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Nata

LumCAT: 2-1672-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.5000
Test No: GC2018091015	Current(A): 0.5000
LampCAT: LUMINUS CXM-11-AC30	Power (W): 17.2500
Lamp flux(lm): 2547.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2337.30
Efficiency(%): 91.77%
Lumens(lm)/Power(W): 135.50
Central intensity(cd): 8709.892
Maximum intensity(cd): 8709.892
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.9
 [C90/270]Total=24.9
Field angle(10%Imax): [C0/180]Total=49.8
 [C90/270]Total=49.8
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.39 C90_270=0.39
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.72%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.670%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/9/10
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

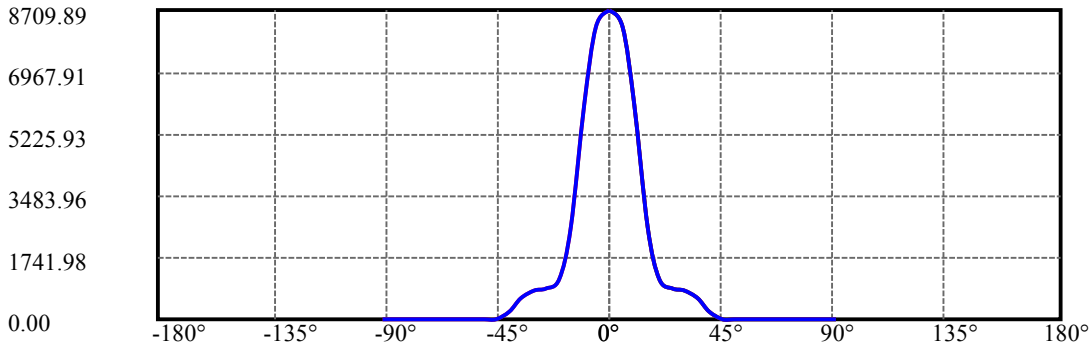
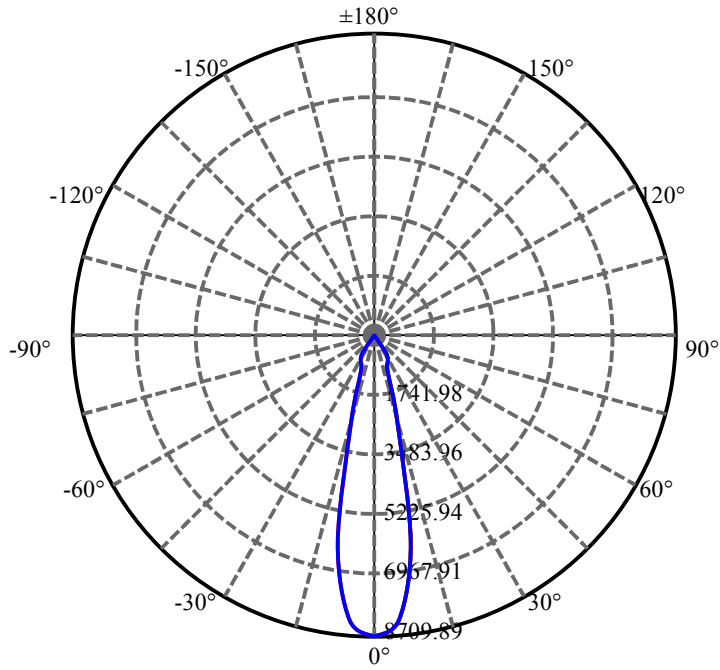
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8709.891	52.087	52.087	2.045%	2.229%
5.0	8246.461	393.961	446.048	15.468%	19.084%
10.0	6071.695	577.923	1023.97	22.690%	43.810%
15.0	2600.789	368.970	1392.94	14.486%	59.596%
20.0	1119.720	209.918	1602.858	8.242%	68.577%
25.0	866.862	200.811	1803.669	7.884%	77.169%
30.0	786.509	215.557	2019.227	8.463%	86.392%
35.0	611.803	192.350	2211.577	7.552%	94.621%
40.0	208.371	73.417	2284.993	2.882%	97.762%
45.0	18.464	7.157	2292.15	.281%	98.068%
50.0	12.270	5.152	2297.302	.202%	98.289%
55.0	11.496	5.162	2302.464	.203%	98.510%
60.0	10.955	5.200	2307.664	.204%	98.732%
65.0	10.610	5.271	2312.935	.207%	98.958%
70.0	10.364	5.338	2318.273	.210%	99.186%
75.0	10.195	5.398	2323.671	.212%	99.417%
80.0	10.083	5.443	2329.114	.214%	99.650%
85.0	10.005	5.464	2334.578	.215%	99.884%
90.0	9.921	2.719	2337.297	.107%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2019.23	79.28%	86.39%
0-40	2284.99	89.71%	97.76%
0-60	2307.66	90.60%	98.73%
0-90	2334.58	91.66%	99.88%
0-120	2334.58	91.66%	99.88%
0-180	2337.30	91.77%	100.00%
60-90	32.11	1.26%	1.37%
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%
0-26.53	1869.84	73.41%	80.00%

