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## Nata

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LumCAT: 1677-A	
Luminaire: 92.70.051.00+92.70.147.00	
Report No: NT2017092621	Voltage(V): 39.0000
Test No: GC2017092621	Current(A): 0.3000
LampCAT: LUMINUS CXM-6-AA30	Power (W): 11.7000
Lamp flux(lm): 936.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 777.32  
Efficiency(%): 83.05%  
Lumens(lm)/Power(W): 66.44  
Central intensity(cd): 2174.865  
Maximum intensity(cd): 2174.865  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=31.4  
                                  [C90/270]Total=31.4  
Field angle(10%Imax): [C0/180]Total=56.0  
                                  [C90/270]Total=56.0  
Maximum s/h(1/2): C0\_180=0.52 C90\_270=0.52  
Maximum s/h(1/4): C0\_180=0.50 C90\_270=0.50  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 84.36%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.467%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2017/9/26  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

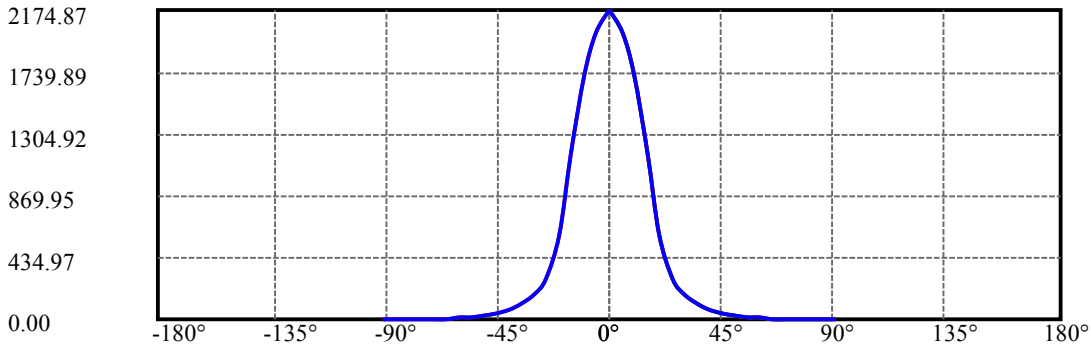
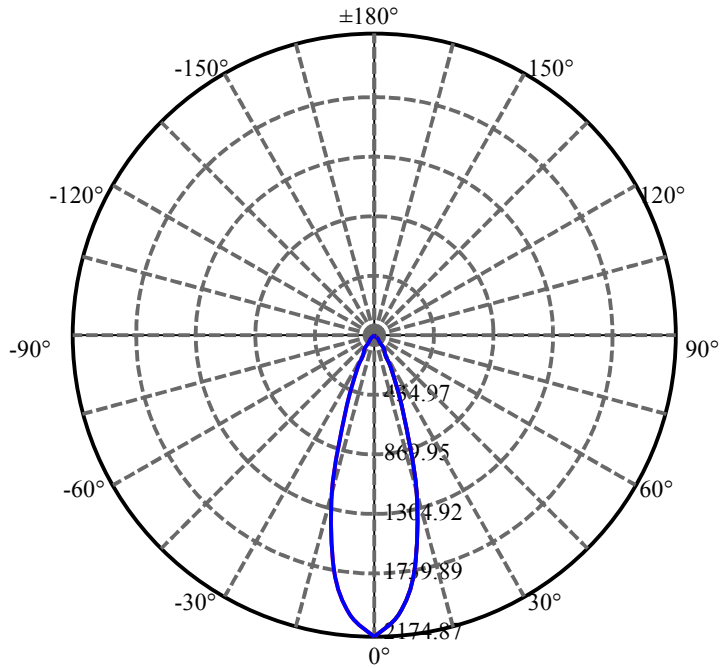
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2174.865	13.006	13.006	1.390%	1.673%
5.0	2016.716	96.345	109.351	10.293%	14.068%
10.0	1714.732	163.213	272.565	17.437%	35.065%
15.0	1165.750	165.383	437.948	17.669%	56.341%
20.0	594.595	111.471	549.419	11.909%	70.681%
25.0	282.171	65.366	614.785	6.984%	79.091%
30.0	173.586	47.574	662.359	5.083%	85.211%
35.0	113.581	35.710	698.069	3.815%	89.805%
40.0	71.271	25.111	723.18	2.683%	93.035%
45.0	43.323	16.791	739.972	1.794%	95.196%
50.0	27.088	11.374	751.346	1.215%	96.659%
55.0	15.822	7.104	758.45	.759%	97.573%
60.0	6.813	3.234	761.684	.346%	97.989%
65.0	5.334	2.650	764.334	.283%	98.330%
70.0	5.347	2.754	767.088	.294%	98.684%
75.0	5.561	2.944	770.032	.315%	99.063%
80.0	6.008	3.243	773.275	.346%	99.480%
85.0	5.808	3.172	776.447	.339%	99.888%
90.0	3.173	0.870	777.317	.093%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	662.36	70.76%	85.21%
0-40	723.18	77.26%	93.04%
0-60	761.68	81.38%	97.99%
0-90	776.45	82.95%	99.89%
0-120	776.45	82.95%	99.89%
0-180	777.32	83.05%	100.00%
60-90	18.00	1.92%	2.32%
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%
0-25.74	621.85	66.44%	80.00%

