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Nata

LumCAT: LN01D05060DA-N

Luminaire: 97.70.234.00

Report No: 210107-B002

Test No: 210107-C002

LampCAT: SEOUL SAWX10 LES9.8

Lamp flux(lm): 1759.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 35.5800

Current(A): 0.3810

Power (W): 13.5550

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

Photometric Results

Lumens(lm): 1554.95

Efficiency(%): 88.40%

Lumens(lm)/Power(W): 114.71

Central intensity(cd): 1598.977

Maximum intensity(cd): 1598.977

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=58.4

[C90/270]Total=58.4

Field angle(10%Imax): [C0/180]Total=90.0

[C90/270]Total=90.0

Maximum s/h(1/2): C0_180=0.88 C90_270=0.88

Maximum s/h(1/4): C0_180=0.89 C90_270=0.89

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.40%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.358%

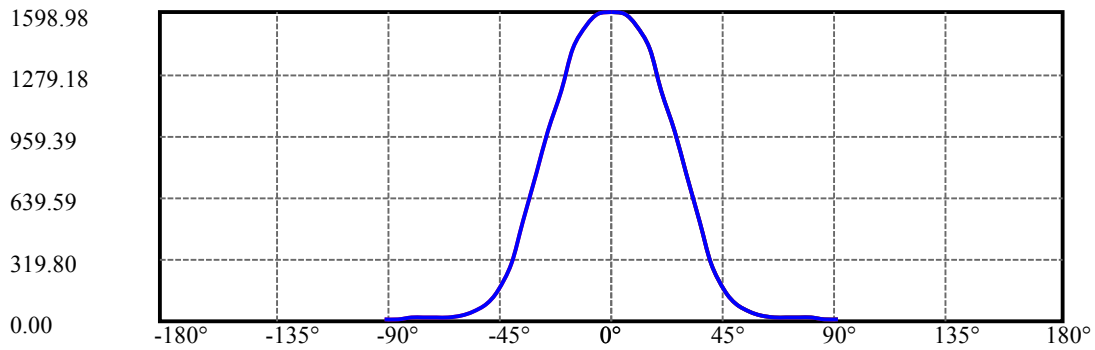
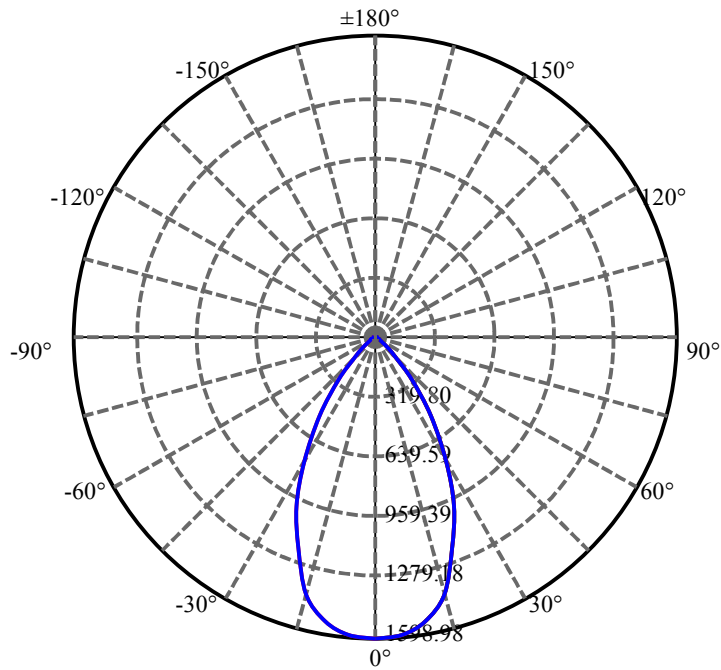
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1598.977	0.000	0	.000%	.000%
5.0	1588.711	38.108	38.108	2.166%	2.451%
10.0	1533.656	111.697	149.805	6.350%	9.634%
15.0	1410.328	174.635	324.44	9.928%	20.865%
20.0	1194.757	214.696	539.136	12.206%	34.672%
25.0	986.977	228.824	767.959	13.009%	49.388%
30.0	763.109	221.475	989.434	12.591%	63.631%
35.0	513.415	187.977	1177.411	10.687%	75.720%
40.0	298.941	135.535	1312.946	7.705%	84.436%
45.0	159.237	84.835	1397.782	4.823%	89.892%
50.0	89.480	50.257	1448.038	2.857%	93.124%
55.0	51.546	30.664	1478.702	1.743%	95.096%
60.0	33.307	19.614	1498.316	1.115%	96.358%
65.0	23.330	13.768	1512.084	.783%	97.243%
70.0	19.969	10.963	1523.048	.623%	97.948%
75.0	19.617	10.347	1533.395	.588%	98.613%
80.0	17.866	10.030	1543.424	.570%	99.258%
85.0	8.958	7.289	1550.713	.414%	99.727%
90.0	6.532	4.241	1554.954	.241%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	989.43	56.25%	63.63%
0-40	1312.95	74.64%	84.44%
0-60	1498.32	85.18%	96.36%
0-90	1550.71	88.16%	99.73%
0-120	1550.71	88.16%	99.73%
0-180	1554.95	88.40%	100.00%
60-90	72.01	4.09%	4.63%
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%
0-37.46	1243.96	70.72%	80.00%

