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Nata

LumCAT: 1-1223-L	
Luminaire: 92.70.124.00	
Report No: 220519-B011	Voltage(V): 35.6300
Test No: 220519-C011	Current(A): 0.2800
LampCAT: CITIZEN CLU028	Power (W): 9.9760
Lamp flux(lm): 1195.8	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1059.48
Efficiency(%): 88.60%
Lumens(lm)/Power(W): 106.20
Central intensity(cd): 1993.058
Maximum intensity(cd): 1993.058
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=43.4
 [C90/270]Total=43.4
Field angle(10%Imax): [C0/180]Total=68.0
 [C90/270]Total=68.0
Maximum s/h(1/2): C0_180=0.69 C90_270=0.69
Maximum s/h(1/4): C0_180=0.69 C90_270=0.69
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.60%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.650%

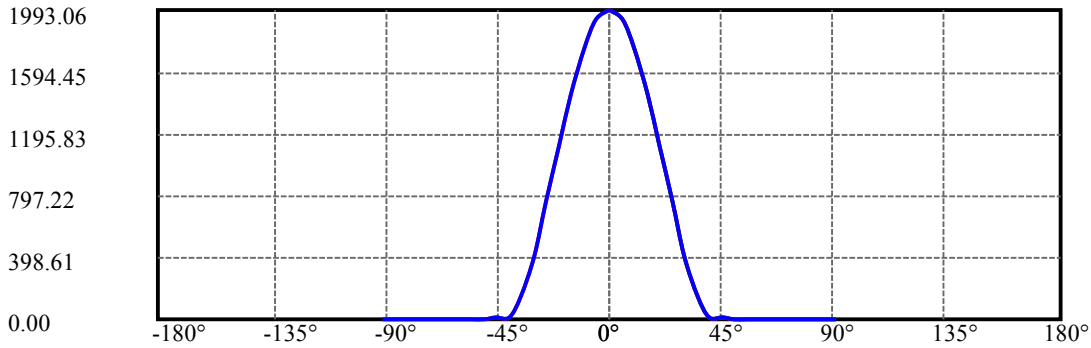
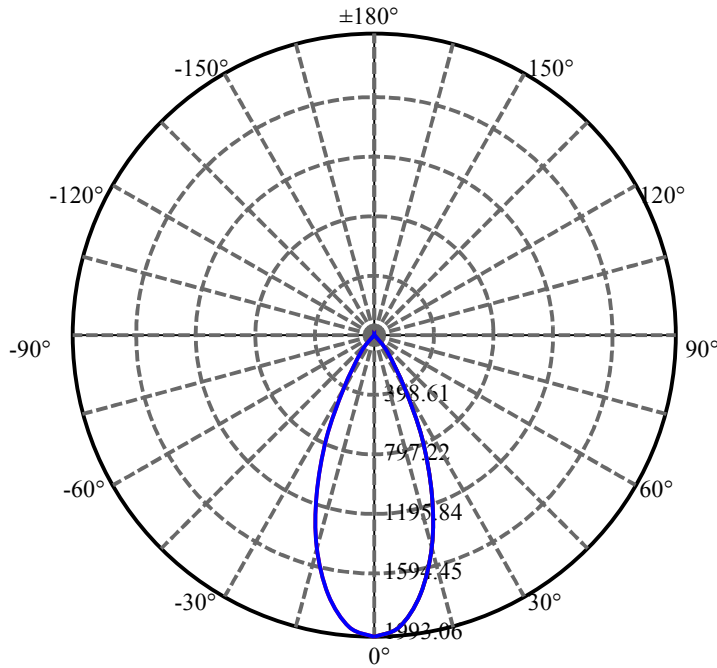
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1993.058	0.000	0	.000%	.000%
5.0	1933.081	46.936	46.936	3.925%	4.430%
10.0	1741.573	131.454	178.39	10.993%	16.837%
15.0	1449.232	189.276	367.666	15.828%	34.702%
20.0	1123.153	212.001	579.667	17.728%	54.712%
25.0	754.515	196.933	776.6	16.468%	73.300%
30.0	413.303	147.788	924.388	12.359%	87.249%
35.0	144.281	82.108	1006.496	6.866%	94.999%
40.0	17.933	27.064	1033.56	2.263%	97.553%
45.0	6.797	4.579	1038.139	.383%	97.985%
50.0	5.564	2.498	1040.637	.209%	98.221%
55.0	5.004	2.298	1042.935	.192%	98.438%
60.0	4.735	2.251	1045.186	.188%	98.650%
65.0	4.586	2.266	1047.452	.189%	98.864%
70.0	4.541	2.311	1049.764	.193%	99.083%
75.0	4.526	2.370	1052.134	.198%	99.306%
80.0	4.519	2.420	1054.554	.202%	99.535%
85.0	4.519	2.456	1057.01	.205%	99.766%
90.0	4.519	2.475	1059.484	.207%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	924.39	77.30%	87.25%
0-40	1033.56	86.43%	97.55%
0-60	1045.19	87.40%	98.65%
0-90	1057.01	88.39%	99.77%
0-120	1057.01	88.39%	99.77%
0-180	1059.48	88.60%	100.00%
60-90	14.07	1.18%	1.33%
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%
0-27.40	847.59	70.88%	80.00%