## ZONAL LUMEN SUMMARY

0-10	272.56
10-20	276.85
20-30	112.94
30-40	60.82
40-50	28.17
50-60	10.34
60-70	5.40
70-80	6.19
80-90	3.17
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): ———

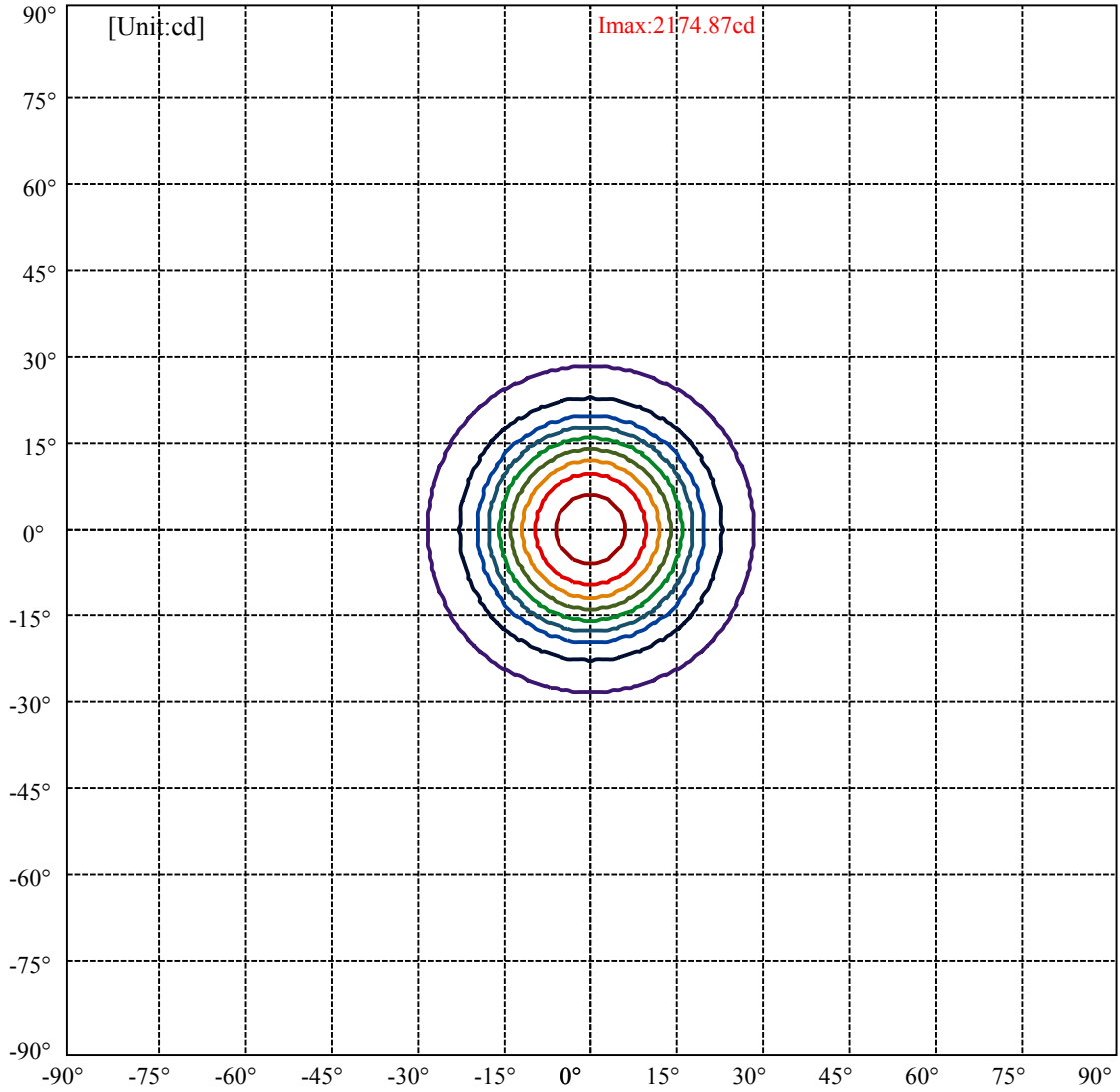
C0/C180: ———

C90/C270: ———

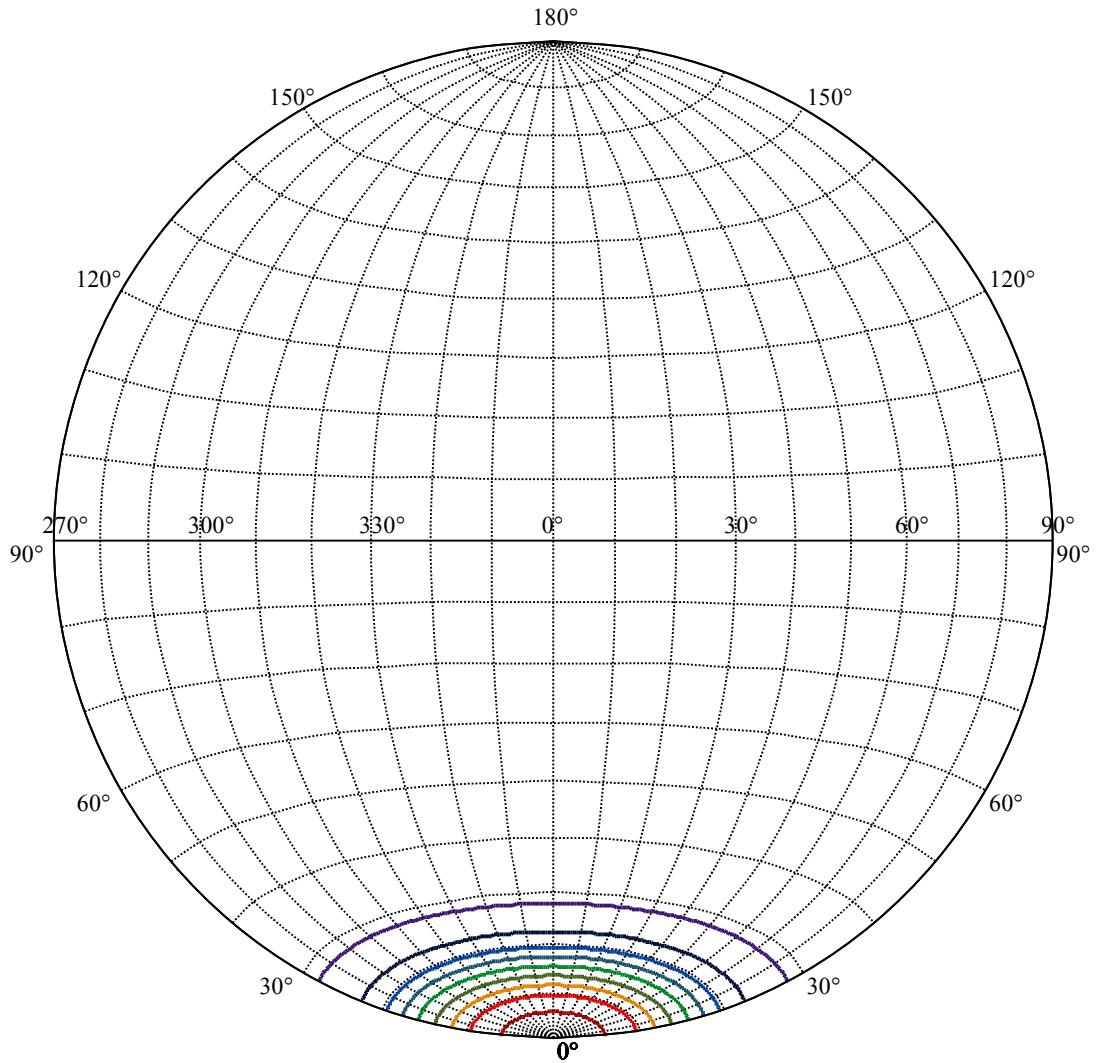
Field angle(10%Imax):C0/180Left:28.0 Right:28.0  
:C90/270Left:28.0 Right:28.0

Beam Angle(50%Imax):C0/180Left:15.7 Right:15.7  
:C90/270Left:15.7 Right:15.7





(10%Imax) 217.487	—
(20%Imax) 434.973	—
(30%Imax) 652.46	—
(40%Imax) 869.946	—
(50%Imax) 1087.43	—
(60%Imax) 1304.92	—
(70%Imax) 1522.41	—
(80%Imax) 1739.89	—
(90%Imax) 1957.38	—