ZONAL LUMEN SUMMARY

0-10	149.80
10-20	389.33
20-30	450.30
30-40	323.51
40-50	135.09
50-60	50.28
60-70	24.73
70-80	20.38
80-90	7.29
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



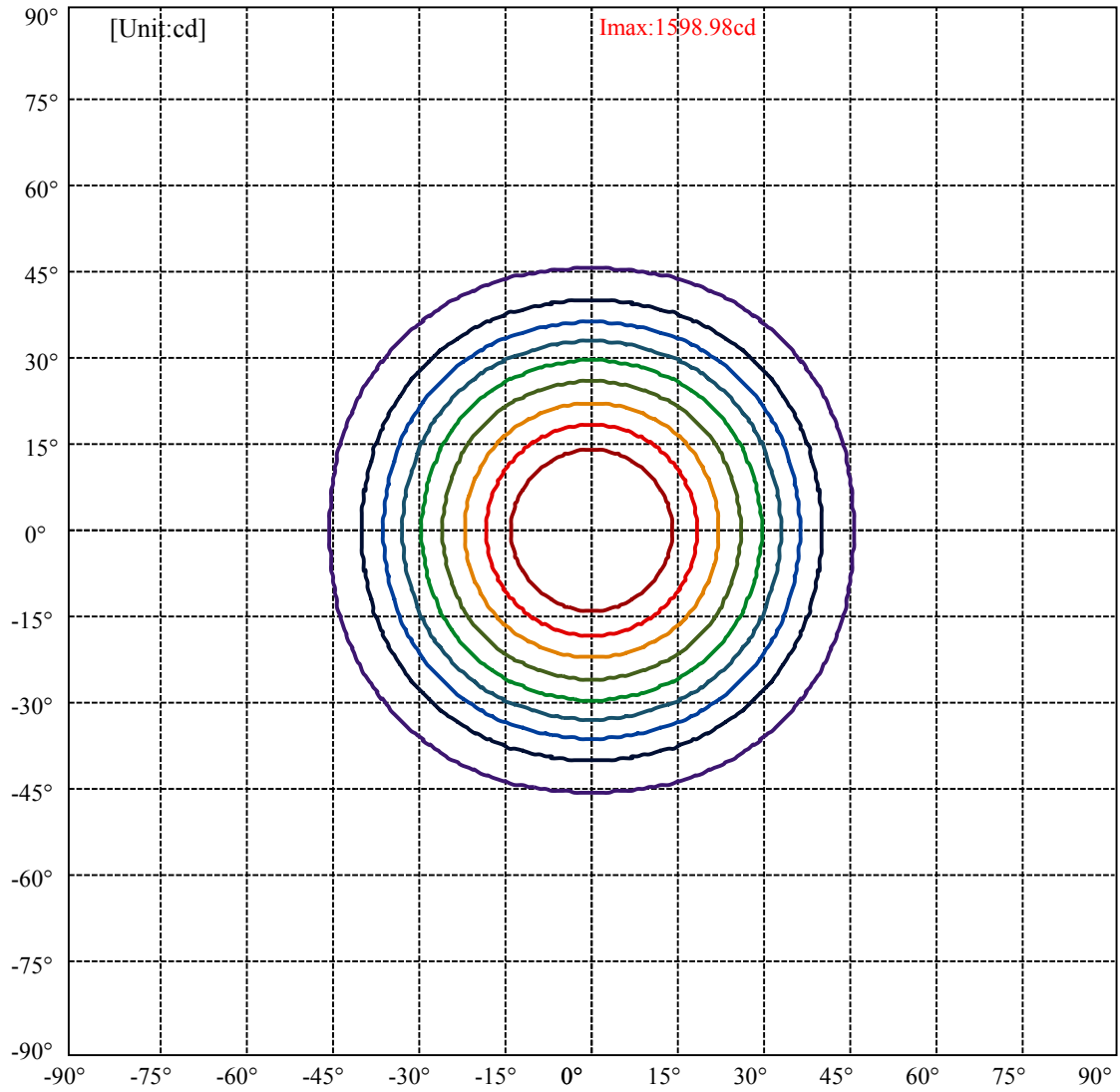
C0(Max): —————

C0/C180: —————

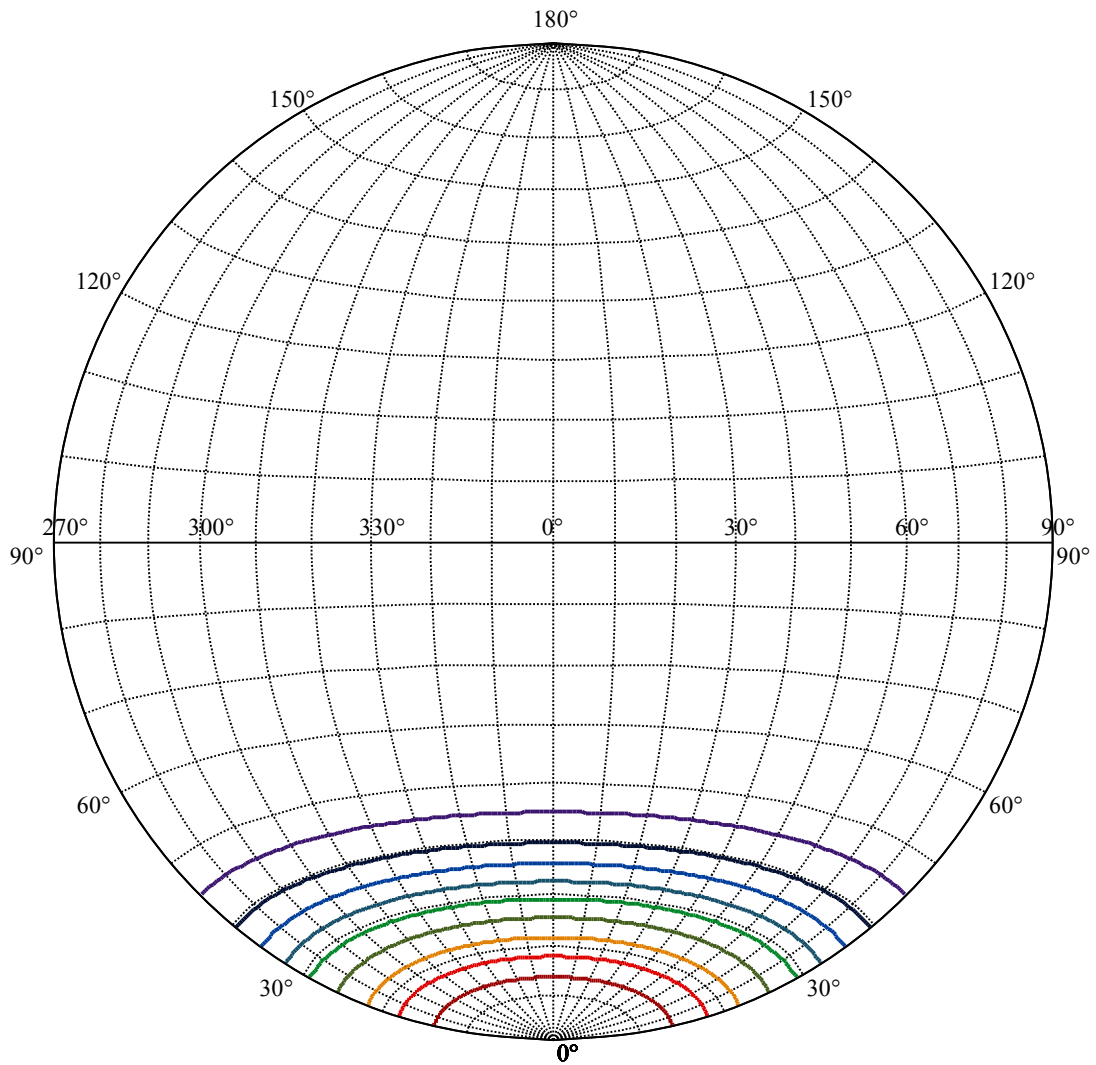
C90/C270: —————

Field angle(10%Imax):C0/180Left:45.0 Right:45.0
:C90/270Left:45.0 Right:45.0

Beam Angle(50%Imax):C0/180Left:29.2 Right:29.2
:C90/270Left:29.2 Right:29.2



(10%Imax) 159.898	—
(20%Imax) 319.795	—
(30%Imax) 479.693	—
(40%Imax) 639.591	—
(50%Imax) 799.488	—
(60%Imax) 959.386	—
(70%Imax) 1119.28	—
(80%Imax) 1279.18	—
(90%Imax) 1439.08	—



