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Nata

LumCAT: 1681-S
Luminaire: 92.70.124.00
Report No: NATA0100
Test No: GC2018082309
LampCAT: LUMINUS CXM-9-AC30
Lamp flux(lm): 1974.0
Number of Lamps: 1
Length(mm): 47
Phm Type: C

Voltage(V): 35.1000
Current(A): 0.4000
Power (W): 14.0400
PF: 0.0000
Ballast type: DC
Width(mm): 47
Height(mm): 0

Photometric Results

Lumens(lm): 1757.55
Efficiency(%): 89.03%
Lumens(lm)/Power(W): 125.95
Central intensity(cd): 2094.208
Maximum intensity(cd): 2094.208
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=58.8
 [C90/270]Total=58.8
Field angle(10%Imax): [C0/180]Total=78.6
 [C90/270]Total=78.6
Maximum s/h(1/2): C0_180=0.93 C90_270=0.93
Maximum s/h(1/4): C0_180=0.87 C90_270=0.87
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.58%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.722%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/8/23
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

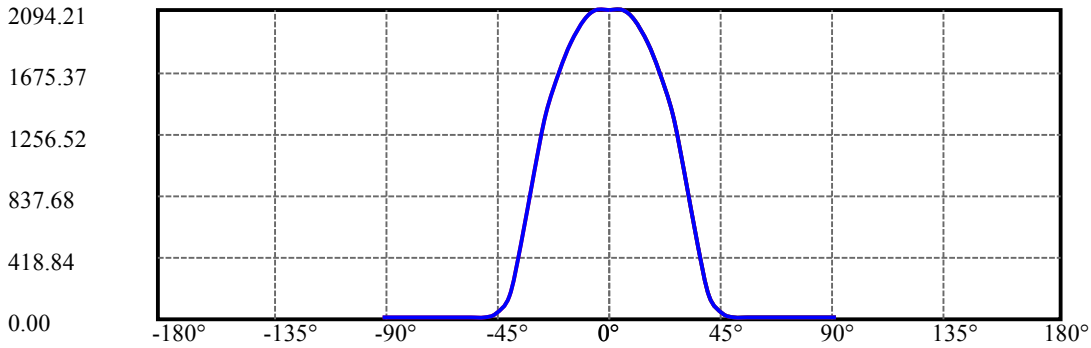
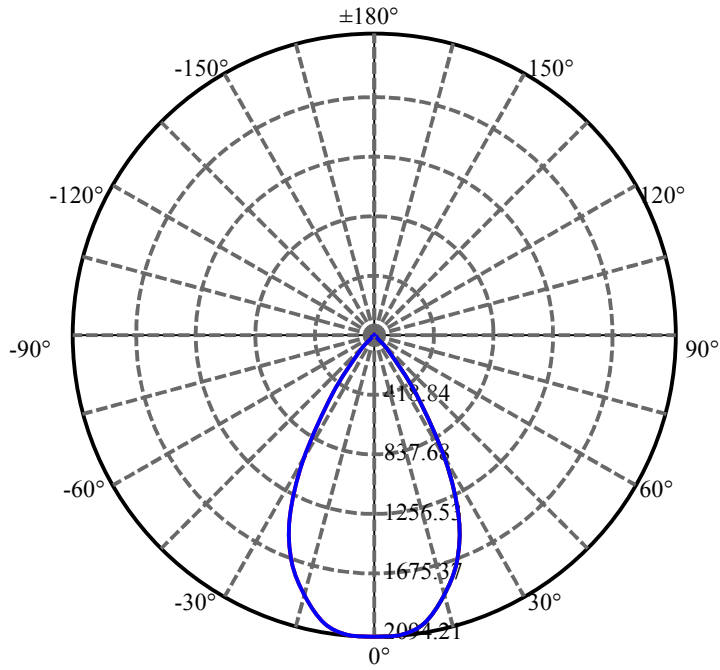
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2094.208	12.524	12.524	.634%	.713%
5.0	2092.763	99.978	112.502	5.065%	6.401%
10.0	2027.039	192.940	305.442	9.774%	17.379%
15.0	1874.602	265.947	571.388	13.472%	32.511%
20.0	1672.407	313.533	884.921	15.883%	50.350%
25.0	1394.235	322.978	1207.9	16.362%	68.727%
30.0	998.413	273.634	1481.534	13.862%	84.296%
35.0	506.395	159.210	1640.744	8.065%	93.354%
40.0	159.209	56.095	1696.839	2.842%	96.546%
45.0	33.213	12.873	1709.712	.652%	97.278%
50.0	16.847	7.074	1716.786	.358%	97.681%
55.0	12.904	5.794	1722.58	.294%	98.011%
60.0	11.644	5.528	1728.107	.280%	98.325%
65.0	11.383	5.655	1733.762	.286%	98.647%
70.0	11.176	5.757	1739.519	.292%	98.974%
75.0	10.509	5.564	1745.083	.282%	99.291%
80.0	10.199	5.506	1750.589	.279%	99.604%
85.0	8.713	4.758	1755.346	.241%	99.875%
90.0	8.024	2.199	1757.545	.111%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1481.53	75.05%	84.30%
0-40	1696.84	85.96%	96.55%
0-60	1728.11	87.54%	98.33%
0-90	1755.35	88.92%	99.87%
0-120	1755.35	88.92%	99.87%
0-180	1757.55	89.03%	100.00%
60-90	32.77	1.66%	1.86%
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%
0-28.62	1406.04	71.23%	80.00%