ZONAL LUMEN SUMMARY

0-10	1023.97
10-20	578.89
20-30	416.37
30-40	265.77
40-50	12.31
50-60	10.36
60-70	10.61
70-80	10.84
80-90	5.46
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: —————

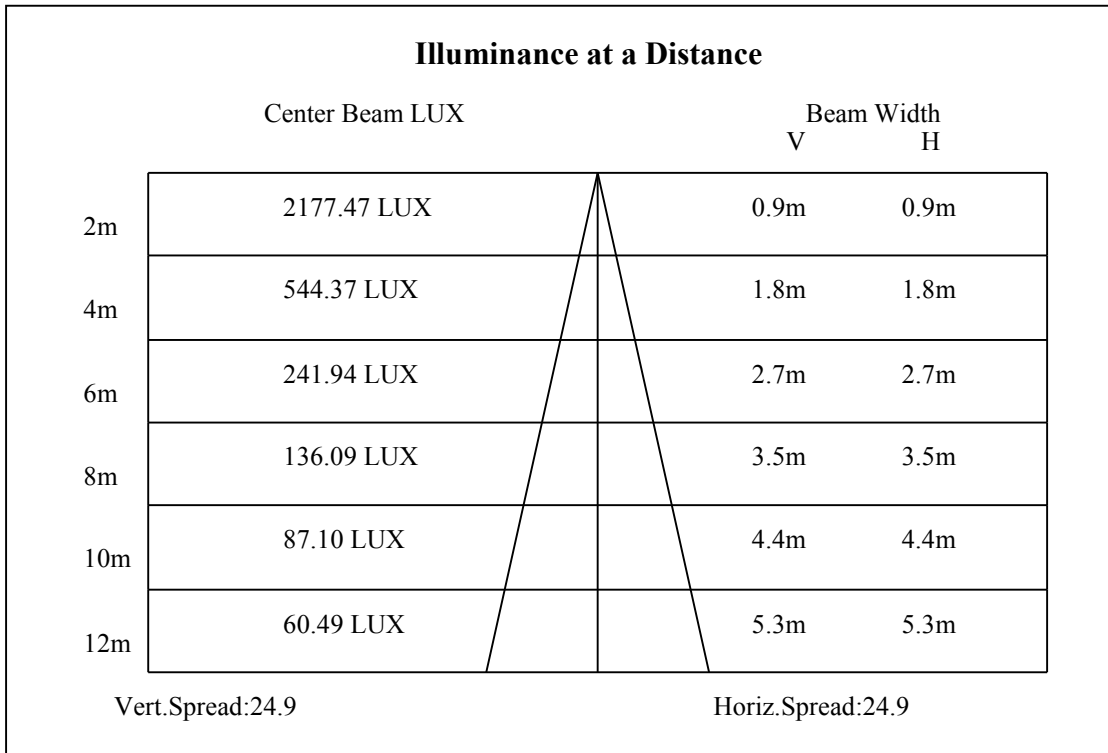
C90/C270: —————

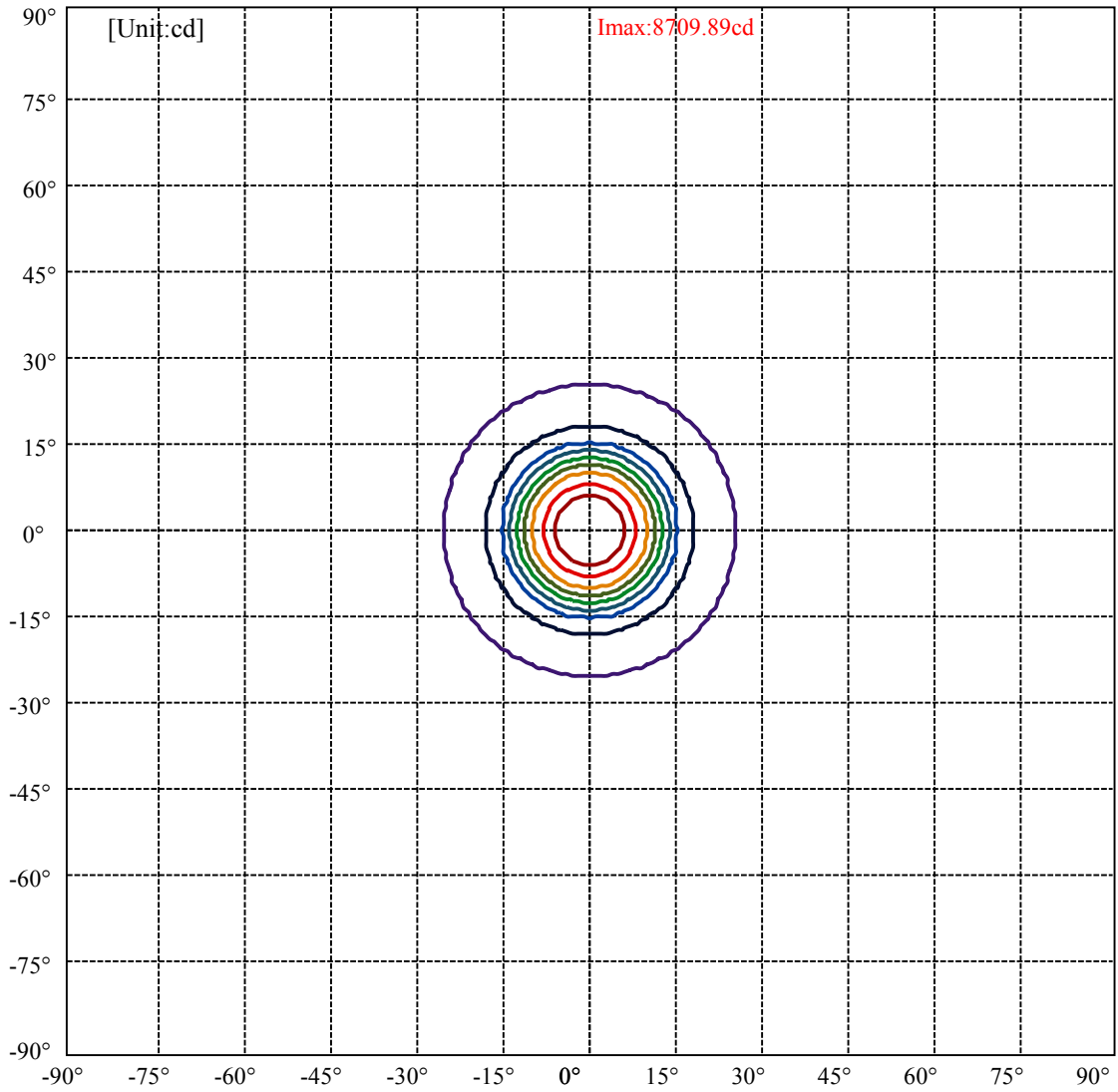
Field angle(10%Imax):C0/180Left:24.9 Right:24.9

