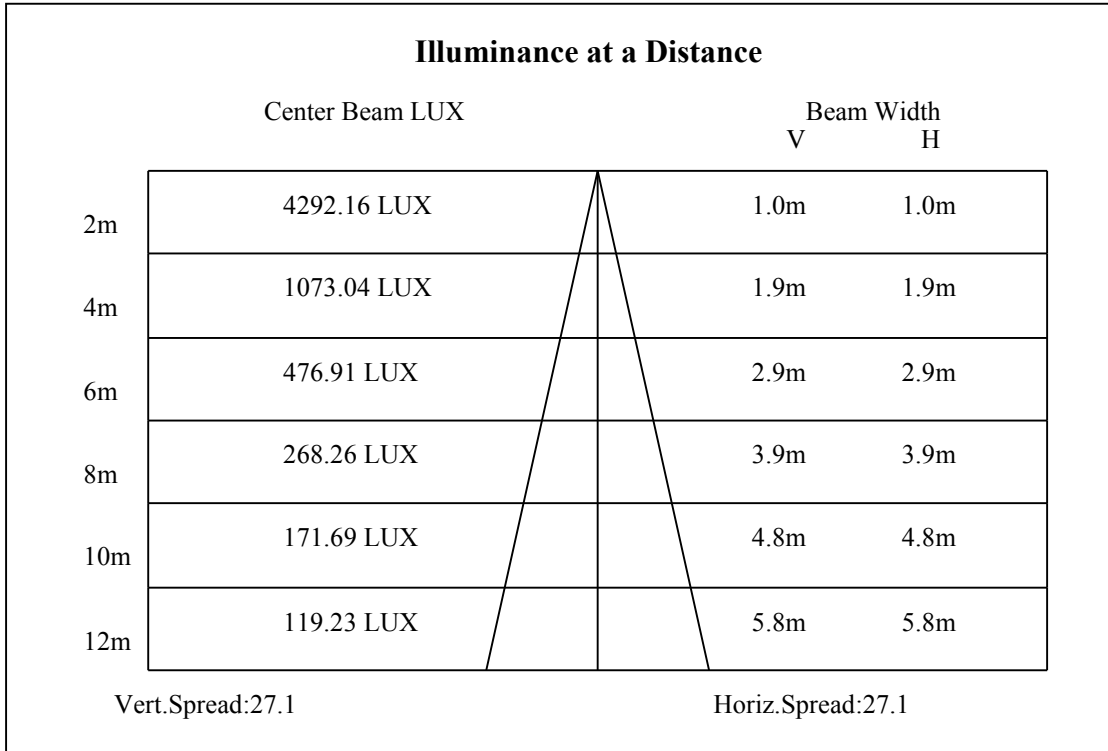
C90/C270: ———

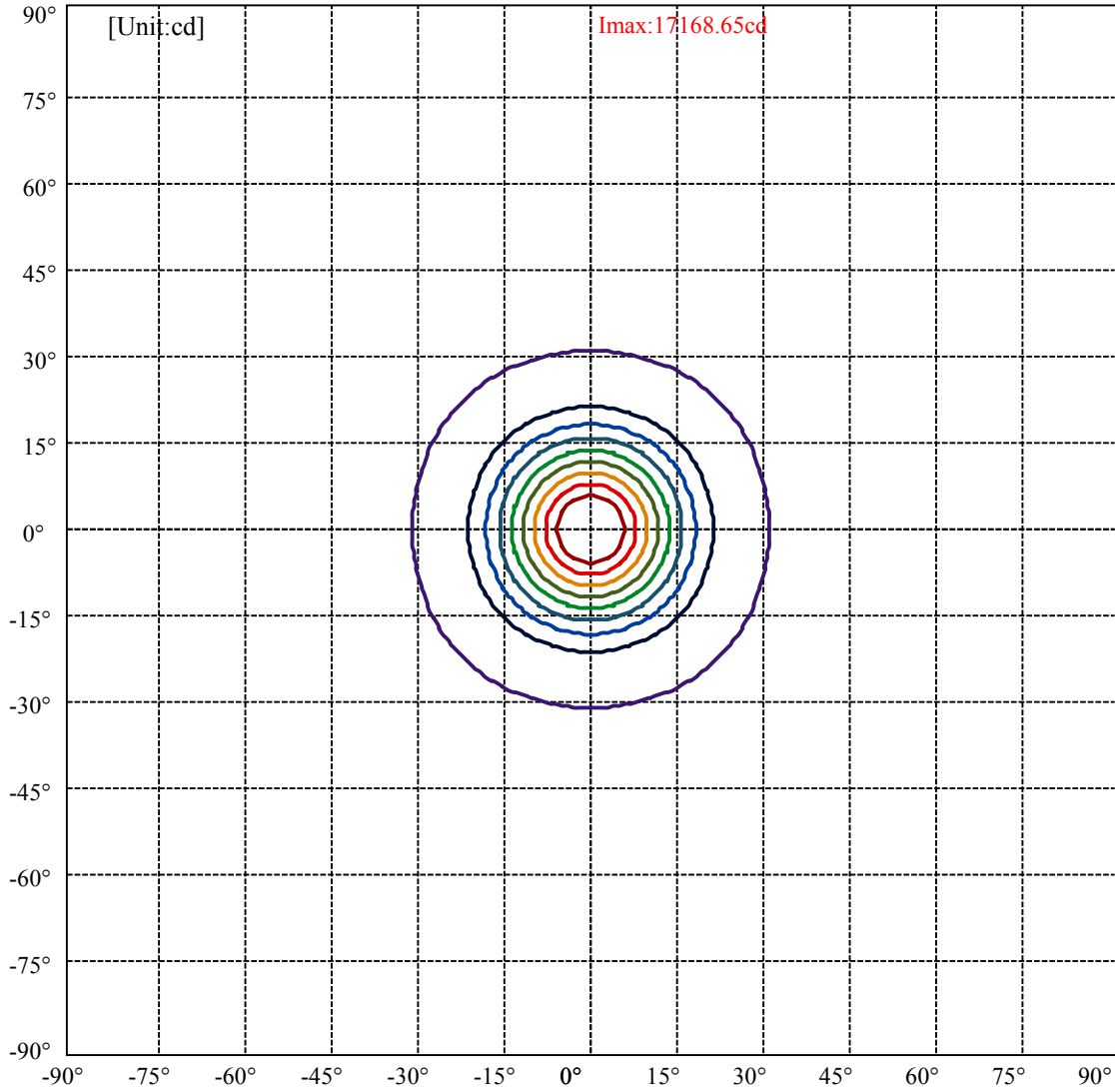
Field angle(10%Imax):C0/180Left:30.6 Right:30.6