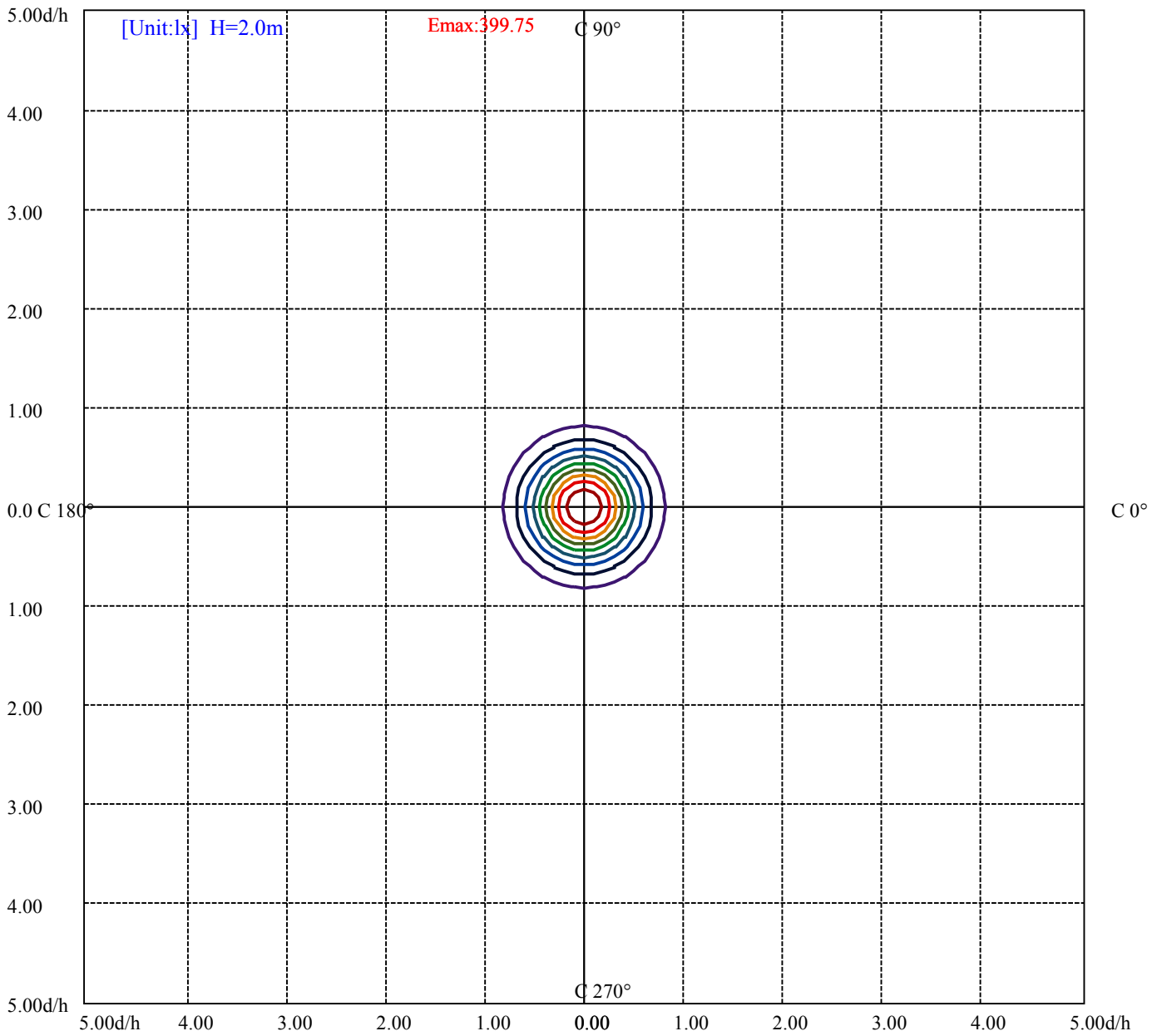
House

[Unit:cd]