:C90/270Left:24.9 Right:24.9

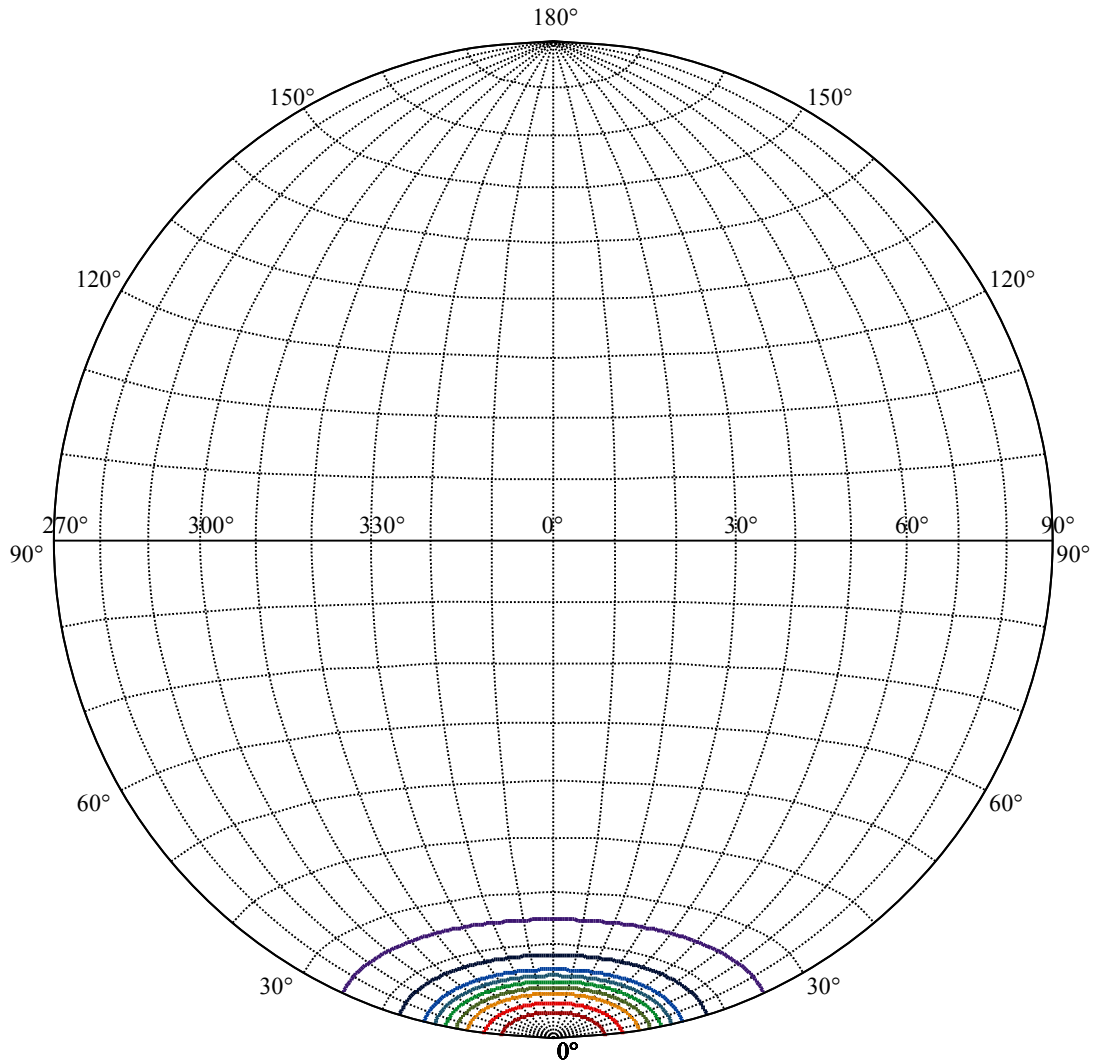
Beam Angle(50%Imax):C0/180Left:12.5 Right:12.5