:C90/270Left:30.6 Right:30.6

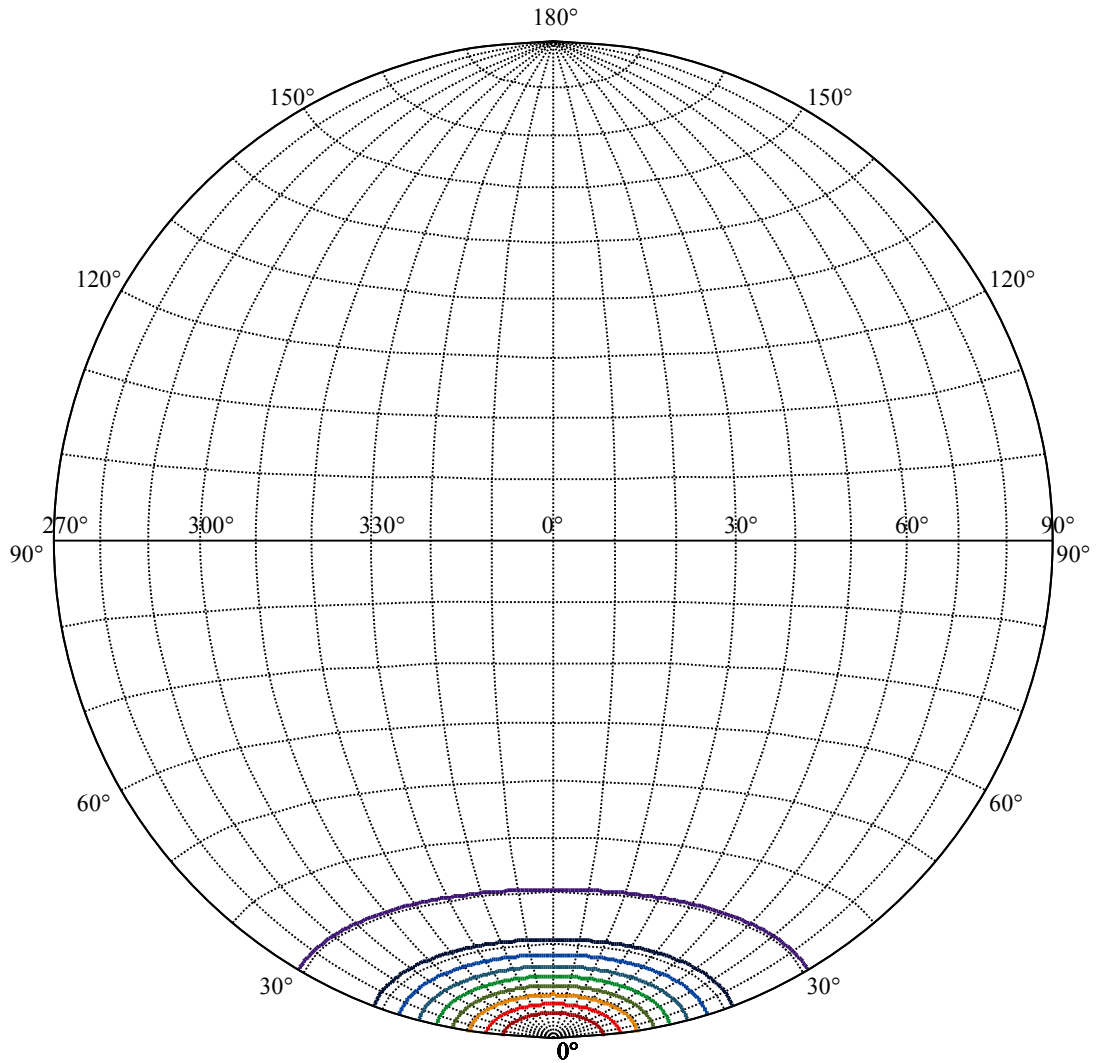
Beam Angle(50%Imax):C0/180Left:13.6 Right:13.6

