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## NATA

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LumCAT: 4-2026-G

Luminaire:

Report No: NATA0100

Voltage(V): 26.1000

Test No: GC2019022607

Current(A): 0.9000

LampCAT: Philips DLM Flex LES64

Power (W): 23.4900

Lamp flux(lm): 1947.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 105

Width(mm): 105

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1721.88

Efficiency(%): 88.44%

Lumens(lm)/Power(W): 73.58

Central intensity(cd): 1370.109

Maximum intensity(cd): 1393.453

Angle of maximum intensity: C=0.0  $\gamma$ =15.0

Beam Angle(50%Imax): [C0/180]Total=68.9

[C90/270]Total=68.9

Field angle(10%Imax): [C0/180]Total=95.2

[C90/270]Total=95.2

Maximum s/h(1/2): C0\_180=1.13 C90\_270=1.13

Maximum s/h(1/4): C0\_180=1.01 C90\_270=1.01

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.77%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.264%

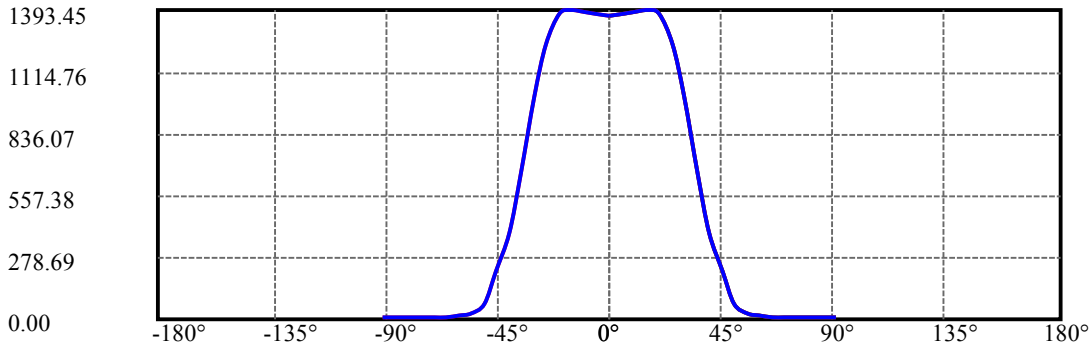
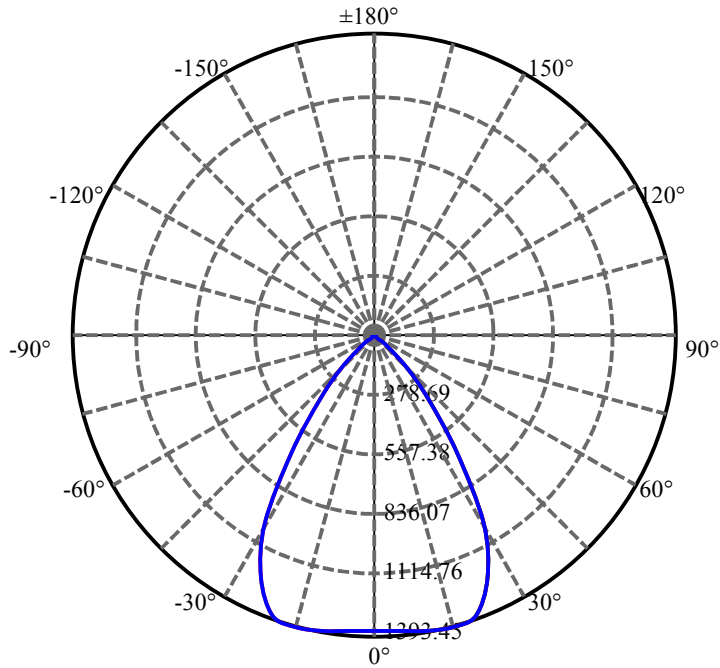
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1370.109	8.194	8.194	.421%	.476%
5.0	1375.313	65.703	73.897	3.375%	4.292%
10.0	1385.367	131.863	205.76	6.773%	11.950%
15.0	1393.453	197.687	403.447	10.153%	23.431%
20.0	1375.242	257.822	661.269	13.242%	38.404%
25.0	1238.456	286.892	948.161	14.735%	55.066%
30.0	1005.223	275.500	1223.661	14.150%	71.066%
35.0	660.284	207.592	1431.254	10.662%	83.122%
40.0	387.865	136.659	1567.912	7.019%	91.058%
45.0	213.195	82.632	1650.545	4.244%	95.857%
50.0	69.813	29.314	1679.859	1.506%	97.560%
55.0	26.522	11.909	1691.768	.612%	98.251%
60.0	14.034	6.662	1698.43	.342%	98.638%
65.0	10.336	5.135	1703.565	.264%	98.937%
70.0	8.944	4.607	1708.171	.237%	99.204%
75.0	8.044	4.259	1712.43	.219%	99.451%
80.0	7.369	3.978	1716.408	.204%	99.682%
85.0	6.785	3.705	1720.113	.190%	99.898%
90.0	6.434	1.763	1721.876	.091%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1223.66	62.85%	71.07%
0-40	1567.91	80.53%	91.06%
0-60	1698.43	87.23%	98.64%
0-90	1720.11	88.35%	99.90%
0-120	1720.11	88.35%	99.90%
0-180	1721.88	88.44%	100.00%
60-90	28.35	1.46%	1.65%
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%
0-33.71	1377.50	70.75%	80.00%