:C90/270Left:12.5 Right:12.5





(10%Imax) 870.989	—
(20%Imax) 1741.98	—
(30%Imax) 2612.97	—
(40%Imax) 3483.96	—
(50%Imax) 4354.95	—
(60%Imax) 5225.94	—
(70%Imax) 6096.92	—
(80%Imax) 6967.91	—
(90%Imax) 7838.9	—



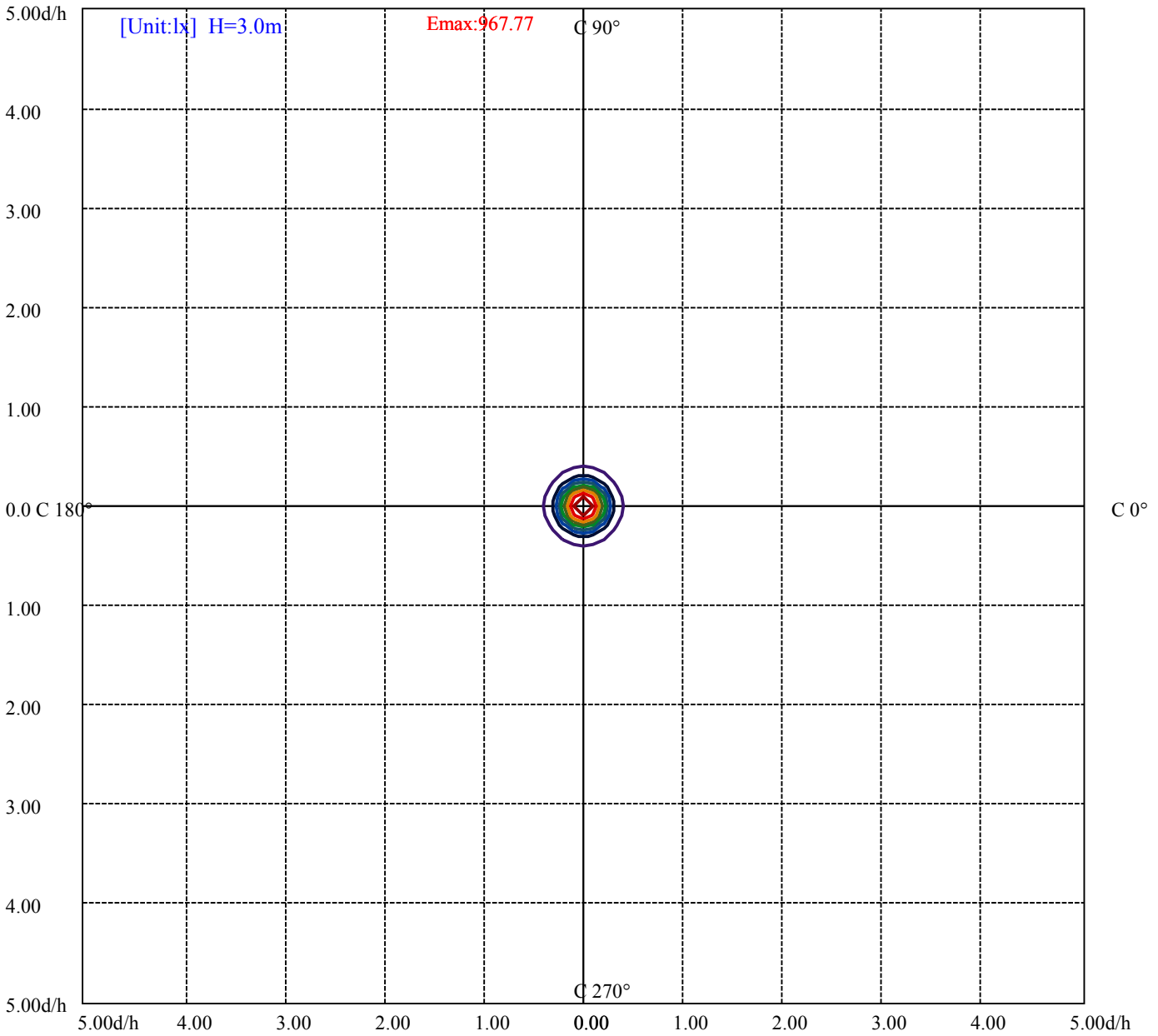
House

[Unit:cd]