:C90/270Left:13.6 Right:13.6





(10%Imax) 1716.86	—
(20%Imax) 3433.73	—
(30%Imax) 5150.6	—
(40%Imax) 6867.46	—
(50%Imax) 8584.33	—
(60%Imax) 10301.2	—
(70%Imax) 12018.1	—
(80%Imax) 13734.9	—
(90%Imax) 15451.8	—



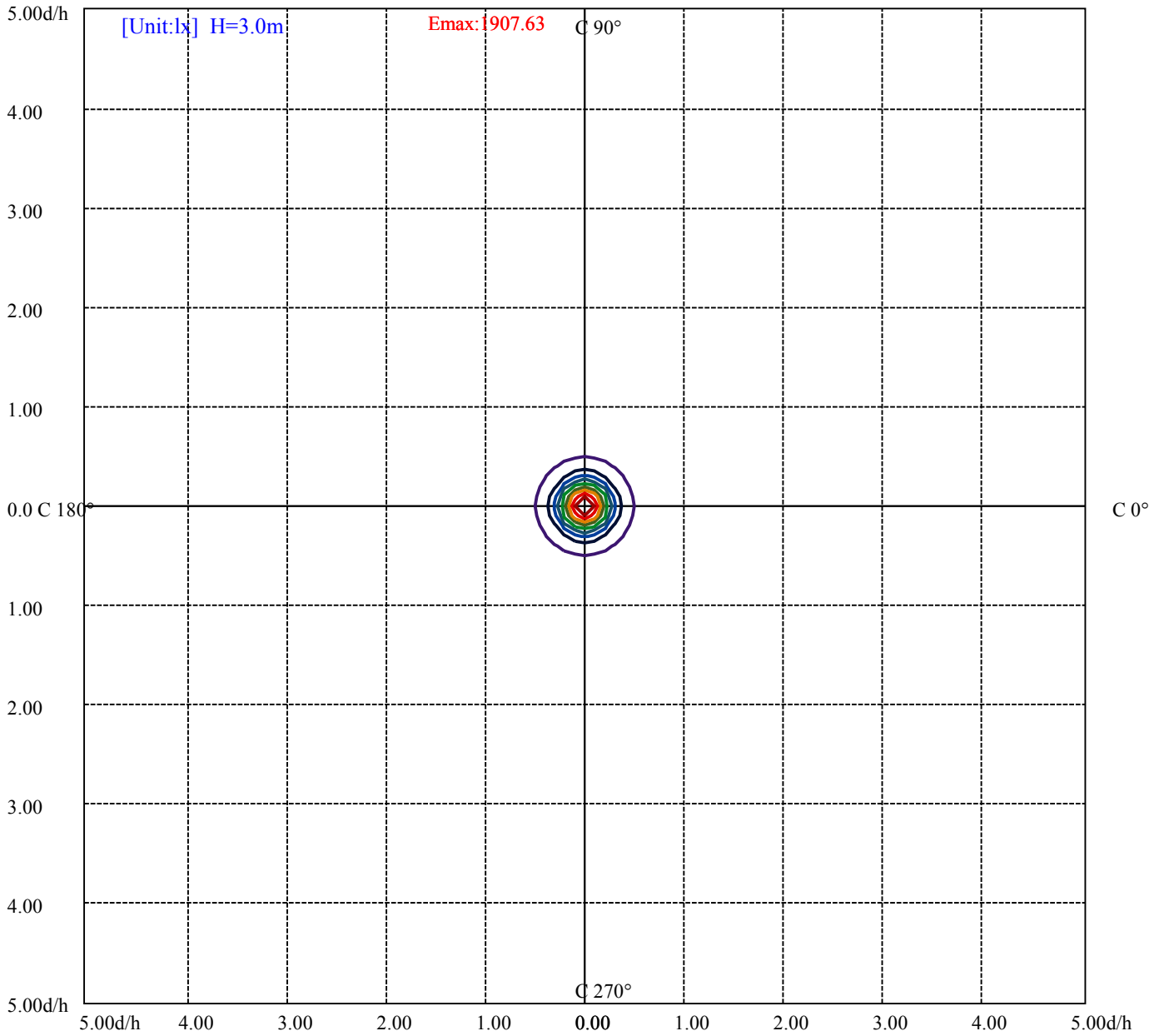
House

[Unit:cd]