ZONAL LUMEN SUMMARY

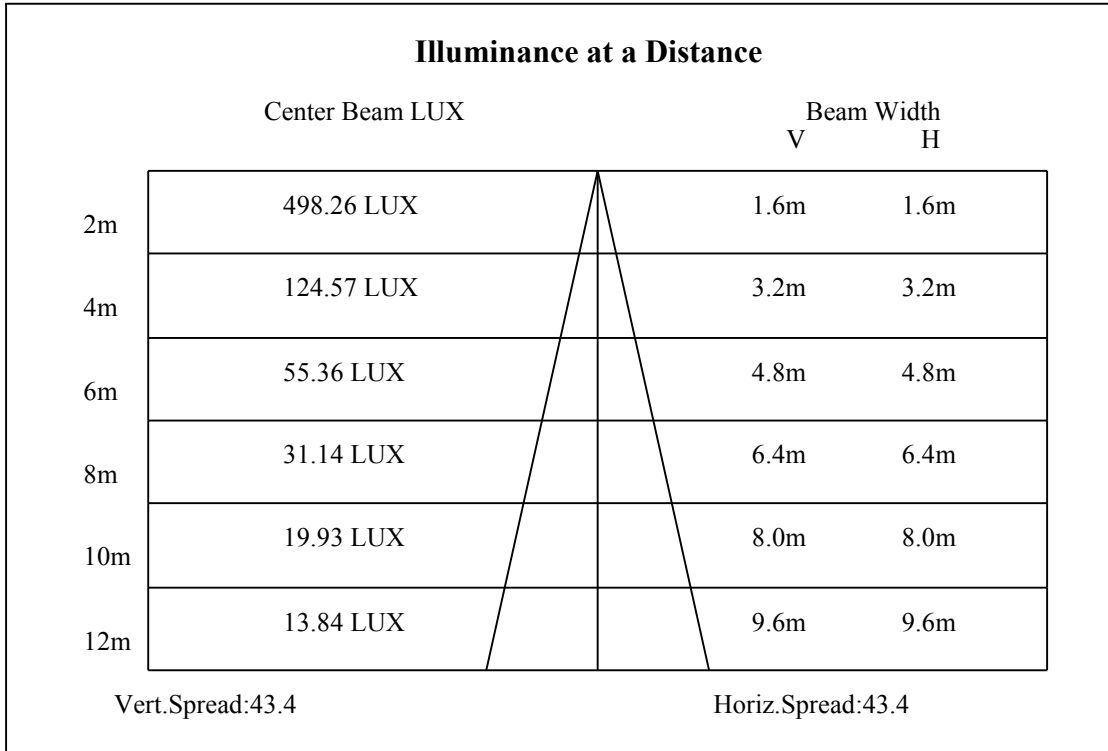
0-10	178.39
10-20	401.28
20-30	344.72
30-40	109.17
40-50	7.08
50-60	4.55
60-70	4.58
70-80	4.79
80-90	2.46
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