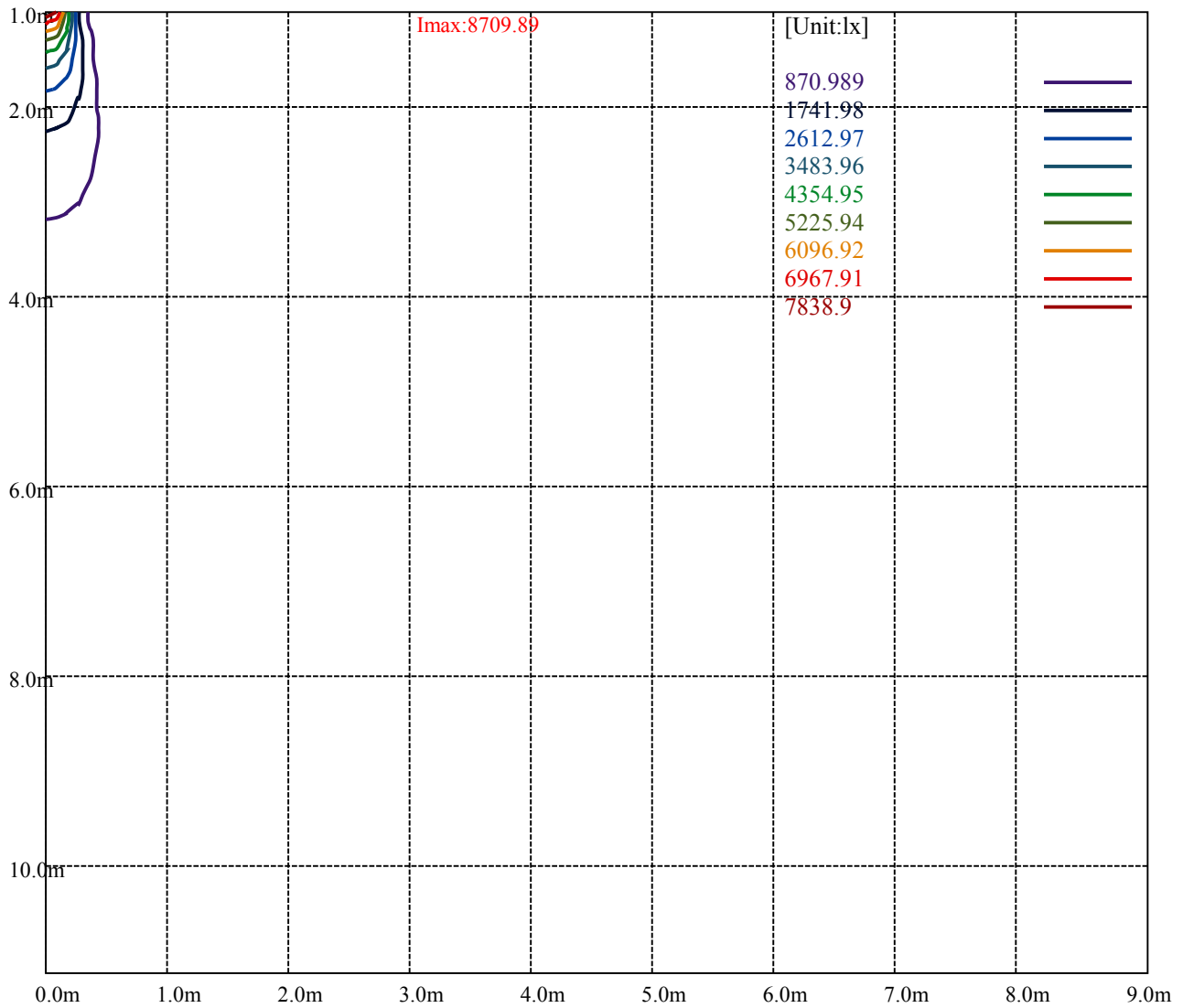
Road

Imax:8709.89

(10%Imax) 870.989	—
(20%Imax) 1741.98	—
(30%Imax) 2612.97	—
(40%Imax) 3483.96	—
(50%Imax) 4354.95	—
(60%Imax) 5225.94	—
(70%Imax) 6096.92	—
(80%Imax) 6967.91	—
(90%Imax) 7838.9	—



(10%Emax) 96.77644	—
(20%Emax) 193.5533	—
(30%Emax) 290.3289	—
(40%Emax) 387.1056	—
(50%Emax) 483.8822	—
(60%Emax) 580.6589	—
(70%Emax) 677.4344	—
(80%Emax) 774.2111	—
(90%Emax) 870.9878	—