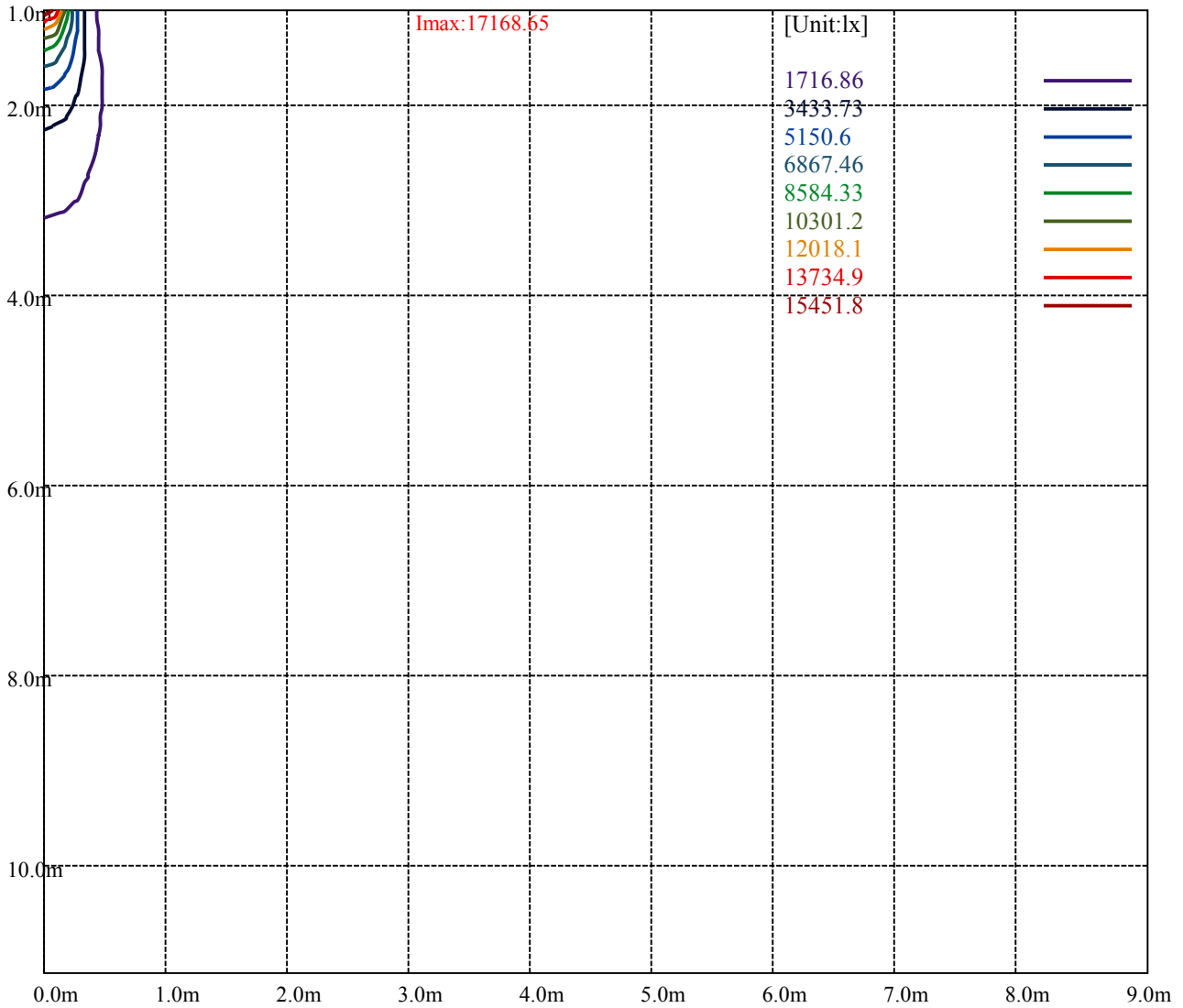
Road

I_{max}:17168.65

(10%I _{max}) 1716.86	—
(20%I _{max}) 3433.73	—
(30%I _{max}) 5150.6	—
(40%I _{max}) 6867.46	—
(50%I _{max}) 8584.33	—
(60%I _{max}) 10301.2	—
(70%I _{max}) 12018.1	—
(80%I _{max}) 13734.9	—
(90%I _{max}) 15451.8	—



- (10%Emax) 190.7622
- (20%Emax) 381.5244
- (30%Emax) 572.2878