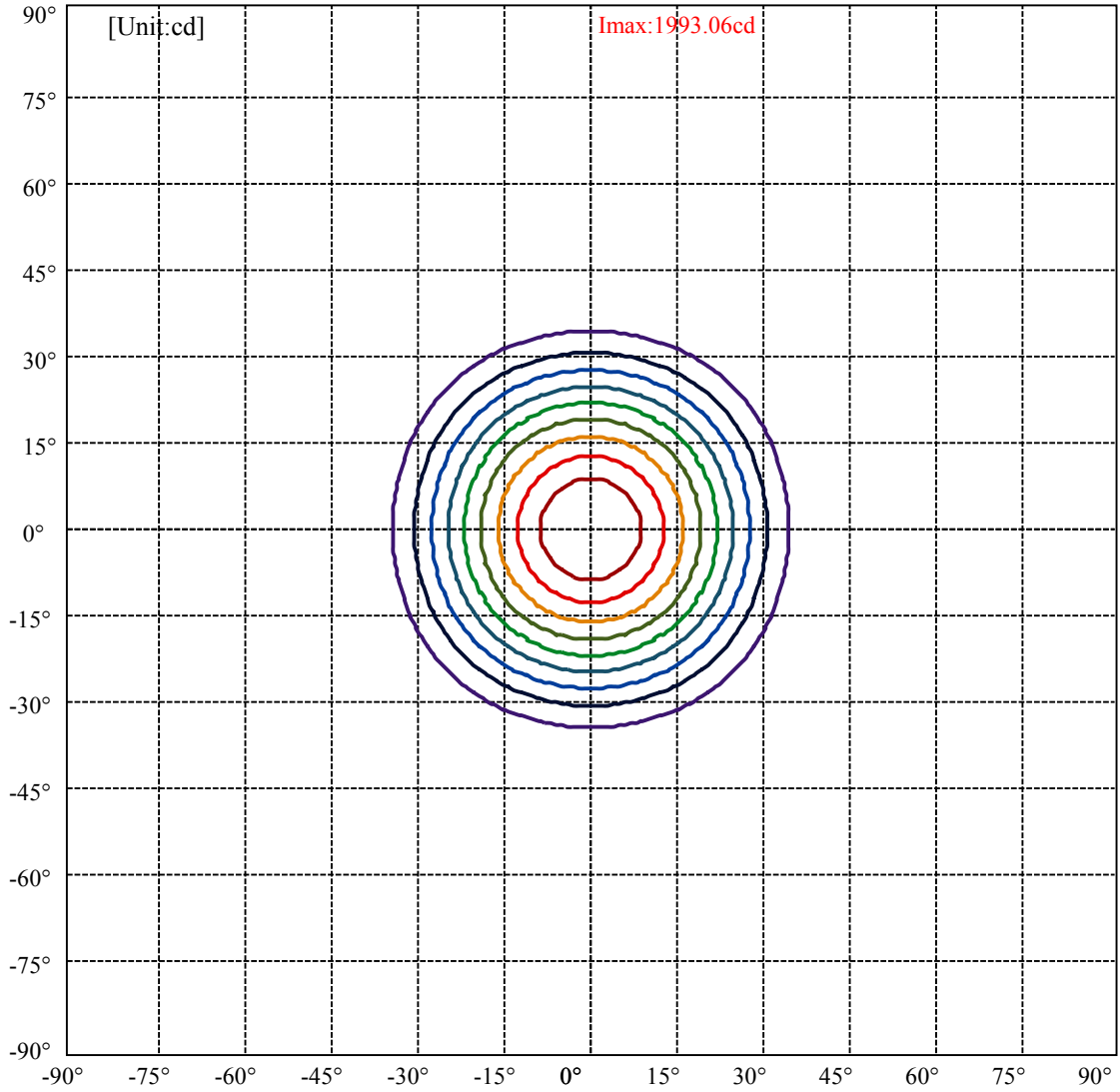


C0(Max): ———
C0/C180: ———
C90/C270: ———