Luminance Table

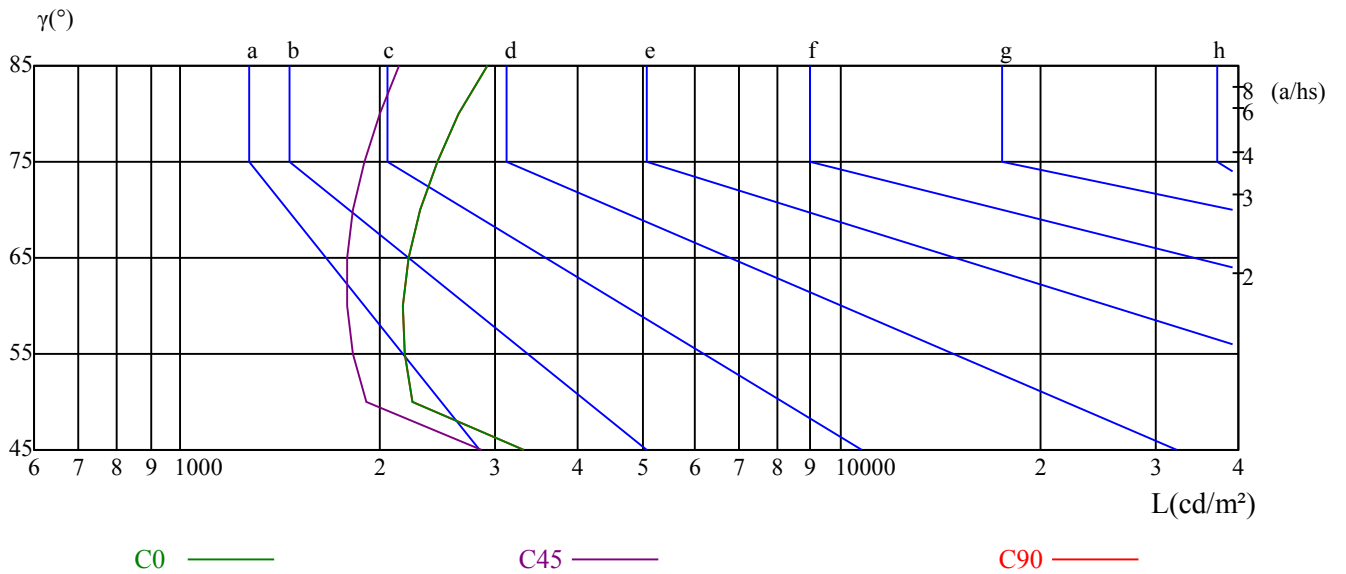
γ	45	50	55	60	65	70	75	80	85
C0	3301	2249	2179	2166	2211	2301	2442	2643	2921
C45	2852	1914	1826	1785	1790	1826	1895	1999	2144
C90	3301	2249	2179	2166	2211	2301	2442	2643	2921

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5124	5124	5124	8039	8039	8039	23429	23429	23429