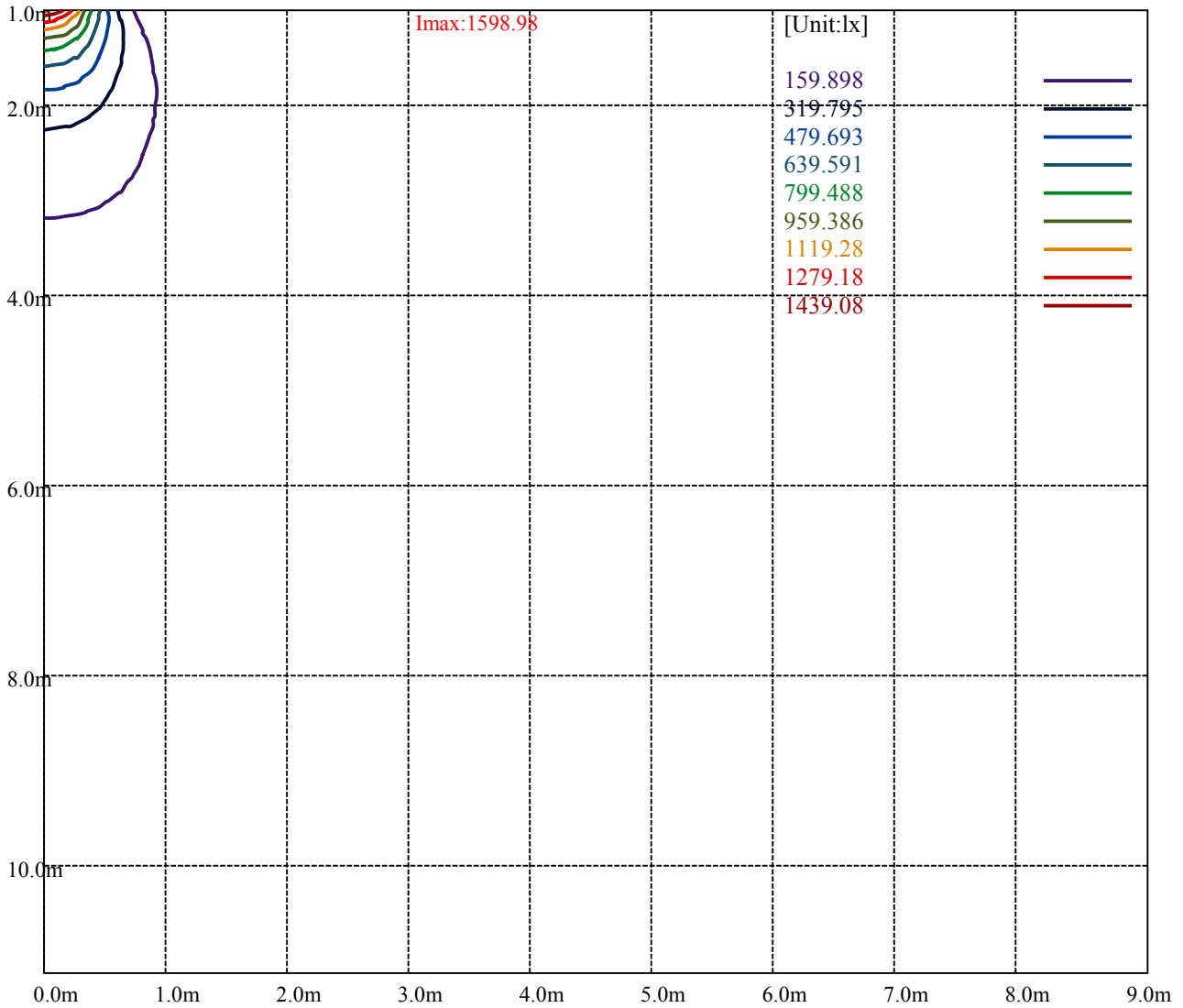
Road

Imax:1598.98

(10%Imax)	159.898	—
(20%Imax)	319.795	—
(30%Imax)	479.693	—
(40%Imax)	639.591	—
(50%Imax)	799.488	—
(60%Imax)	959.386	—
(70%Imax)	1119.28	—
(80%Imax)	1279.18	—
(90%Imax)	1439.08	—



- (10%Emax) 39.9745
- (20%Emax) 79.94875
- (30%Emax) 119.9232
- (40%Emax) 159.8975
- (50%Emax) 199.872
- (60%Emax) 239.8465
- (70%Emax) 279.82
- (80%Emax) 319.795
- (90%Emax) 359.77