ZONAL LUMEN SUMMARY

0-10	205.76
10-20	455.51
20-30	562.39
30-40	344.25
40-50	111.95
50-60	18.57
60-70	9.74
70-80	8.24
80-90	3.71
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

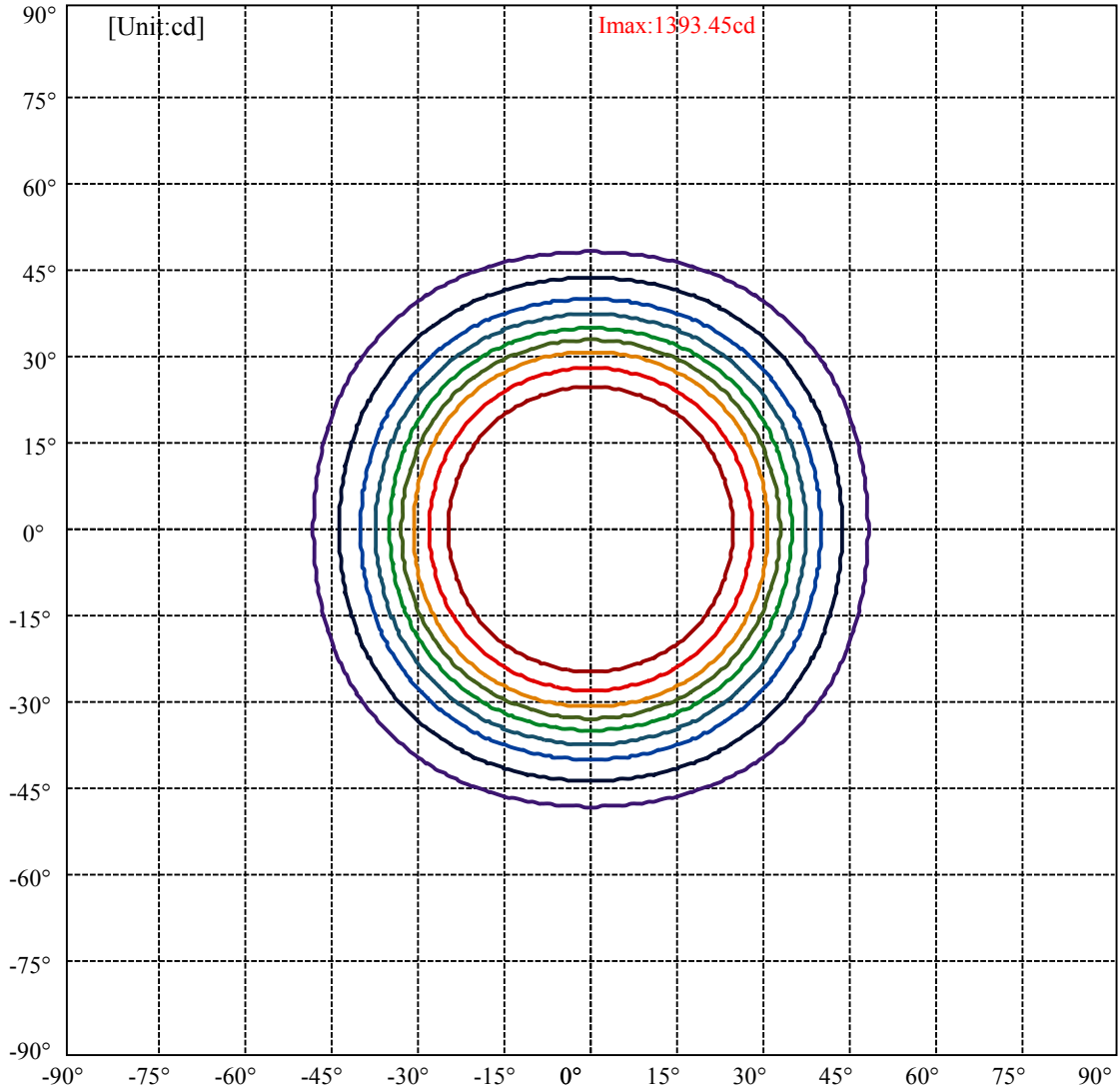


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

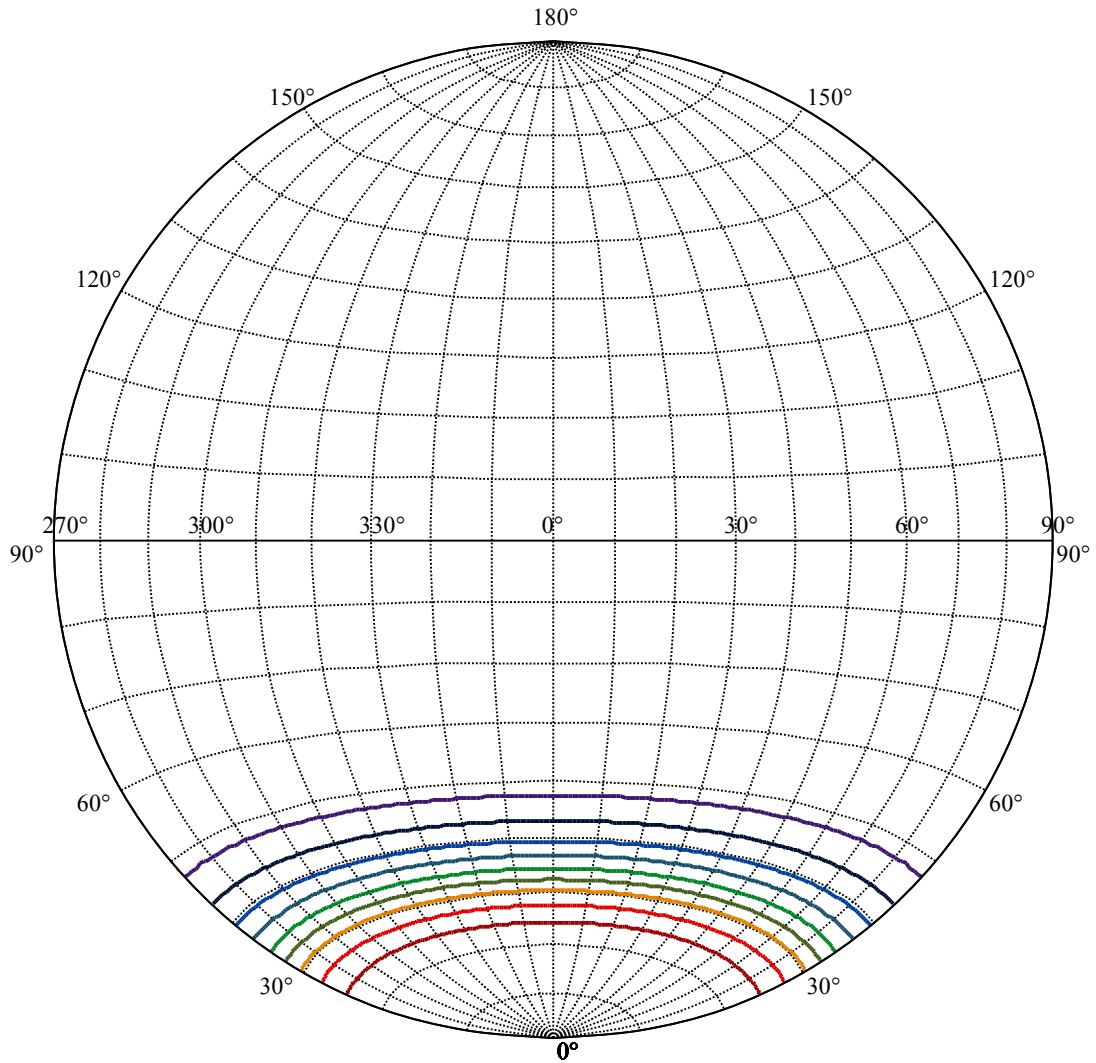
Field angle(10%Imax):C0/180Left:62.6 Right:32.6  
:C90/270Left:62.6 Right:32.6

Beam Angle(50%Imax):C0/180Left:49.5 Right:19.5  
:C90/270Left:49.5 Right:19.5





(10%Imax) 139.345	—
(20%Imax) 278.691	—
(30%Imax) 418.036	—
(40%Imax) 557.381	—
(50%Imax) 696.727	—
(60%Imax) 836.072	—
(70%Imax) 975.417	—
(80%Imax) 1114.76	—
(90%Imax) 1254.11	—