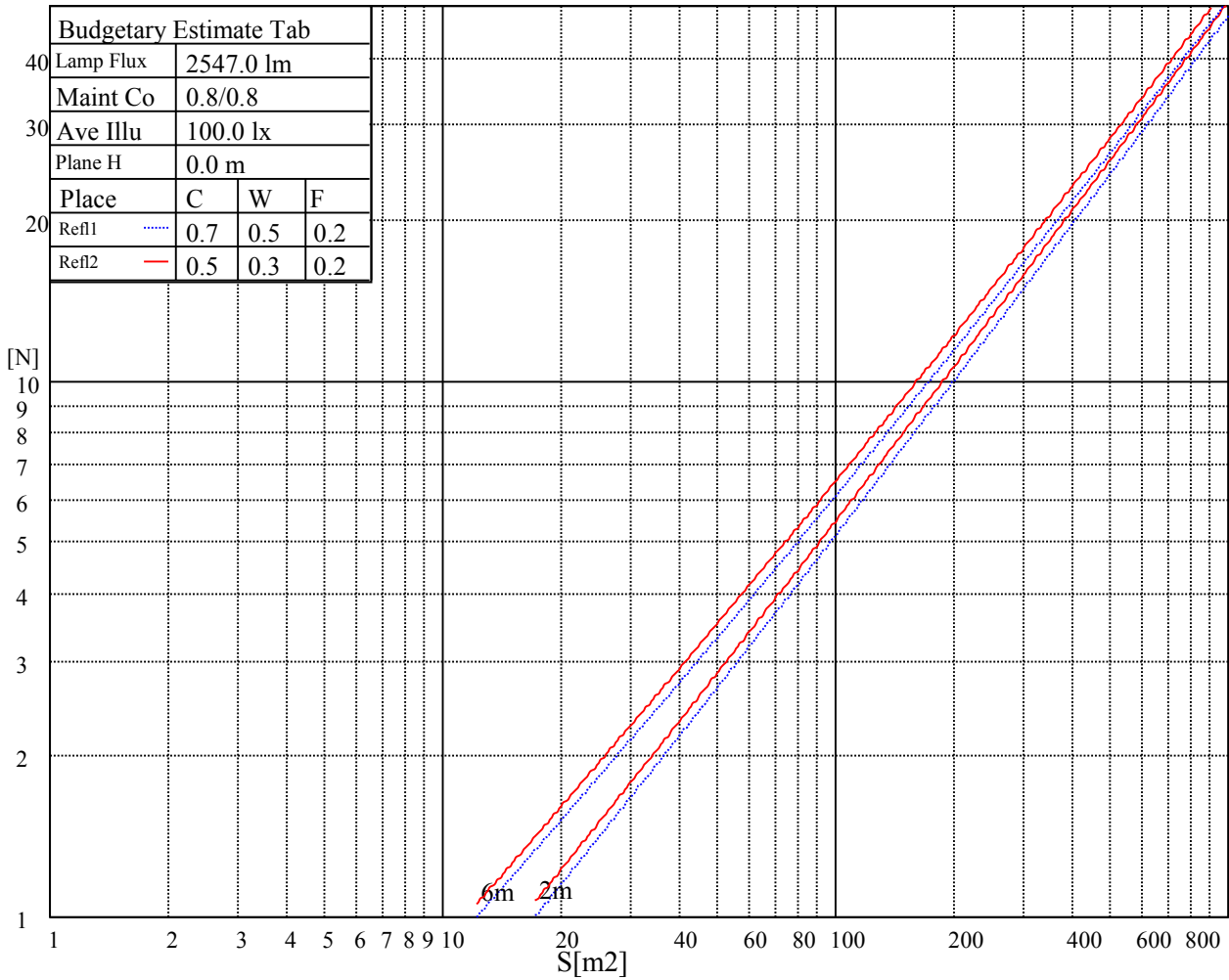
Glare Table

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

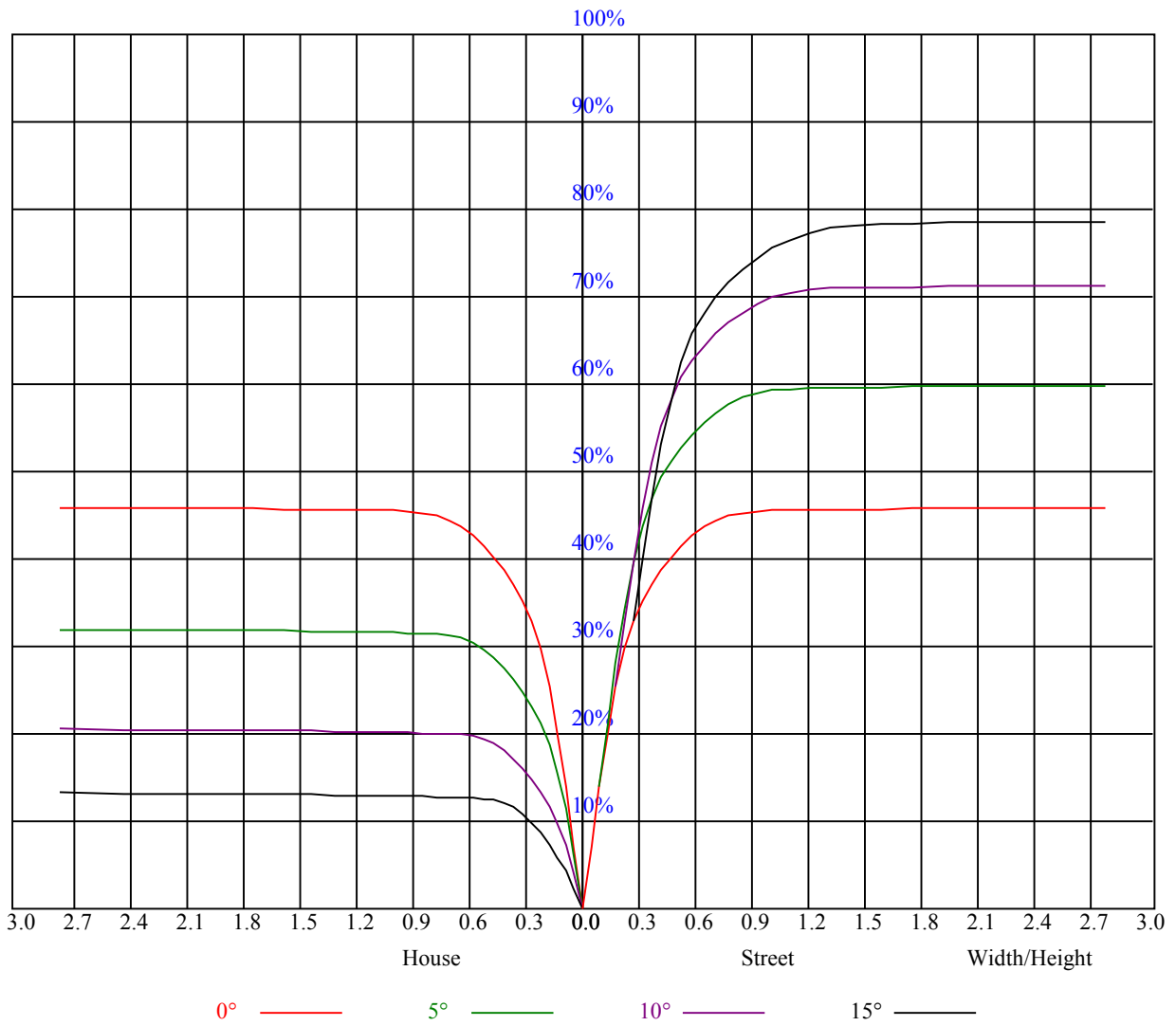
Luminance Limiting Curve



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	0.94	1.85	1.31	2.17	2.48	0.92	1.84	1.29	2.15	2.47
	3H	3.18	3.99	3.56	4.32	4.69	3.18	3.98	3.56	4.32	4.69
	4H	4.41	5.16	4.82	5.51	5.90	4.40	5.15	4.81	5.51	5.90
	6H	5.71	6.39	6.13	6.77	7.17	5.70	6.38	6.12	6.76	7.16
	8H	6.36	7.00	6.80	7.40	7.81	6.35	6.99	6.79	7.38	7.80
	12H	7.37	7.98	7.81	8.37	8.80	7.36	7.97	7.79	8.35	8.78
4H	2H	1.43	2.17	1.83	2.53	2.92	1.41	2.16	1.82	2.51	2.90
	3H	3.95	4.57	4.37	4.98	5.38	3.96	4.57	4.38	4.98	5.39
	4H	5.37	5.91	5.80	6.34	6.79	5.36	5.91	5.80	6.34	6.79
	6H	6.77	7.24	7.24	7.69	8.17	6.76	7.23	7.23	7.68	8.16
	8H	7.53	7.97	8.01	8.42	8.90	7.52	7.96	8.00	8.41	8.89
8H	12H	8.54	8.91	9.03	9.40	9.88	8.52	8.90	9.02	9.39	9.87
	4H	5.80	6.24	6.28	6.69	7.17	5.80	6.24	6.28	6.69	7.17
	6H	7.45	7.79	7.96	8.29	8.78	7.44	7.78	7.95	8.28	8.77
	8H	8.36	8.67	8.90	9.19	9.69	8.35	8.66	8.89	9.18	9.68
12H	12H	9.50	9.76	10.02	10.26	10.84	9.49	9.75	10.01	10.25	10.83
	4H	5.89	6.27	6.38	6.76	7.23	5.89	6.26	6.38	6.75	7.23
	6H	7.82	7.92	8.15	8.39	8.94	7.81	7.91	8.14	8.38	8.93
	8H	8.63	8.89	9.15	9.39	9.97	8.62	8.88	9.14	9.38	9.96
Variation with the observer position at spacings:											
S = 1.0H	4.9/-8.8					4.9/-8.8					
S = 1.5H	7.4/-7.0					7.4/-7.0					
S = 2.0H	9.1/-5.7					9.1/-5.7					
Standard tables:	BK1					BK1					
Uncorrected UGR	-1.6					-1.6					



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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.03	1.00	0.98	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.86
2	0.97	0.94	0.91	0.96	0.92	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.93	0.89	0.85	0.91	0.88	0.85	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.79