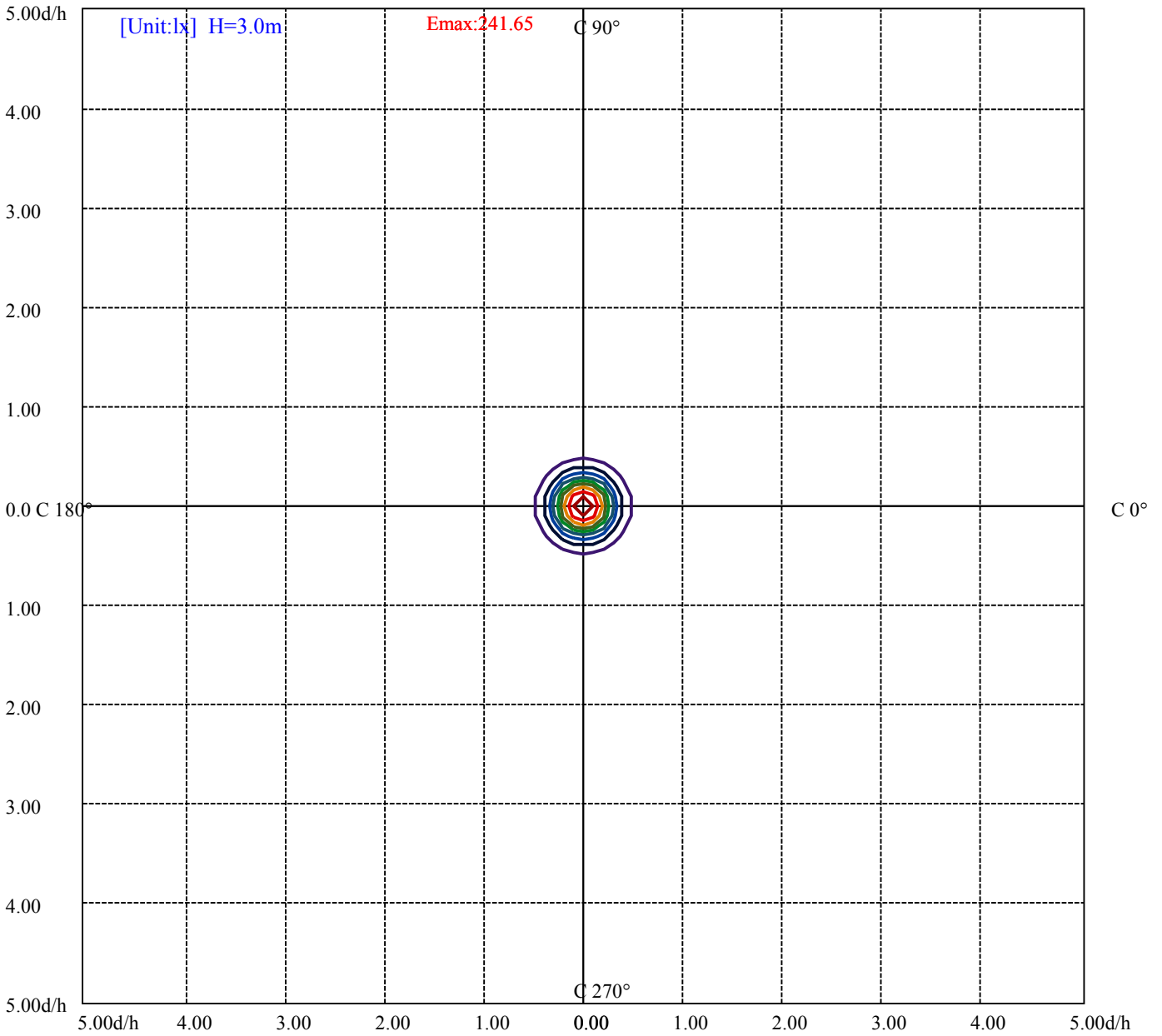
House

[Unit:cd]