Luminance Table

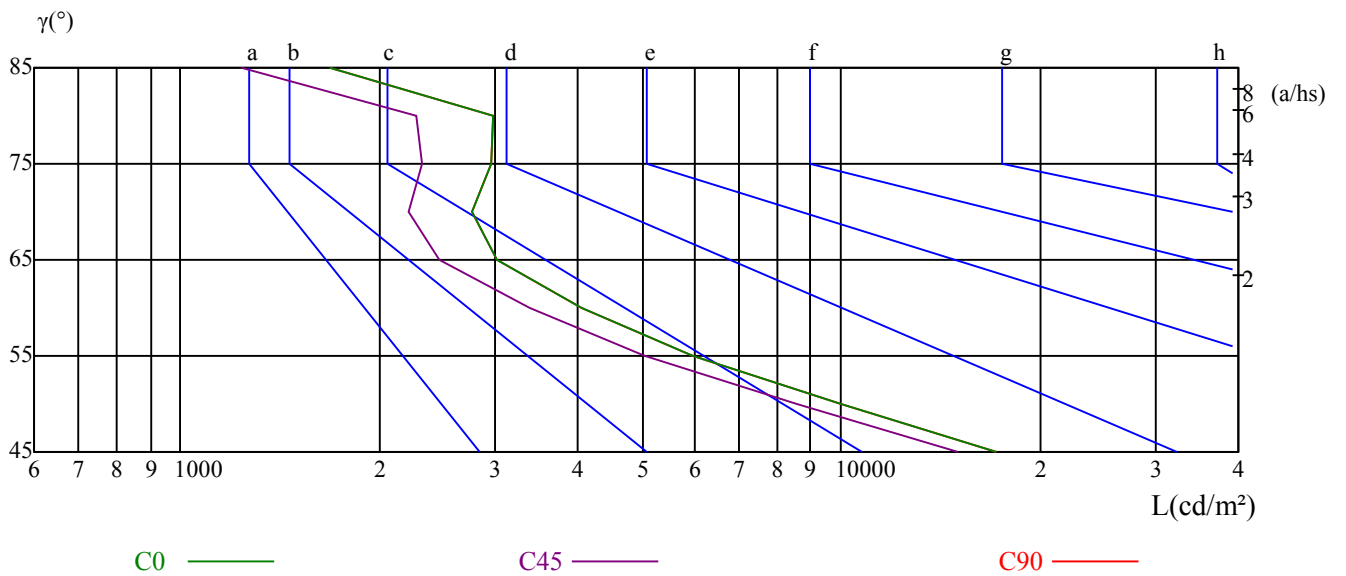
γ	45	50	55	60	65	70	75	80	85
C0	17238	9982	5978	4054	3012	2767	2957	2978	1684
C45	15044	8584	5062	3376	2463	2217	2315	2268	1241
C90	17238	9982	5978	4054	3012	2767	2957	2978	1684