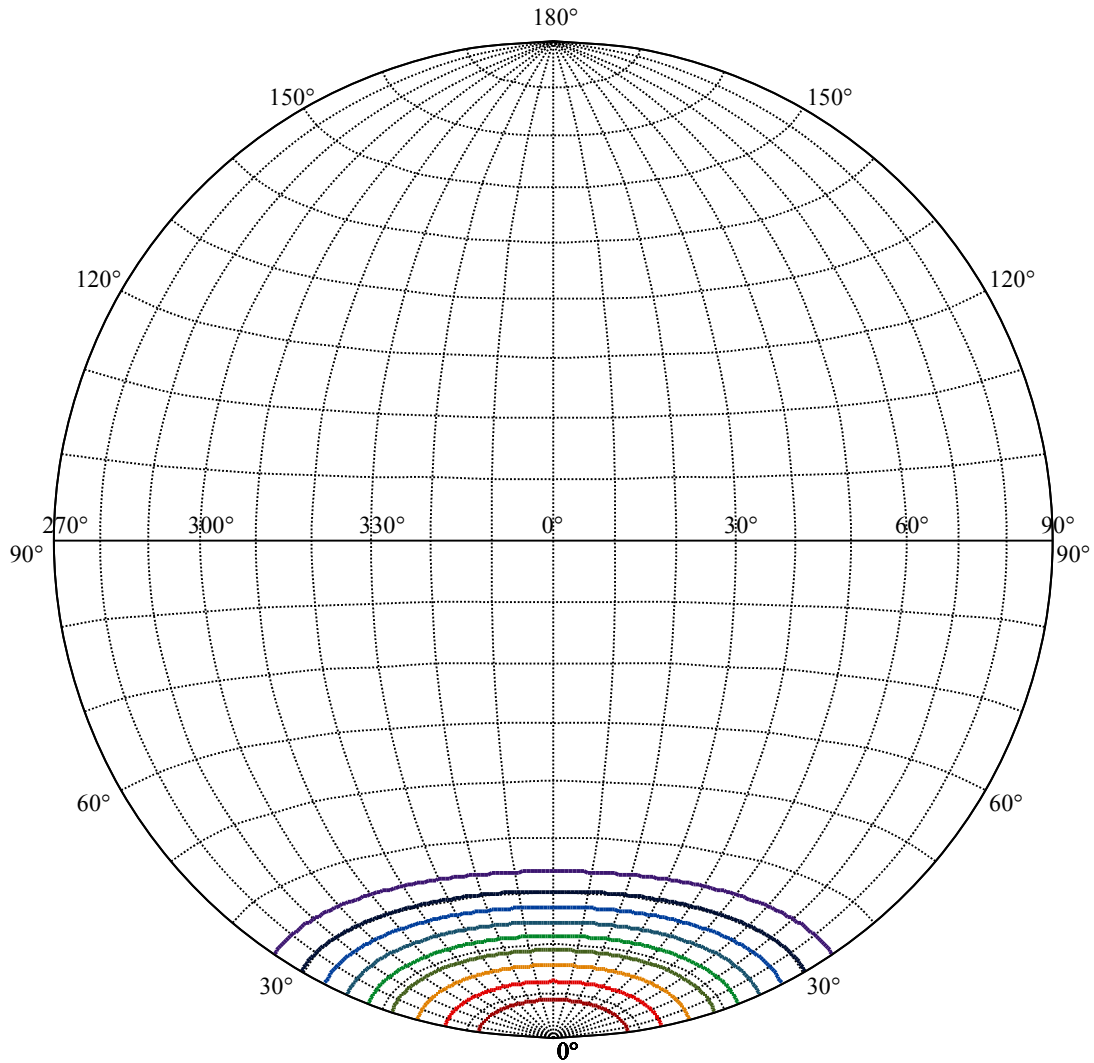
Field angle(10%Imax):C0/180Left:34.0 Right:34.0
:C90/270Left:34.0 Right:34.0