- (40%Emax) 763.05
- (50%Emax) 953.8122
- (60%Emax) 1144.578
- (70%Emax) 1335.333
- (80%Emax) 1526.1
- (90%Emax) 1716.867



Luminance Table

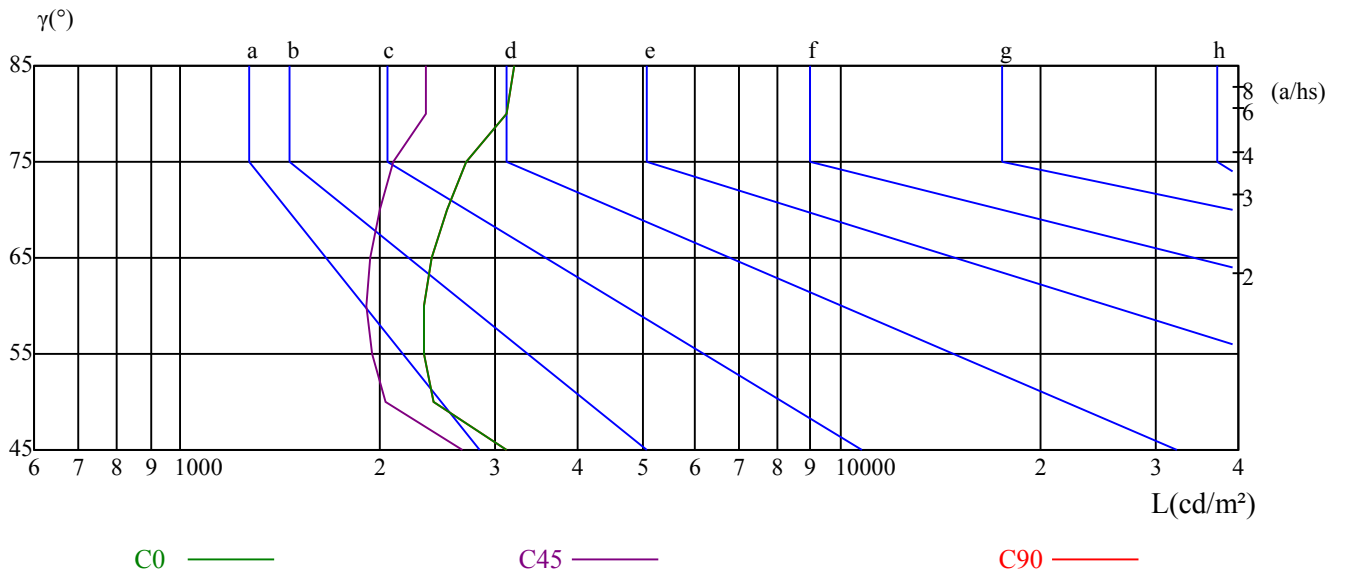
γ	45	50	55	60	65	70	75	80	85
C0	3112	2414	2333	2338	2403	2528	2706	3121	3212
C45	2675	2044	1945	1917	1936	1998	2093	2354	2353
C90	3112	2414	2333	2338	2403	2528	2706	3121	3212