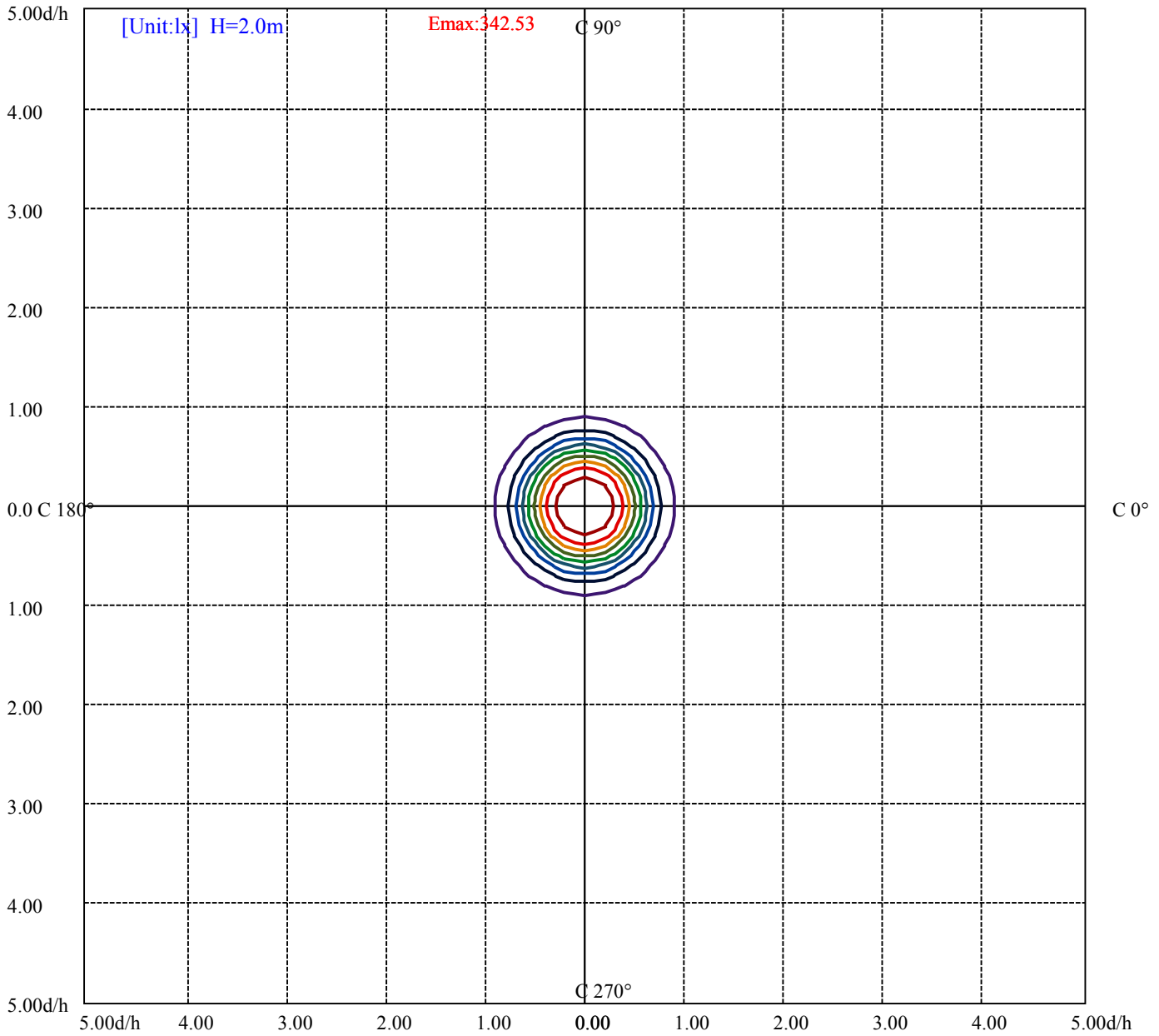
House

[Unit:cd]