Beam Angle(50%Imax):C0/180Left:21.7 Right:21.7
:C90/270Left:21.7 Right:21.7





(10%Imax) 199.306	—
(20%Imax) 398.612	—
(30%Imax) 597.917	—
(40%Imax) 797.223	—
(50%Imax) 996.529	—
(60%Imax) 1195.83	—
(70%Imax) 1395.14	—
(80%Imax) 1594.45	—
(90%Imax) 1793.75	—



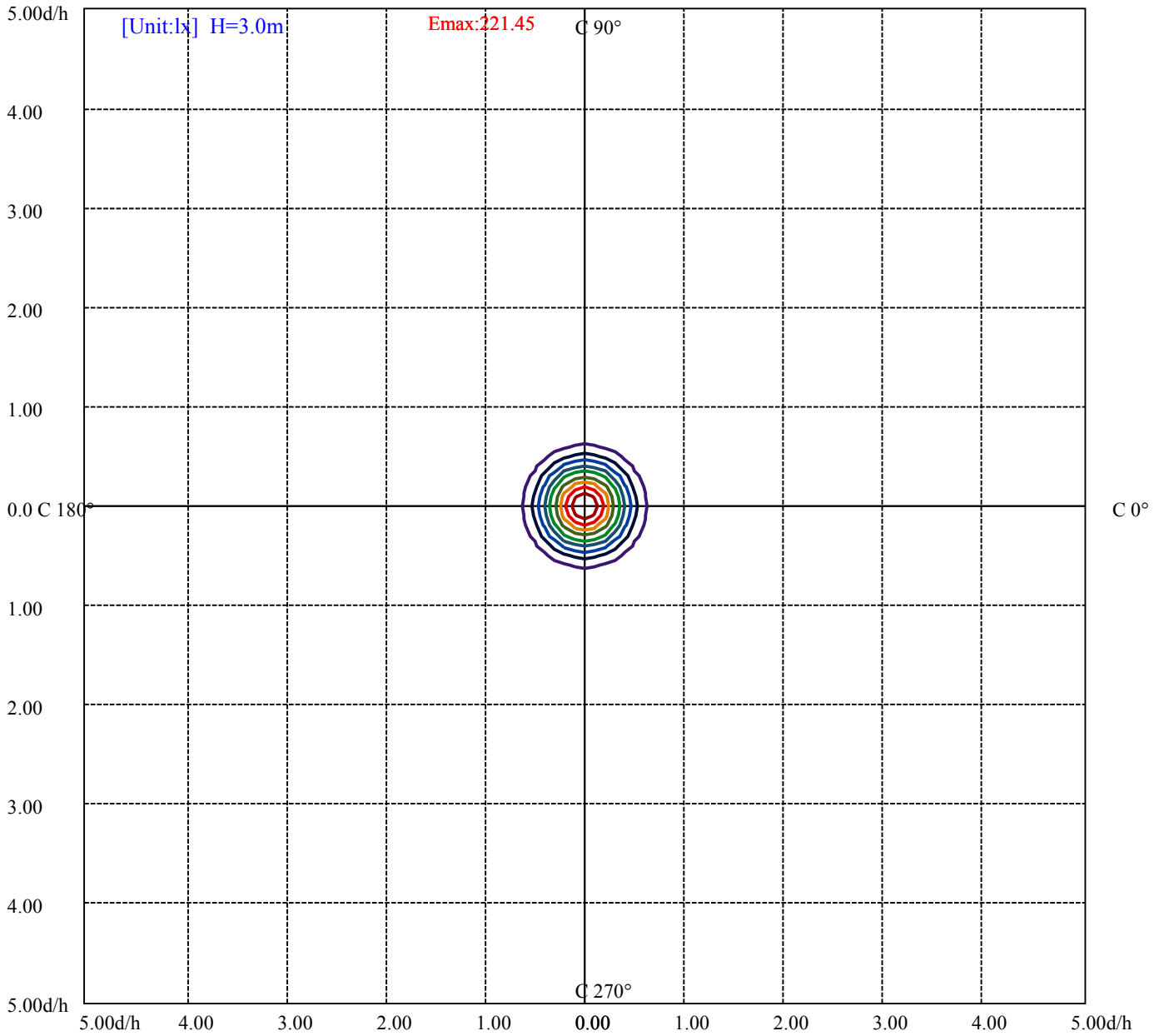
House

[Unit:cd]