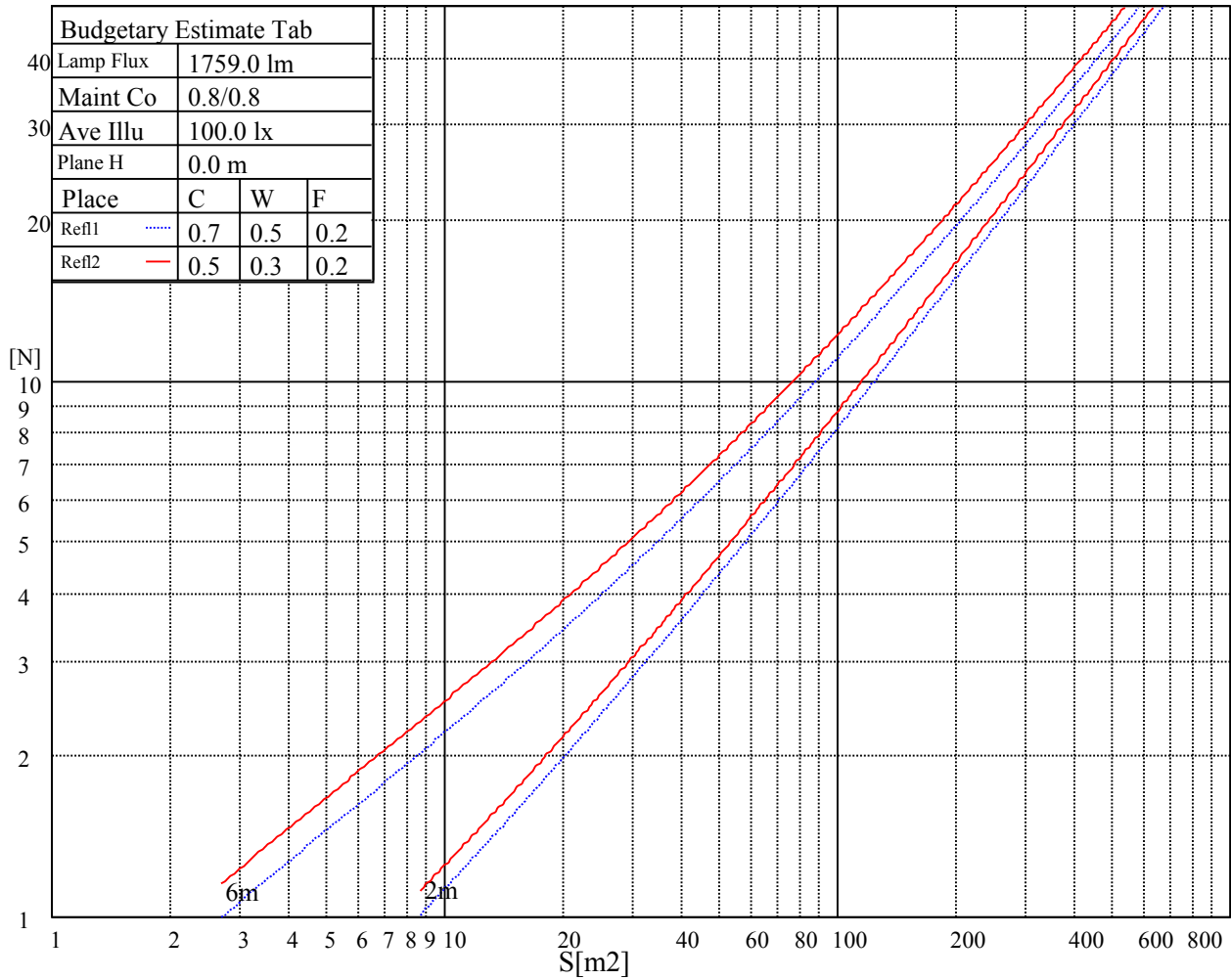
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6522	6522	6522	8955	8955	8955	12143	12143	12143

Glare Table

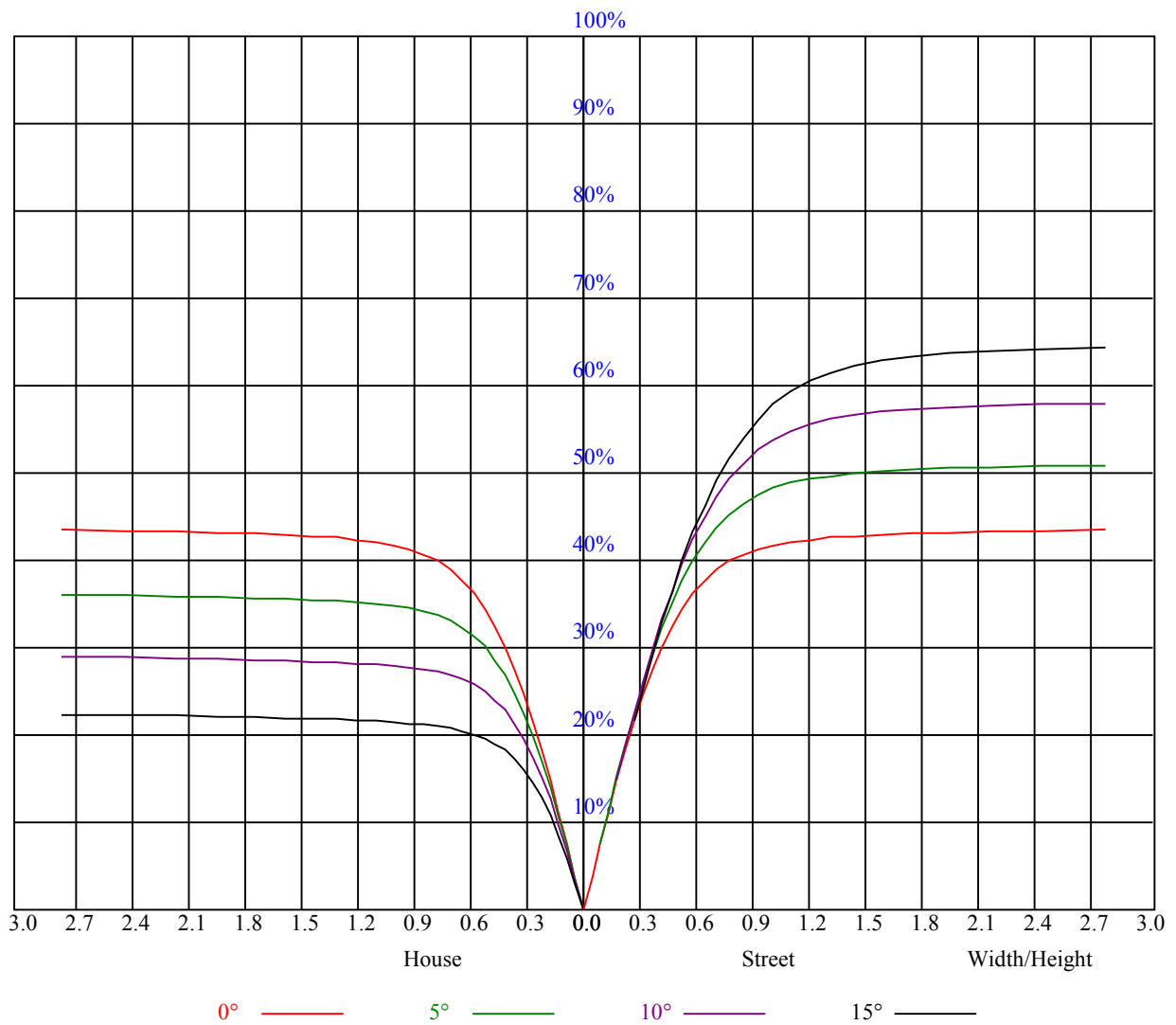
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.84	0.83	0.81
2	0.89	0.85	0.82	0.88	0.84	0.81	0.85	0.82	0.79	0.82	0.80	0.77	0.80	0.78	0.76	0.74
3	0.83	0.78	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.68
4	0.77	0.71	0.67	0.76	0.71	0.67	0.74	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.63
5	0.71	0.66	0.62	0.70	0.65	0.61	0.69	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.58
6	0.67	0.61	0.57	0.66	0.60	0.57	0.64	0.60	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.54
7	0.62	0.57	0.53	0.62	0.56	0.52	0.61	0.56	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.50
8	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.48	0.55	0.51	0.48	0.47
9	0.55	0.50	0.46	0.55	0.49	0.46	0.54	0.49	0.46	0.53	0.49	0.45	0.52	0.48	0.45	0.44
10	0.52	0.47	0.43	0.52	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.49	0.45	0.42	0.41