Road

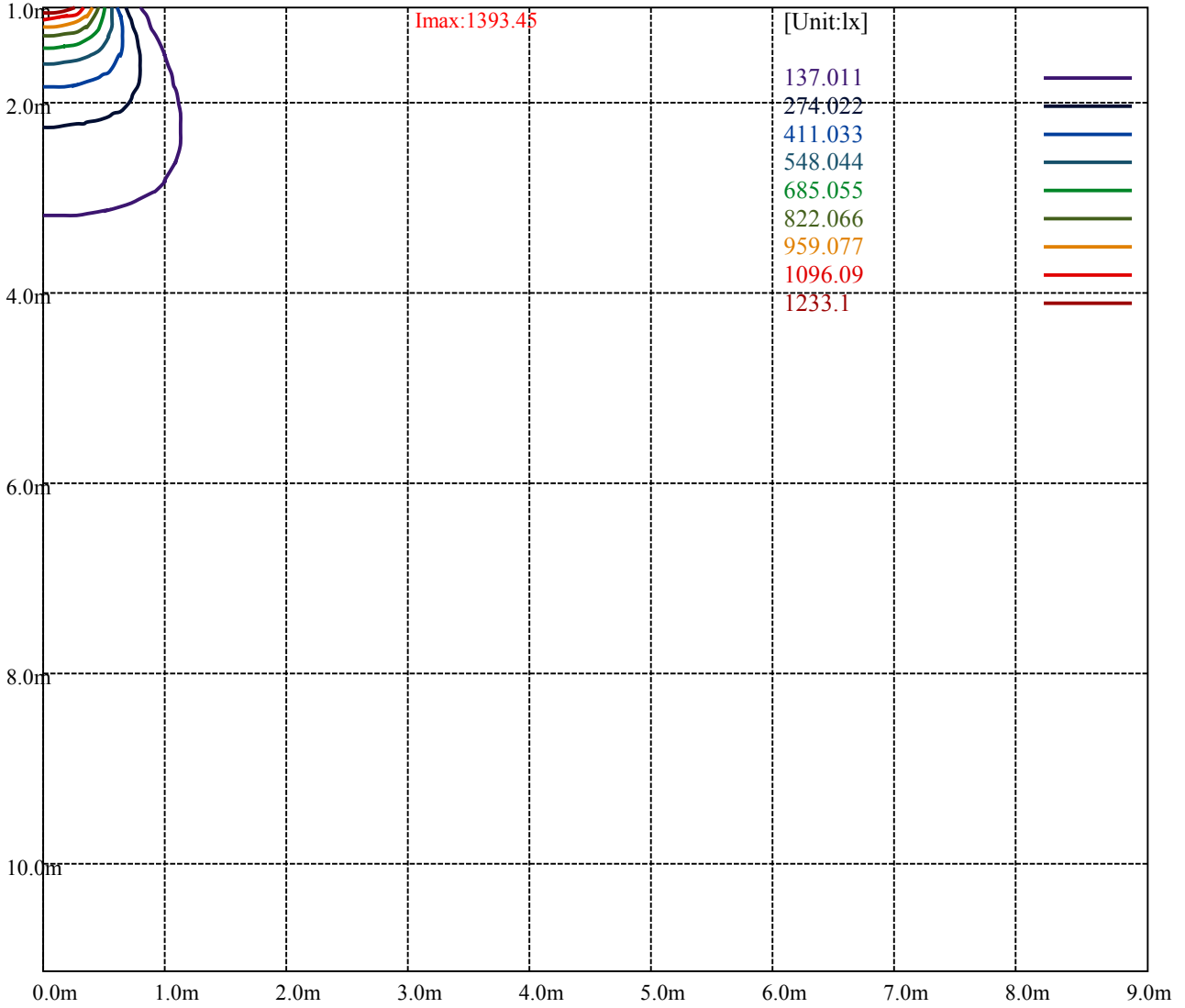
Imax:1393.45

(10%Imax)	139.345	—
(20%Imax)	278.691	—
(30%Imax)	418.036	—
(40%Imax)	557.381	—
(50%Imax)	696.727	—
(60%Imax)	836.072	—
(70%Imax)	975.417	—
(80%Imax)	1114.76	—
(90%Imax)	1254.11	—



- (10%Emax) 34.25275
- (20%Emax) 68.5055
- (30%Emax) 102.7582
- (40%Emax) 137.011
- (50%Emax) 171.2637
- (60%Emax) 205.5165
- (70%Emax) 239.7693
- (80%Emax) 274.0225
- (90%Emax) 308.275





Luminance Table

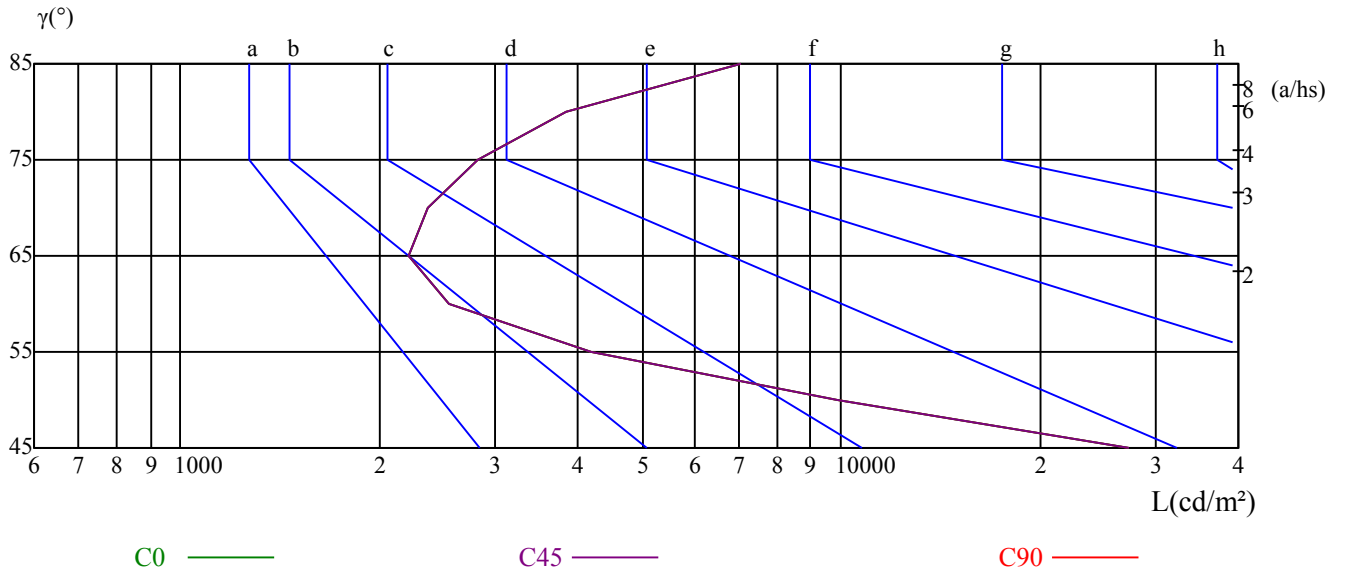
$\gamma$	45	50	55	60	65	70	75	80	85
C0	27347	9851	4194	2546	2218	2372	2819	3849	7061
C45	27347	9851	4194	2546	2218	2372	2819	3849	7061
C90	27347	9851	4194	2546	2218	2372	2819	3849	7061