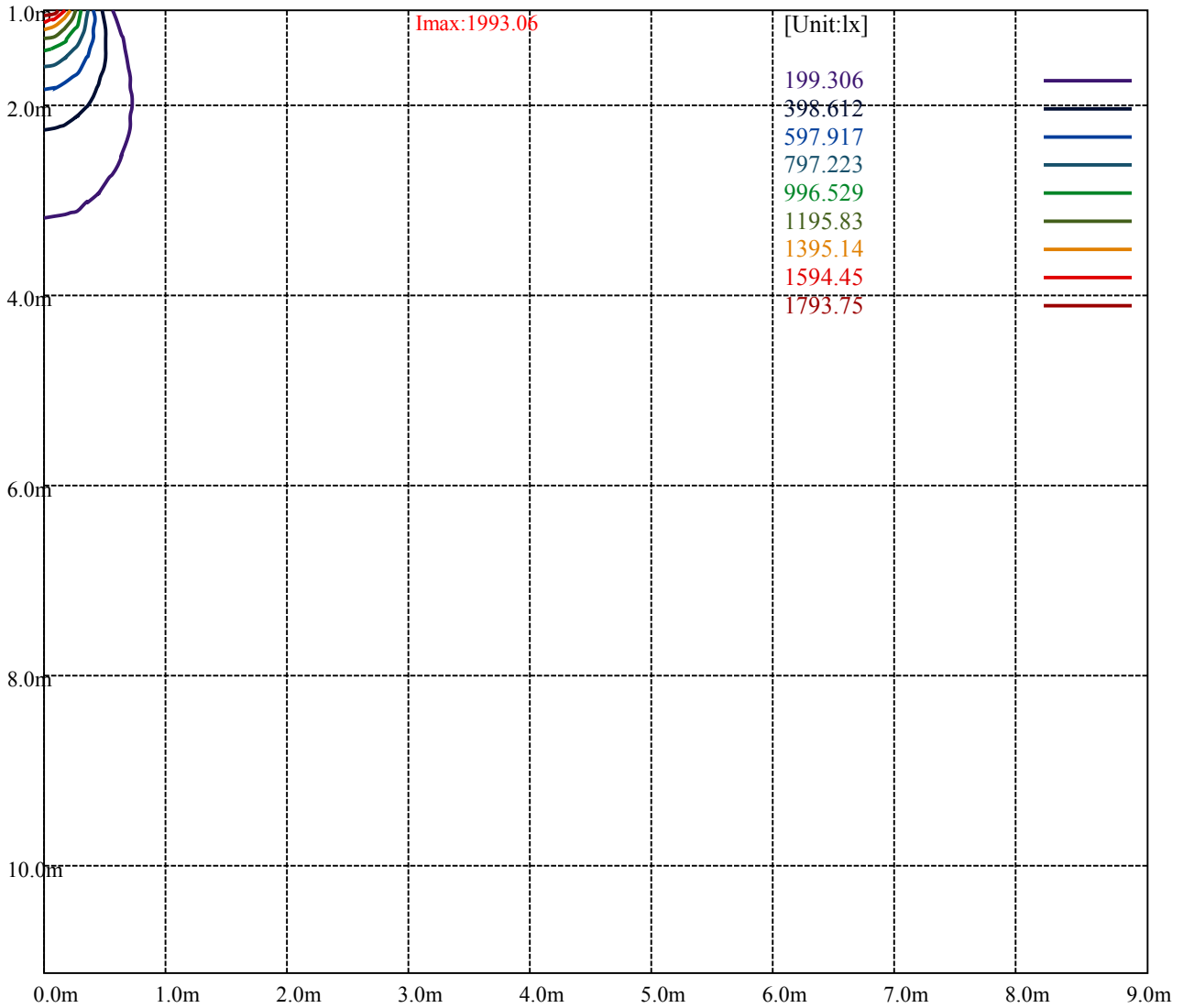
Road

Imax:1993.06

(10%Imax)	199.306	—
(20%Imax)	398.612	—
(30%Imax)	597.917	—
(40%Imax)	797.223	—
(50%Imax)	996.529	—
(60%Imax)	1195.83	—
(70%Imax)	1395.14	—
(80%Imax)	1594.45	—
(90%Imax)	1793.75	—



(10%Emax) 22.14511	—
(20%Emax) 44.29011	—
(30%Emax) 66.43522	—
(40%Emax) 88.58034	—
(50%Emax) 110.7253	—
(60%Emax) 132.87	—
(70%Emax) 155.0156	—
(80%Emax) 177.1611	—
(90%Emax) 199.3056	—



Luminance Table

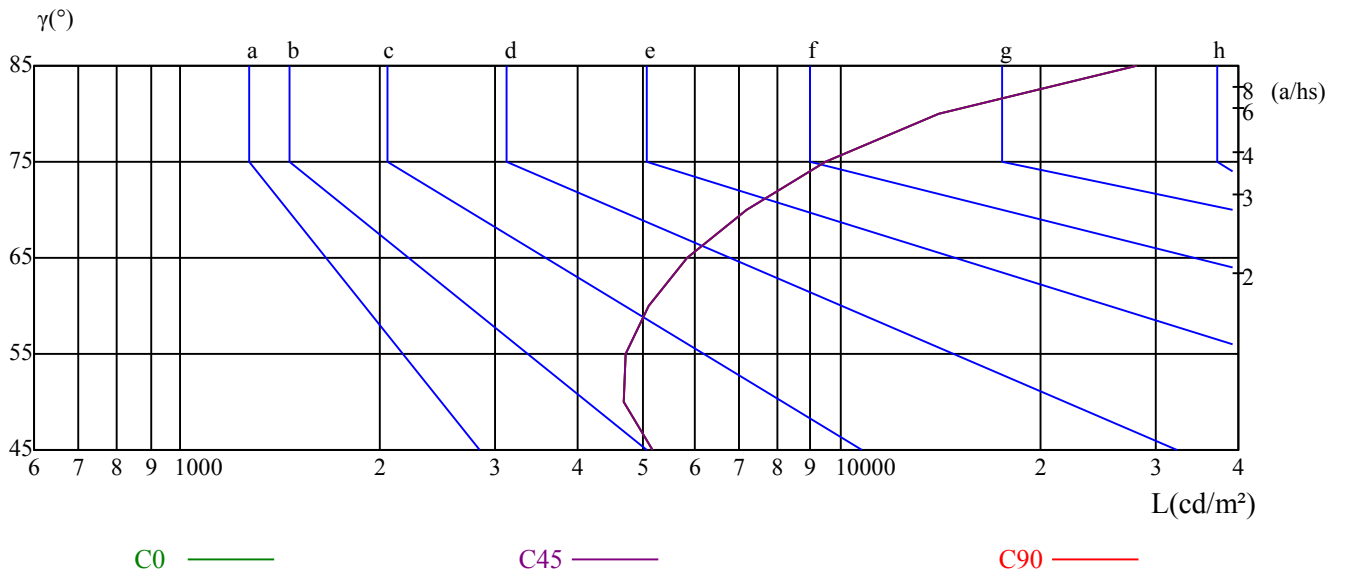
γ	45	50	55	60	65	70	75	80	85
C0	5199	4682	4719	5122	5869	7181	9458	14074	28041
C45	5199	4682	4719	5122	5869	7181	9458	14074	28041
C90	5199	4682	4719	5122	5869	7181	9458	14074	28041