Road

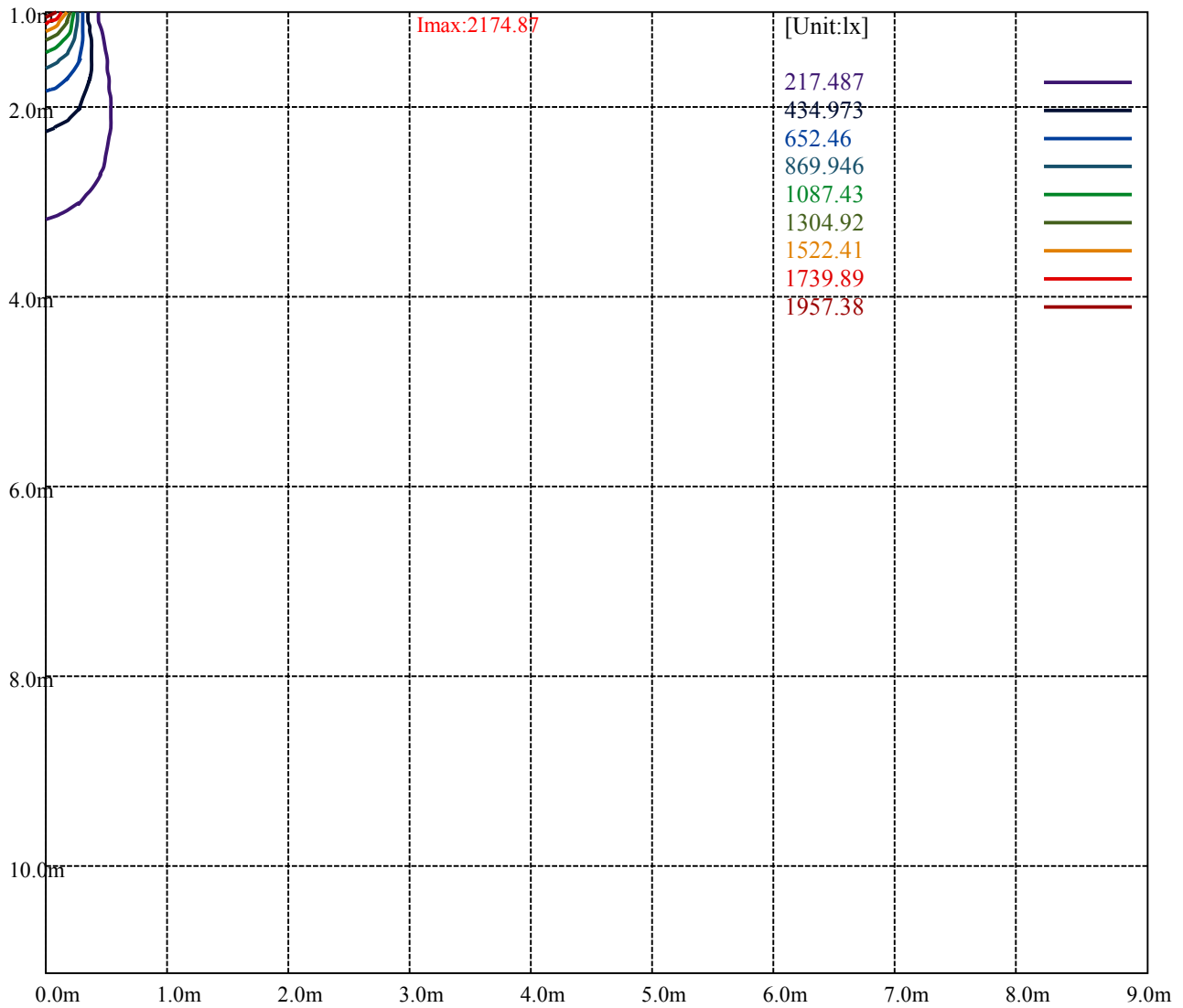
**Imax:2174.87**

(10%Imax) 217.487	—
(20%Imax) 434.973	—
(30%Imax) 652.46	—
(40%Imax) 869.946	—
(50%Imax) 1087.43	—
(60%Imax) 1304.92	—
(70%Imax) 1522.41	—
(80%Imax) 1739.89	—
(90%Imax) 1957.38	—



(10%Emax) 24.16511	—
(20%Emax) 48.33022	—
(30%Emax) 72.49533	—
(40%Emax) 96.66044	—
(50%Emax) 120.8256	—
(60%Emax) 144.9911	—
(70%Emax) 169.1556	—
(80%Emax) 193.3211	—
(90%Emax) 217.4855	—





Luminance Table

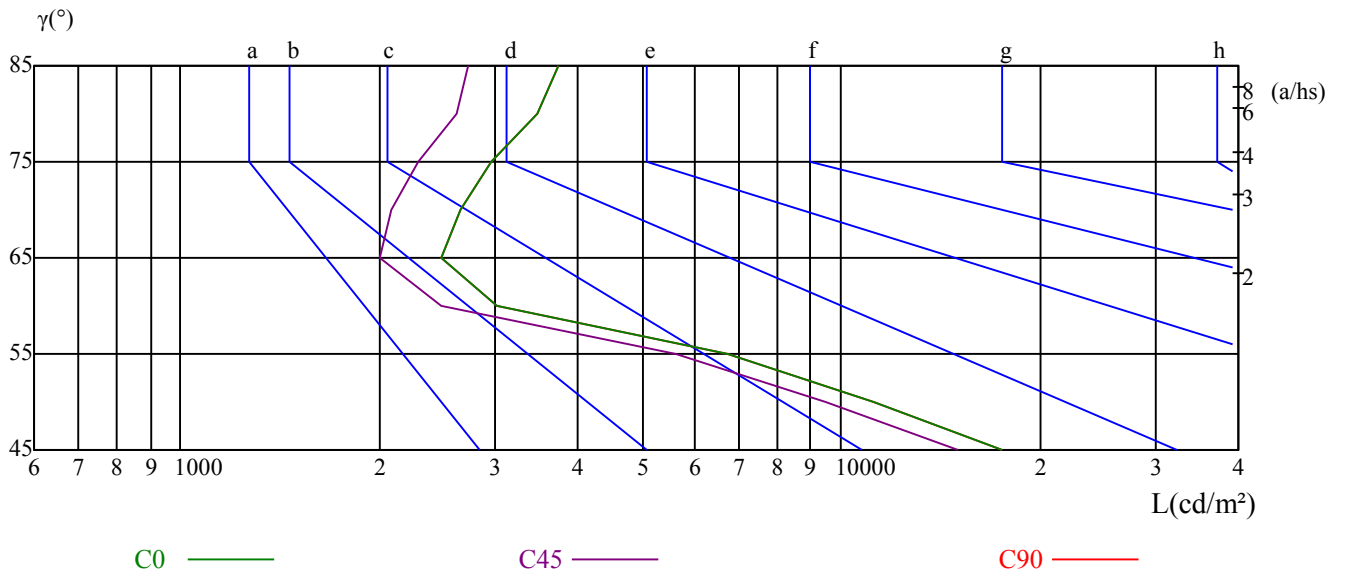
$\gamma$	45	50	55	60	65	70	75	80	85
C0	17525	11206	6750	3024	2487	2647	2957	3480	3725
C45	15062	9487	5626	2479	2003	2091	2286	2624	2729
C90	17525	11206	6750	3024	2487	2647	2957	3480	3725