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2218	2218	2218	2819	2819	2819	7061	7061	7061

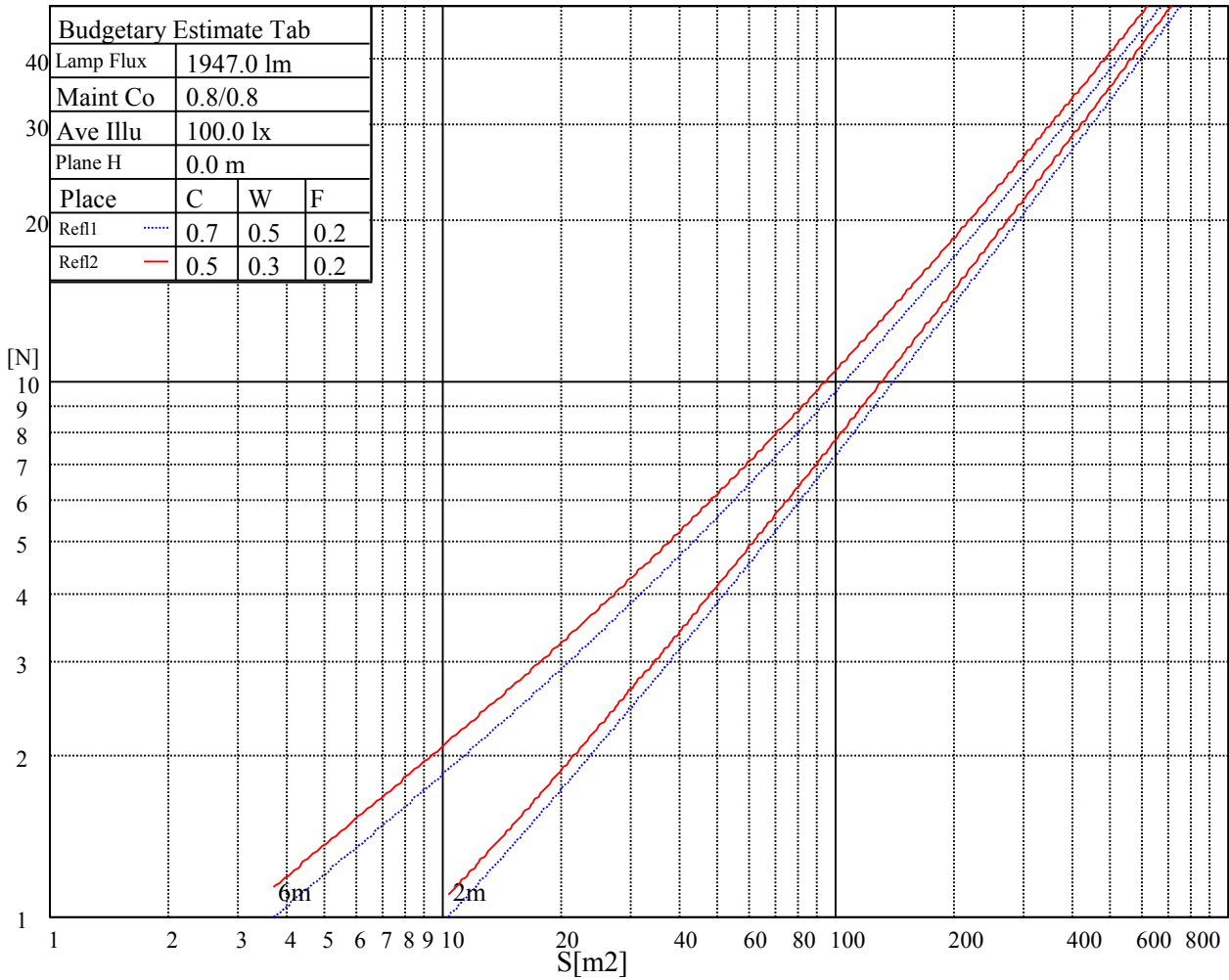
Glare Table

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

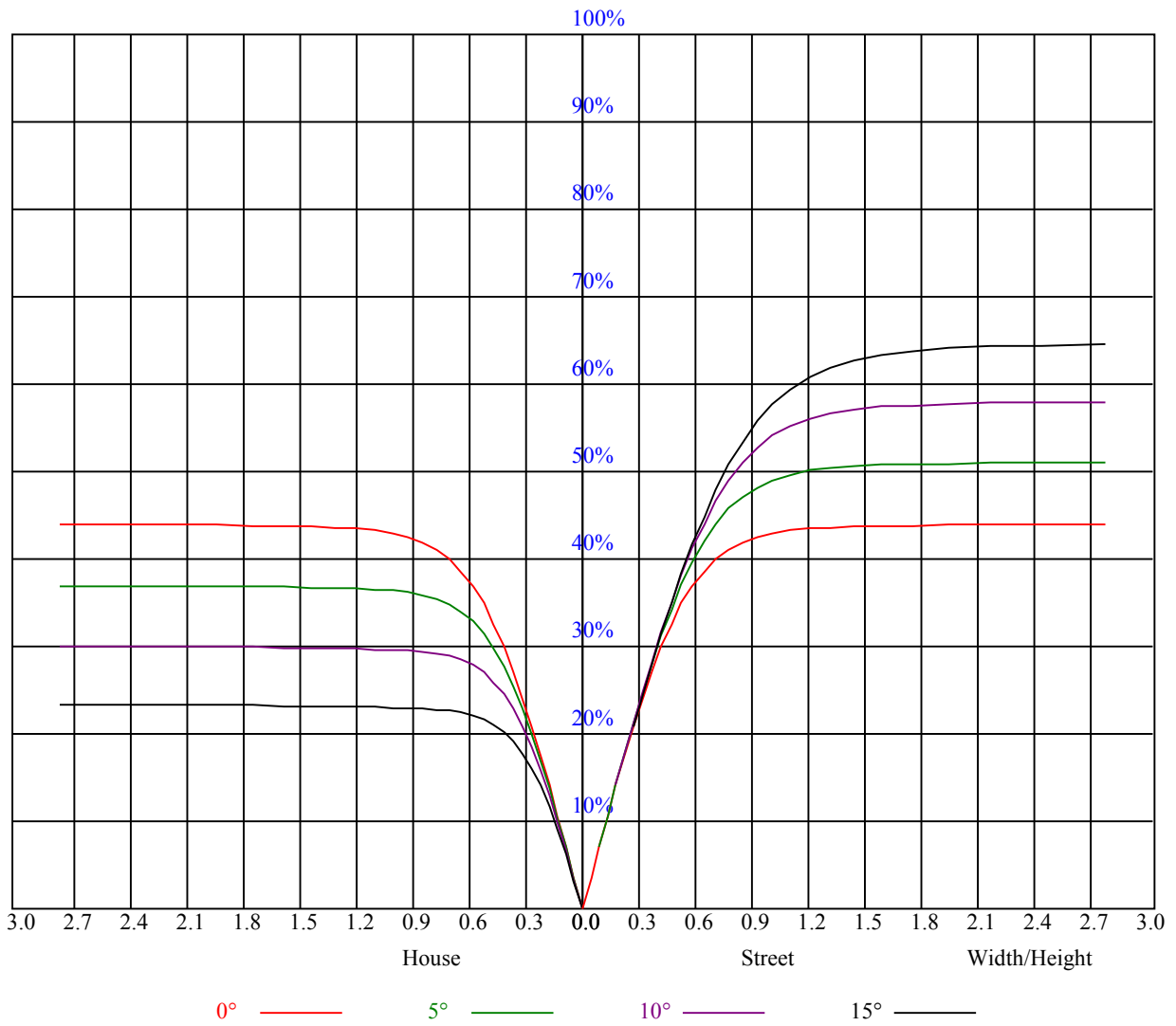
Luminance Limiting Curve



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	5.94	7.00	6.31	7.31	7.62	6.09	7.14	6.46	7.46	7.77
	3H	6.99	7.92	7.38	8.25	8.62	7.13	8.06	7.52	8.39	8.76
	4H	7.73	8.59	8.14	8.94	9.33	7.86	8.72	8.26	9.07	9.46
	6H	8.72	9.50	9.14	9.88	10.27	8.83	9.61	9.25	9.99	10.38
	8H	9.33	10.07	9.77	10.46	10.87	9.44	10.17	9.87	10.57	10.98
	12H	10.46	11.16	10.89	11.54	11.97	10.55	11.25	10.98	11.64	12.07
4H	2H	6.09	6.95	6.50	7.30	7.69	6.23	7.08	6.63	7.44	7.82
	3H	7.49	8.19	7.91	8.59	9.00	7.61	8.30	8.02	8.71	9.12
	4H	8.47	9.09	8.91	9.51	9.96	8.57	9.19	9.01	9.61	10.06
	6H	9.68	10.22	10.15	10.67	11.14	9.77	10.30	10.24	10.75	11.23
	8H	10.46	10.96	10.94	11.41	11.89	10.55	11.05	11.02	11.50	11.97
8H	12H	11.65	12.08	12.14	12.57	13.04	11.73	12.16	12.22	12.65	13.12
	4H	8.86	9.36	9.34	9.81	10.28	8.95	9.44	9.42	9.89	10.37
	6H	10.38	10.78	10.89	11.28	11.77	10.45	10.85	10.96	11.35	11.84
	8H	11.37	11.72	11.90	12.25	12.74	11.44	11.80	11.97	12.32	12.81
12H	12H	12.81	13.12	13.33	13.62	14.20	12.89	13.20	13.41	13.70	14.27