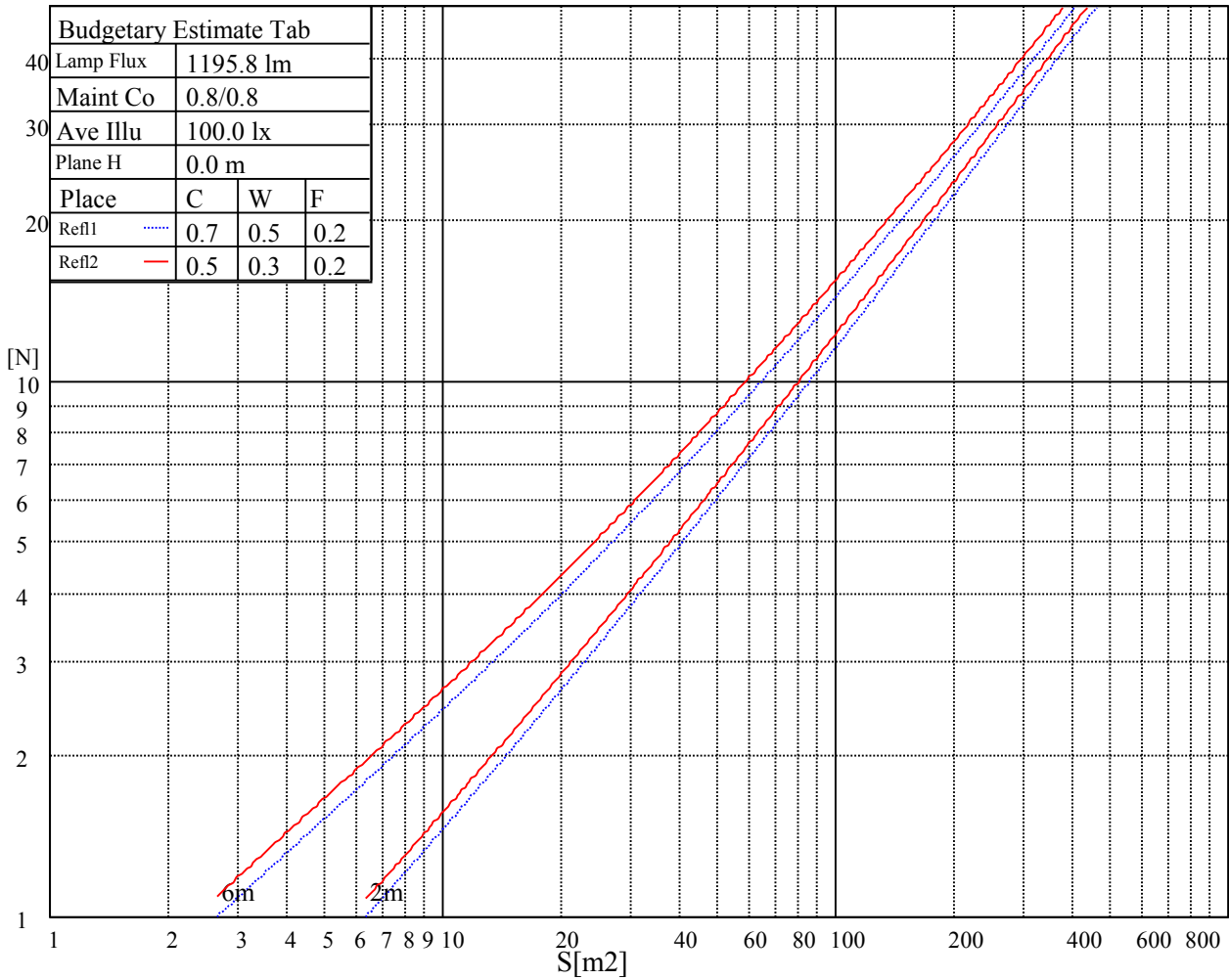
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5869	5869	5869	9458	9458	9458	28041	28041	28041