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5964	5964	5964	10154	10154	10154	31496	31496	31496

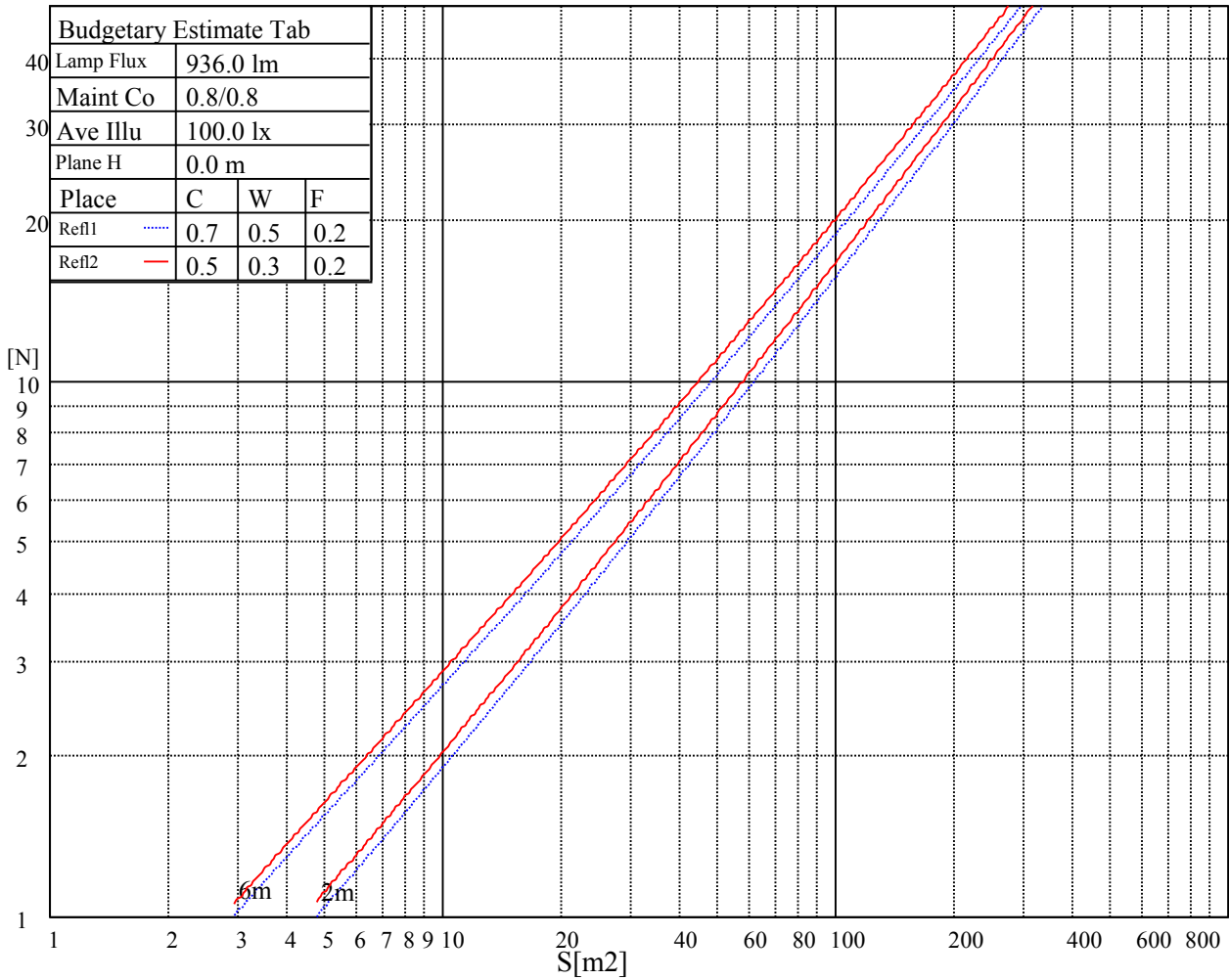
Glare Table

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

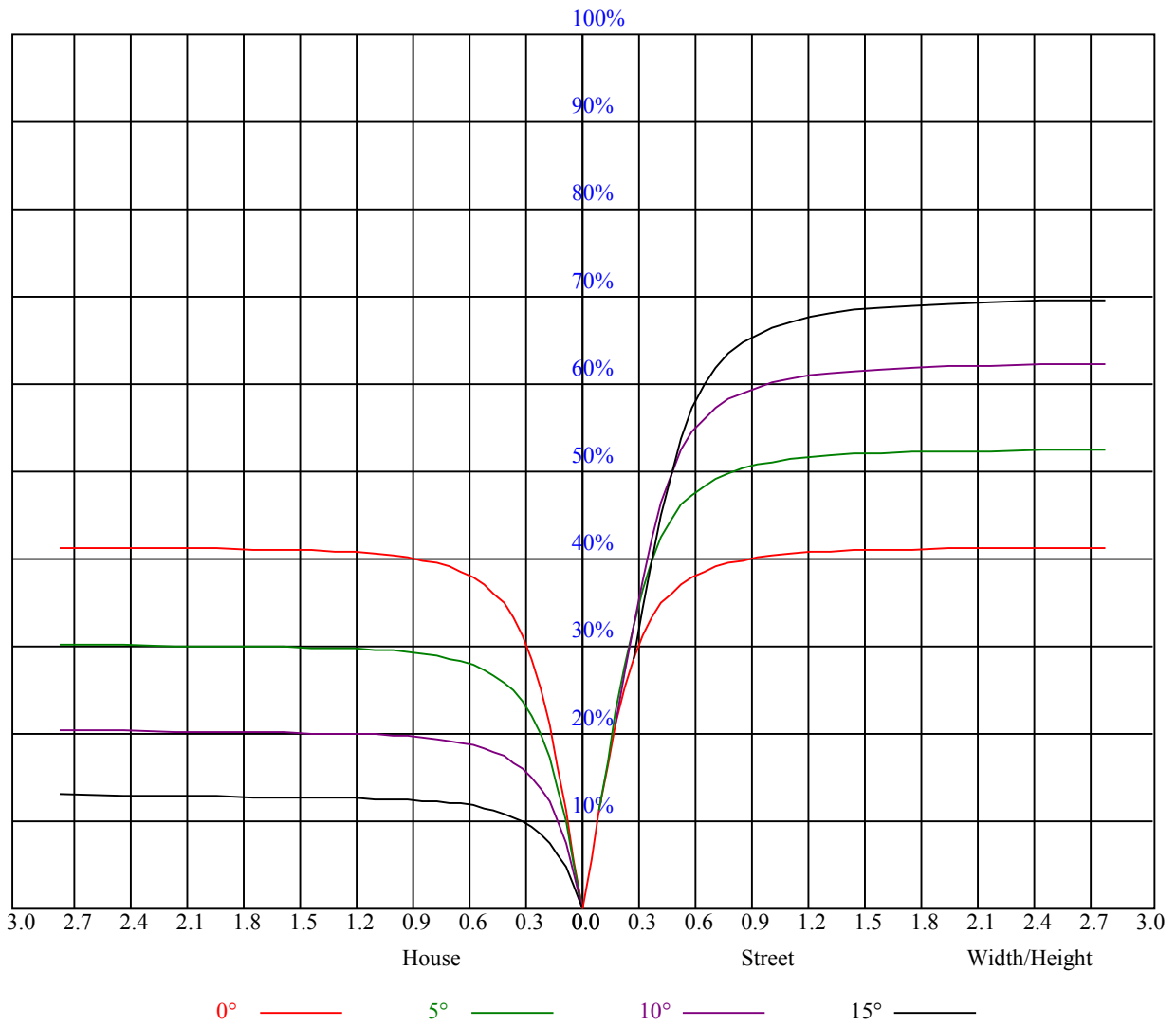
Luminance Limiting Curve



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	11.03	12.03	11.39	12.34	12.66	11.25	12.25	11.62	12.57	12.88
	3H	11.65	12.53	12.03	12.87	13.24	11.96	12.84	12.34	13.18	13.55
	4H	12.20	13.02	12.61	13.37	13.76	12.63	13.45	13.04	13.80	14.19
	6H	13.03	13.78	13.45	14.15	14.55	13.61	14.37	14.03	14.74	15.14
	8H	13.51	14.21	13.95	14.61	15.02	14.14	14.85	14.58	15.24	15.65
	12H	14.31	14.98	14.74	15.36	15.80	14.95	15.62	15.39	16.01	16.44
4H	2H	10.96	11.78	11.37	12.14	12.53	11.17	11.99	11.58	12.35	12.74
	3H	11.87	12.54	12.29	12.95	13.36	12.17	12.84	12.58	13.25	13.65
	4H	12.65	13.25	13.09	13.68	14.12	13.07	13.67	13.51	14.10	14.54
	6H	13.56	14.08	14.03	14.53	15.00	14.11	14.63	14.58	15.08	15.55
	8H	14.23	14.71	14.71	15.16	15.64	14.83	15.31	15.31	15.76	16.24
	12H	15.13	15.55	15.63	16.04	16.52	15.74	16.16	16.23	16.65	17.13
8H	4H	12.94	13.42	13.41	13.87	14.35	13.31	13.79	13.78	14.24	14.71
	6H	14.15	14.53	14.66	15.04	15.52	14.64	15.02	15.15	15.52	16.01
	8H	14.98	15.33	15.52	15.85	16.35	15.52	15.86	16.05	16.38	16.88
	12H	16.03	16.32	16.55	16.82	17.40	16.57	16.86	17.09	17.36	17.94
12H	4H	13.02	13.44	13.51	13.92	14.40	13.36	13.78	13.85	14.27	14.74