	4H	8.96	9.39	9.45	9.88	10.36	9.04	9.47	9.53	9.96	10.44
	6H	10.92	10.95	11.13	11.42	11.97	10.99	11.02	11.20	11.49	12.04
	8H	11.71	12.02	12.23	12.52	13.10	11.77	12.09	12.30	12.58	13.16
Variation with the observer position at spacings:											
S = 1.0H	3.7/-8.7					3.7/-8.7					
S = 1.5H	6.2/-8.4					6.2/-8.4					
S = 2.0H	8.1/-7.3					8.1/-7.3					
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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	0.98	0.95	0.93	0.96	0.94	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.82
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.84	0.81	0.79	0.81	0.79	0.78	0.76
3	0.85	0.80	0.76	0.83	0.79	0.76	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.71
4	0.79	0.74	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.66
5	0.74	0.69	0.65	0.73	0.68	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.61
6	0.69	0.64	0.60	0.69	0.64	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.57
7	0.65	0.60	0.56	0.65	0.60	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.54
8	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.50
9	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.47
10	0.55	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.49	0.46	0.45



Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1370.25	1373.63	1386.00	1390.50	1380.94	1278.00	1074.94	718.88	425.81
45.0	1370.25	1378.13	1392.75	1398.94	1394.44	1288.69	1071.56	727.31	431.44
90.0	1370.81	1380.38	1390.50	1395.00	1378.69	1255.50	1015.03	669.88	390.38
135.0	1369.13	1380.94	1398.38	1410.75	1409.63	1307.81	1074.94	740.25	439.88
180.0	1370.25	1382.63	1400.06	1413.00	1380.94	1251.56	969.13	597.15	357.36
225.0	1370.25	1375.31	1384.31	1400.06	1369.69	1200.38	943.09	593.16	333.17
270.0	1370.81	1365.19	1362.38	1361.25	1336.50	1215.00	960.75	627.75	376.31
315.0	1369.13	1366.31	1368.56	1378.13	1351.13	1110.71	932.34	607.89	348.58
360.0	1370.25	1373.63	1386.00	1390.50	1380.94	1278.00	1074.94	718.88	425.81

C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	292.50	84.60	31.73	15.86	11.03	9.28	8.21	7.54	6.86
45.0	293.63	84.83	30.94	15.64	10.58	9.06	8.16	7.43	6.81
90.0	185.29	73.07	26.94	13.73	10.29	8.89	7.99	7.37	6.75
135.0	284.63	82.52	29.59	14.79	10.74	9.17	8.21	7.48	6.86
180.0	161.10	56.48	22.56	12.94	10.07	8.83	7.99	7.31	6.75
225.0	154.18	53.33	20.87	12.38	9.73	8.55	7.82	7.20	6.69
270.0	174.94	63.34	25.88	13.73	10.13	8.89	7.99	7.31	6.75
315.0	159.30	60.36	23.68	13.22	10.13	8.89	7.99	7.31	6.81
360.0	292.50	84.60	31.73	15.86	11.03	9.28	8.21	7.54	6.86

C/ $\gamma$ (°)	90.0
0.0	6.47
45.0	6.41
90.0	6.41
135.0	6.47
180.0	6.41
225.0	6.41
270.0	6.41
315.0	6.47
360.0	6.47