Glare Table

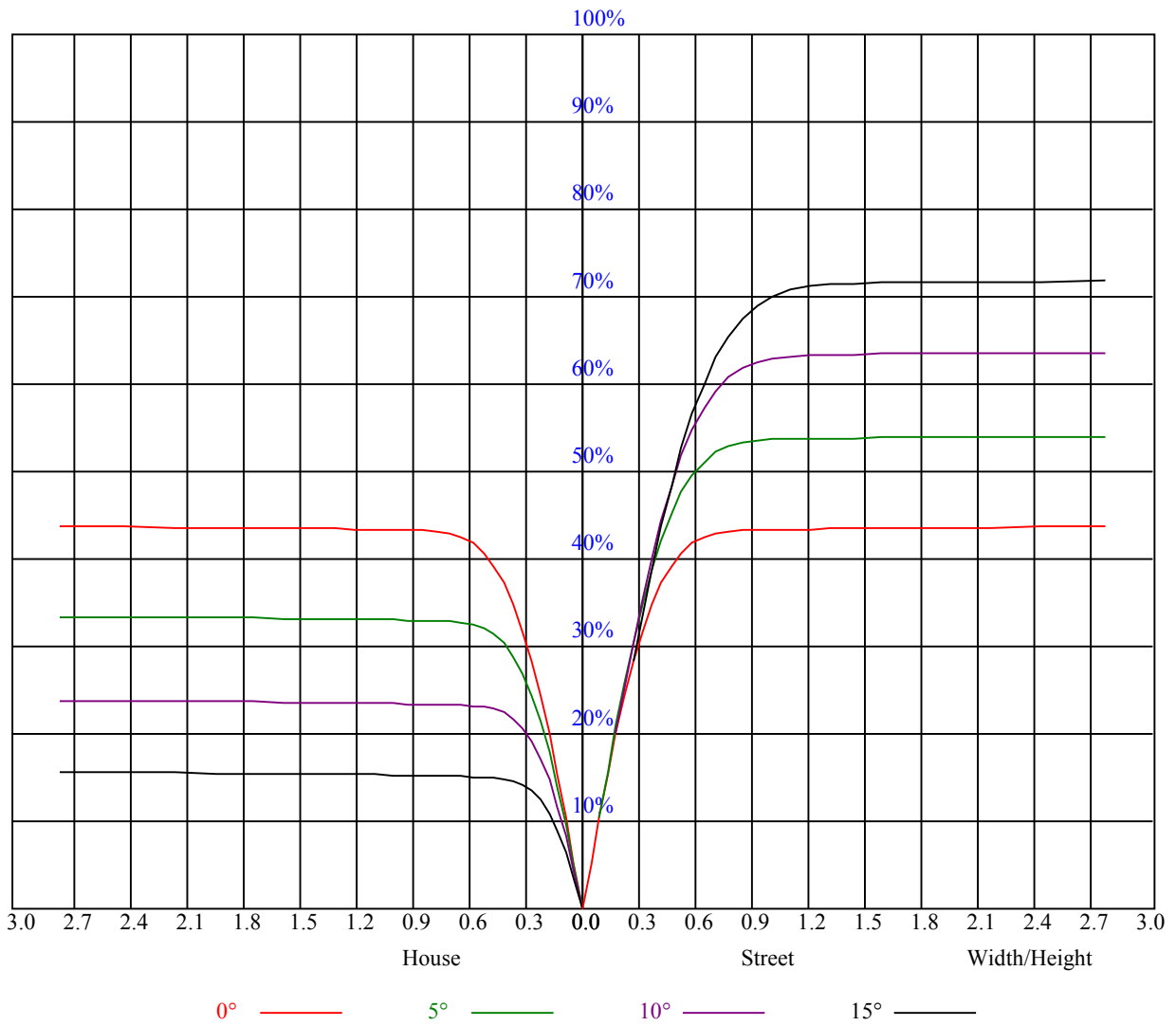
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.89
1	0.99	0.97	0.95	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.81	0.79
3	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.80	0.78	0.76	0.75
4	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.71	0.78	0.74	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
6	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
7	0.71	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.61
8	0.68	0.63	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
9	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.53



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	1989.17	1949.74	1777.65	1507.57	1201.03	834.75	525.23	230.05	23.78
45.0	1998.73	1903.73	1688.62	1385.67	1071.37	704.49	359.71	99.19	13.32
90.0	1989.77	1884.61	1649.18	1352.21	991.48	625.25	306.47	55.99	9.92
135.0	1994.55	1926.43	1738.81	1432.87	1109.01	720.02	371.66	97.94	14.40
180.0	1989.17	1917.47	1704.15	1392.84	1028.59	671.68	324.22	66.33	11.89
225.0	1998.73	1962.88	1797.37	1512.35	1184.06	814.19	456.09	156.01	21.99
270.0	1989.77	1976.63	1827.84	1558.36	1248.24	884.34	527.02	306.53	28.62
315.0	1994.55	1943.16	1748.97	1452.00	1151.44	781.39	436.02	142.21	19.54
360.0	1989.17	1949.74	1777.65	1507.57	1201.03	834.75	525.23	230.05	23.78
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.47	5.74	5.02	4.72	4.60	4.48	4.48	4.48	4.48
45.0	6.45	5.44	4.96	4.66	4.54	4.54	4.54	4.54	4.48
90.0	6.15	5.38	4.90	4.66	4.60	4.54	4.54	4.54	4.54
135.0	6.39	5.50	4.96	4.78	4.60	4.54	4.54	4.54	4.54
180.0	6.27	5.38	4.90	4.72	4.54	4.48	4.48	4.48	4.48
225.0	7.17	5.74	5.14	4.78	4.60	4.60	4.54	4.54	4.54
270.0	7.65	5.80	5.14	4.84	4.66	4.60	4.54	4.54	4.54
315.0	6.81	5.56	5.02	4.72	4.54	4.54	4.54	4.48	4.54
360.0	7.47	5.74	5.02	4.72	4.60	4.48	4.48	4.48	4.48
C/γ(°)	90.0								
0.0	4.54								
45.0	4.54								
90.0	4.48								
135.0	4.54								
180.0	4.48								
225.0	4.54								
270.0	4.54								
315.0	4.48								
360.0	4.54								