	6H	14.62	14.67	14.86	15.14	15.69	15.07	15.11	15.31	15.59	16.13
	8H	15.25	15.55	15.77	16.05	16.63	15.74	16.04	16.26	16.54	17.12
Variation with the observer position at spacings:											
S = 1.0H	2.5/-3.2					2.5/-3.2					
S = 1.5H	4.0/-3.4					4.0/-3.4					
S = 2.0H	5.5/-2.8					5.5/-2.8					
Standard tables:	BK3					BK3					
Uncorrected UGR	-1.7					-1.7					



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	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.84
1	0.93	0.90	0.88	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.87	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.78	0.77	0.75	0.74
3	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.71
4	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.68
5	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.71	0.68	0.66	0.65
6	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
7	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
8	0.68	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.59
9	0.65	0.61	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55



Intensity data(cd)

<b>C/γ(°)</b>	<b>0.0</b>	<b>5.0</b>	<b>10.0</b>	<b>15.0</b>	<b>20.0</b>	<b>25.0</b>	<b>30.0</b>	<b>35.0</b>	<b>40.0</b>
<b>0.0</b>	2165.92	2012.31	1727.67	1196.38	576.44	282.99	170.62	112.37	73.83
<b>45.0</b>	2176.38	2072.87	1770.61	1232.16	621.59	285.19	173.43	115.95	72.29
<b>90.0</b>	2194.00	2094.90	1787.13	1084.67	615.15	287.56	173.26	113.03	70.36