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	1596.94	1588.50	1526.06	1409.06	1227.38	995.06	784.13	513.00	288.56
45.0	1601.44	1595.81	1543.50	1411.31	1217.81	983.81	765.56	504.56	285.19
90.0	1599.75	1607.06	1564.31	1447.88	1245.38	983.48	751.39	499.05	285.53
135.0	1598.06	1600.88	1568.81	1475.44	1304.44	1062.00	826.88	585.00	349.88
180.0	1596.94	1576.13	1509.19	1376.44	1113.24	972.06	756.90	516.43	308.64
225.0	1601.44	1580.63	1513.13	1370.25	1119.66	967.44	756.79	515.76	307.69
270.0	1599.75	1584.00	1533.38	1411.31	1217.81	989.44	758.81	518.06	311.06
315.0	1597.50	1576.69	1510.88	1380.94	1112.34	942.53	704.42	455.46	254.98
360.0	1596.94	1588.50	1526.06	1409.06	1227.38	995.06	784.13	513.00	288.56
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	156.15	86.18	49.39	32.01	22.89	17.49	15.64	14.57	8.21
45.0	153.79	86.18	49.44	32.91	22.95	17.55	13.89	10.69	8.16
90.0	156.32	88.26	50.85	32.12	23.12	17.49	13.44	10.58	8.16
135.0	180.00	102.43	56.98	36.00	24.58	23.63	32.74	35.89	12.99
180.0	162.11	89.49	51.86	33.36	23.18	18.00	15.53	13.78	8.66
225.0	163.74	91.07	52.31	34.43	23.91	18.11	14.18	11.08	8.83
270.0	165.77	93.26	55.07	35.04	24.02	18.17	13.78	10.69	8.33
315.0	136.01	78.98	46.46	30.60	21.99	29.31	37.74	35.66	8.33
360.0	156.15	86.18	49.39	32.01	22.89	17.49	15.64	14.57	8.21
C/γ(°)	90.0								
0.0	6.41								
45.0	6.64								
90.0	6.64								
135.0	6.53								
180.0	6.41								
225.0	6.64								
270.0	6.58								
315.0	6.41								
360.0	6.41								