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5753	5753	5753	9272	9272	9272	27076	27076	27076

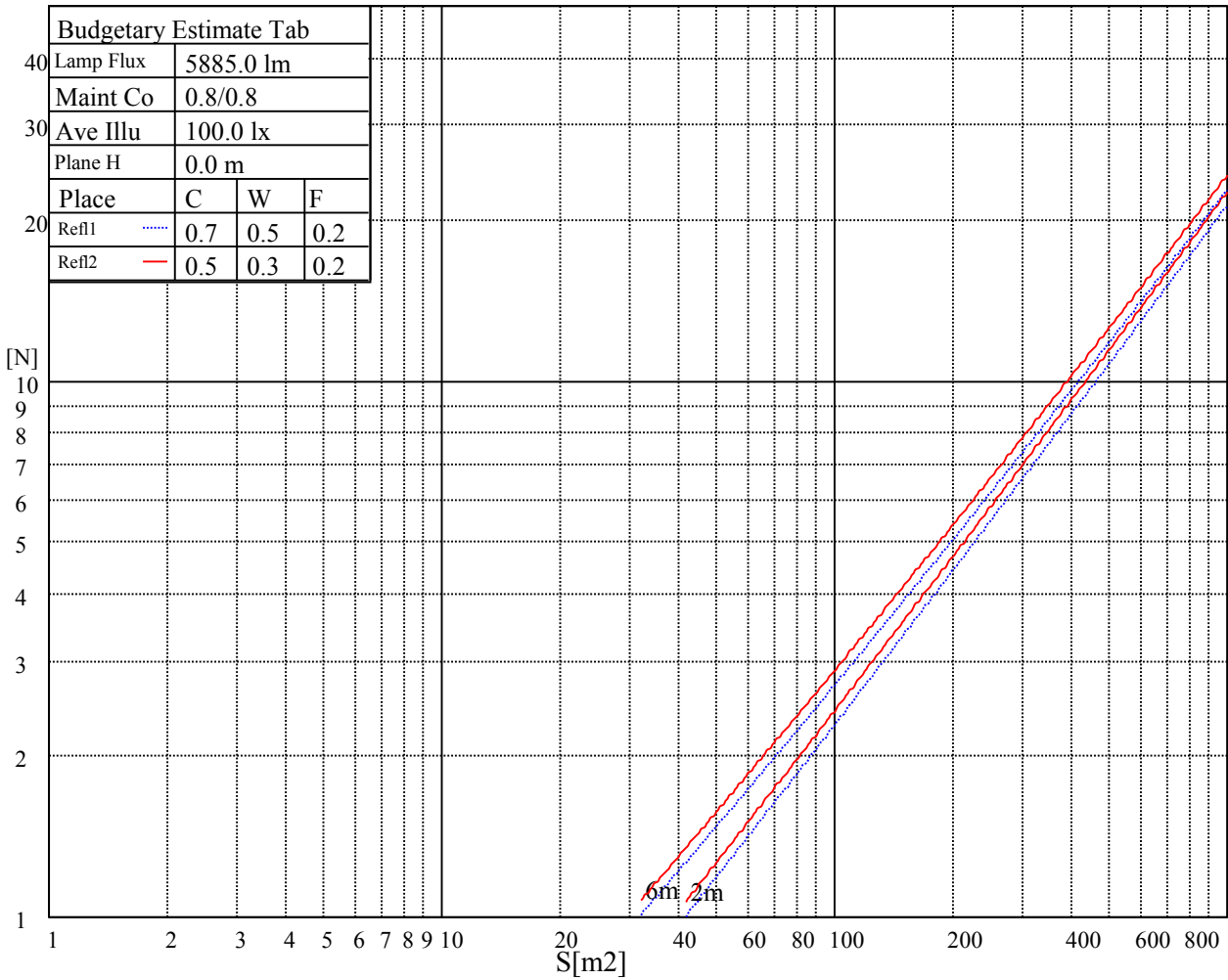
Glare Table

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

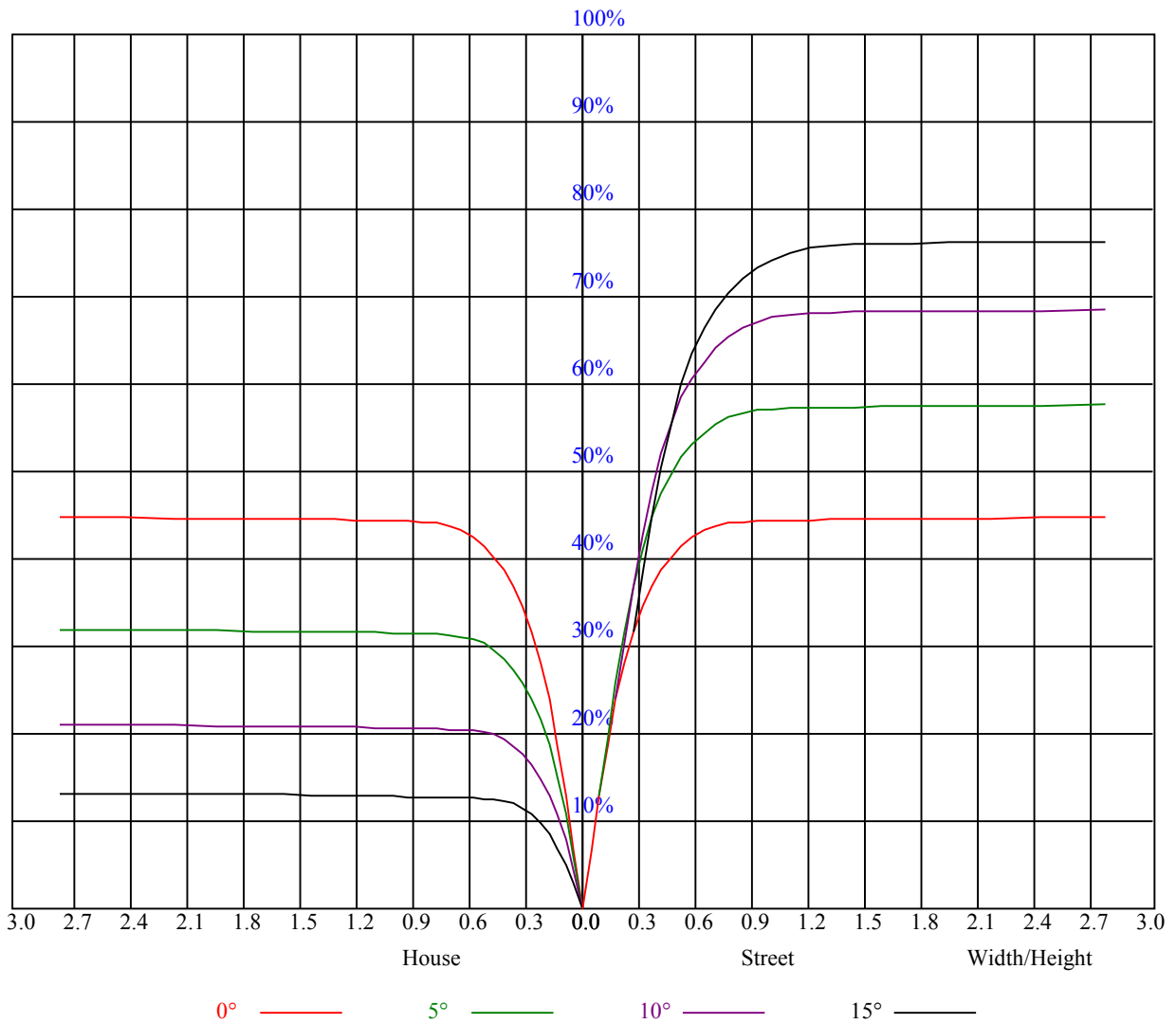
Luminance Limiting Curve



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	-1.59	-0.67	-1.22	-0.36	-0.05	-1.67	-0.76	-1.31	-0.45	-0.13
	3H	0.77	1.58	1.16	1.91	2.28	0.64	1.44	1.02	1.78	2.15
	4H	2.05	2.80	2.46	3.15	3.54	1.90	2.65	2.31	3.00	3.39
	6H	3.52	4.20	3.94	4.58	4.97	3.26	3.94	3.68	4.31	4.71
	8H	4.22	4.86	4.65	5.25	5.66	3.93	4.56	4.36	4.96	5.37
	12H	5.22	5.83	5.66	6.22	6.65	4.95	5.56	5.38	5.94	6.37
4H	2H	-1.10	-0.35	-0.69	0.00	0.39	-1.17	-0.42	-0.76	-0.07	0.32
	3H	1.55	2.17	1.97	2.58	2.98	1.44	2.05	1.85	2.46	2.87
	4H	3.02	3.56	3.46	3.99	4.44	2.88	3.43	3.32	3.86	4.31
	6H	4.54	5.01	5.01	5.46	5.93	4.33	4.79	4.80	5.25	5.72
	8H	5.36	5.80	5.84	6.25	6.73	5.12	5.55	5.59	6.00	6.48
	12H	6.37	6.74	6.86	7.23	7.71	6.13	6.50	6.62	6.99	7.47
8H	4H	3.49	3.92	3.97	4.38	4.85	3.38	3.81	3.86	4.27	4.74
	6H	5.28	5.62	5.79	6.13	6.62	5.09	5.44	5.61	5.94	6.43
	8H	6.25	6.55	6.78	7.08	7.57	6.03	6.33	6.56	6.86	7.36
	12H	7.36	7.62	7.88	8.12	8.70	7.15	7.41	7.68	7.91	8.49
12H	4H	3.59	3.97	4.09	4.46	4.94	3.50	3.87	3.99	4.36	4.84
	6H	5.67	5.77	6.01	6.25	6.80	5.50	5.60	5.84	6.08	6.63