<b>135.0</b>	2163.17	2113.06	1858.15	1403.94	747.12	332.54	202.66	129.00	81.87
<b>180.0</b>	2165.92	1977.63	1642.88	1095.51	566.97	271.54	174.09	114.57	71.35
<b>225.0</b>	2176.38	1966.61	1628.02	1085.44	548.47	263.28	164.95	108.79	67.11
<b>270.0</b>	2194.00	1973.22	1681.97	1191.42	598.46	284.09	172.66	112.81	68.38
<b>315.0</b>	2163.17	1923.12	1621.41	1036.49	482.57	250.18	157.02	102.13	64.97
<b>360.0</b>	2165.92	2012.31	1727.67	1196.38	576.44	282.99	170.62	112.37	73.83
<b>C/γ(°)</b>	<b>45.0</b>	<b>50.0</b>	<b>55.0</b>	<b>60.0</b>	<b>65.0</b>	<b>70.0</b>	<b>75.0</b>	<b>80.0</b>	<b>85.0</b>
<b>0.0</b>	45.92	28.57	17.07	6.99	5.62	5.67	6.00	6.55	6.00
<b>45.0</b>	43.71	27.64	16.63	6.77	5.29	5.29	5.45	6.06	5.56
<b>90.0</b>	41.62	25.82	15.42	6.06	5.07	5.07	5.12	5.73	5.95
<b>135.0</b>	50.54	31.16	17.40	8.26	4.84	4.79	4.79	4.90	5.34
<b>180.0</b>	44.16	26.92	15.14	6.88	5.73	5.78	6.28	6.72	6.11
<b>225.0</b>	40.19	25.77	15.36	6.94	5.67	5.73	6.11	6.55	6.22
<b>270.0</b>	41.07	26.26	15.80	6.39	5.12	5.07	5.18	5.45	5.18
<b>315.0</b>	39.37	24.56	13.76	6.22	5.34	5.40	5.56	6.11	6.11
<b>360.0</b>	45.92	28.57	17.07	6.99	5.62	5.67	6.00	6.55	6.00
<b>C/γ(°)</b>	<b>90.0</b>								
<b>0.0</b>	3.14								
<b>45.0</b>	3.25								
<b>90.0</b>	3.19								
<b>135.0</b>	3.14								
<b>180.0</b>	3.08								
<b>225.0</b>	3.25								
<b>270.0</b>	3.19								
<b>315.0</b>	3.14								
<b>360.0</b>	3.14								