4	0.89	0.84	0.81	0.88	0.84	0.81	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.69
8	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.74	0.71	0.68	0.67
9	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64



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	8745.19	8217.56	5862.38	2483.44	1061.44	854.44	784.69	599.63	297.00
45.0	8668.69	8506.69	6897.38	3389.63	1241.44	896.63	804.38	721.69	297.56
90.0	8719.88	8402.06	6374.25	2858.06	1101.94	873.17	791.89	659.48	184.73
135.0	8705.81	8517.94	7072.88	3555.00	1356.75	905.63	802.69	729.56	285.75
180.0	8745.19	8351.44	6288.75	2688.19	1119.66	872.38	785.93	642.38	192.60
225.0	8668.69	7872.19	5135.63	1794.94	997.88	838.13	771.41	492.81	65.93
270.0	8719.88	8122.50	5842.13	2262.38	1077.75	865.13	785.25	572.63	298.69
315.0	8705.81	7981.31	5100.19	1774.69	1000.91	829.41	765.84	476.27	44.72
360.0	8745.19	8217.56	5862.38	2483.44	1061.44	854.44	784.69	599.63	297.00
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.11	12.26	11.48	10.86	10.52	10.29	10.13	10.01	9.96
45.0	21.99	12.43	11.59	11.03	10.69	10.41	10.24	10.18	10.18
90.0	19.13	12.32	11.53	10.97	10.63	10.35	10.18	10.07	9.96
135.0	21.83	12.54	11.64	11.08	10.69	10.41	10.24	10.07	10.01
180.0	19.52	12.32	11.59	11.03	10.63	10.41	10.18	10.07	9.96
225.0	15.36	12.09	11.42	10.91	10.63	10.41	10.29	10.18	10.01
270.0	16.37	12.15	11.42	10.97	10.63	10.35	10.18	10.07	10.01
315.0	15.41	12.04	11.31	10.80	10.46	10.29	10.13	10.01	9.96
360.0	18.11	12.26	11.48	10.86	10.52	10.29	10.13	10.01	9.96
C/ γ (°)	90.0								
0.0	9.90								
45.0	9.90								
90.0	9.96								
135.0	9.90								
180.0	9.90								
225.0	9.96								
270.0	9.96								
315.0	9.90								
360.0	9.90								