	8H	6.52	6.78	7.05	7.28	7.87	6.33	6.59	6.85	7.09	7.67
Variation with the observer position at spacings:											
S = 1.0H		5.6/-7.0					5.6/-7.0				
S = 1.5H		7.8/-5.4					7.8/-5.4				
S = 2.0H		9.3/-4.1					9.3/-4.1				
Standard tables:		BK2					BK2				
Uncorrected UGR		-2.5					-2.5				



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	1.09	1.09	1.09	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.98	0.95	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.84
2	0.95	0.92	0.89	0.93	0.90	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.85	0.84	0.82	0.81
3	0.91	0.87	0.83	0.89	0.86	0.83	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.78
4	0.87	0.82	0.79	0.86	0.82	0.79	0.84	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
5	0.83	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.76	0.73	0.72
6	0.80	0.76	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.68
8	0.75	0.70	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
9	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.65	0.64
10	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62



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	17172.09	16362.76	12751.06	8087.79	4019.12	2835.40	1947.34	1080.21	311.07
45.0	17150.07	16467.37	12861.18	7856.55	4024.62	2791.36	1921.47	1067.54	282.99
90.0	17172.09	15872.76	10769.58	6795.61	3289.62	2264.47	1729.87	756.64	82.25
135.0	17188.61	16219.62	12272.07	7239.92	3699.79	2322.83	1826.22	943.67	280.24
180.0	17172.09	15845.23	10778.94	6579.24	3374.41	2250.71	1721.61	738.36	72.29
225.0	17133.55	15674.56	10743.16	6515.37	3392.58	2267.77	1709.50	766.94	66.12
270.0	17172.09	16340.74	12960.28	8126.32	4035.63	2802.37	1937.99	1064.79	318.78
315.0	17188.61	16164.56	10814.18	7364.89	3653.54	2325.58	1848.24	914.87	117.99
360.0	17172.09	16362.76	12751.06	8087.79	4019.12	2835.40	1947.34	1080.21	311.07
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	38.65	27.75	25.88	24.89	24.28	23.89	23.62	23.56	23.51
45.0	37.71	27.42	25.60	24.61	24.06	23.62	23.34	23.12	23.18
90.0	37.99	27.58	25.93	25.00	24.61	24.83	24.22	26.10	23.73
135.0	35.79	27.69	26.04	25.16	24.61	24.33	24.56	29.23	23.95
180.0	31.88	26.76	25.49	24.61	24.00	23.67	23.34	23.23	23.34
225.0	31.33	26.65	25.05	24.17	23.67	23.23	23.01	22.90	23.01
270.0	39.97	28.52	26.37	25.27	24.61	24.50	24.39	25.33	23.84
315.0	37.11	27.91	26.10	25.11	24.67	24.61	25.49	29.73	24.22
360.0	38.65	27.75	25.88	24.89	24.28	23.89	23.62	23.56	23.51
C/γ(°)	90.0								
0.0	22.74								
45.0	22.52								
90.0	22.52								
135.0	22.63								
180.0	22.68								
225.0	22.46								
270.0	22.52								
315.0	22.63								
360.0	22.74								