ZONAL LUMEN SUMMARY

0-10	305.44
10-20	579.48
20-30	596.61
30-40	215.31
40-50	19.95
50-60	11.32
60-70	11.41
70-80	11.07
80-90	4.76
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: —————

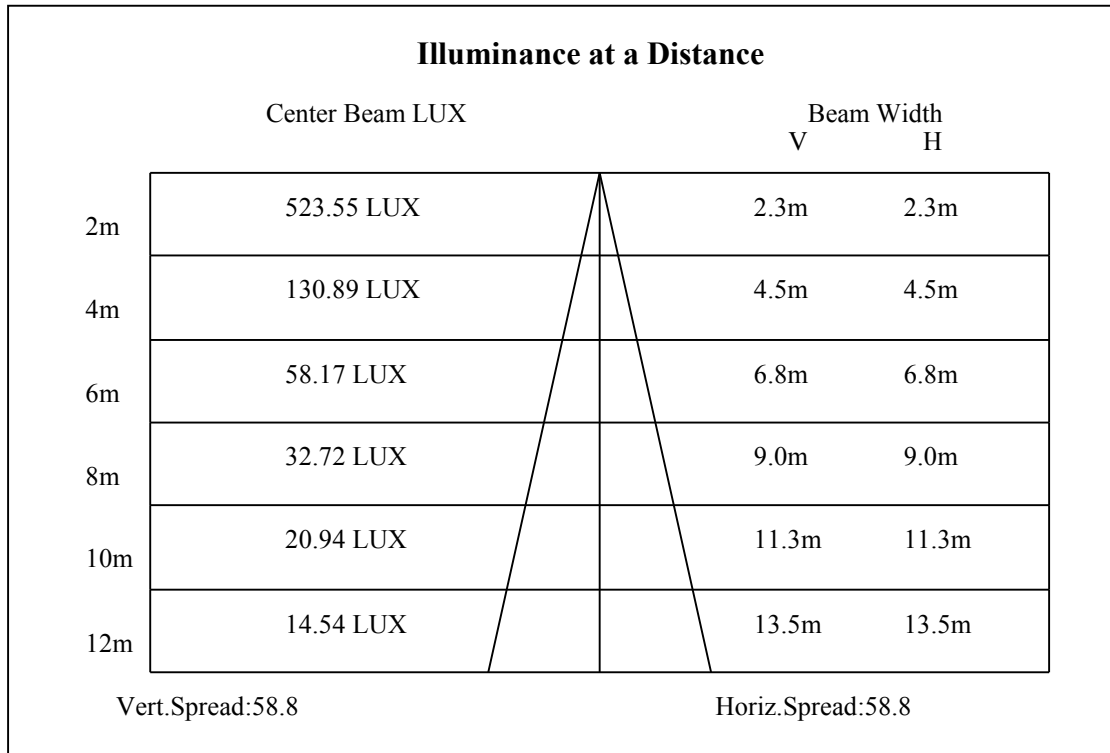
C90/C270: —————

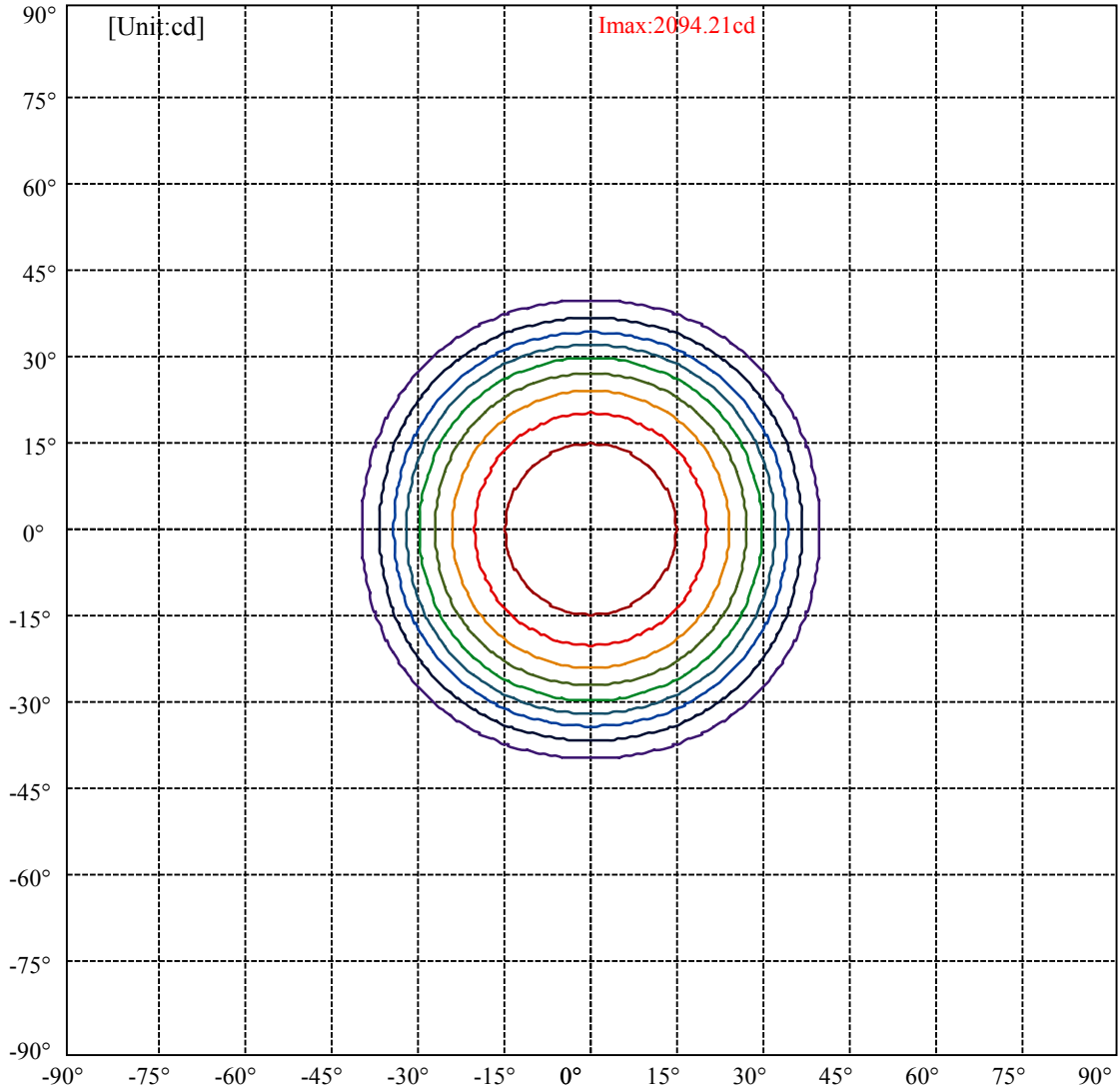
Field angle(10%Imax):C0/180Left:39.3 Right:39.3

:C90/270Left:39.3 Right:39.3

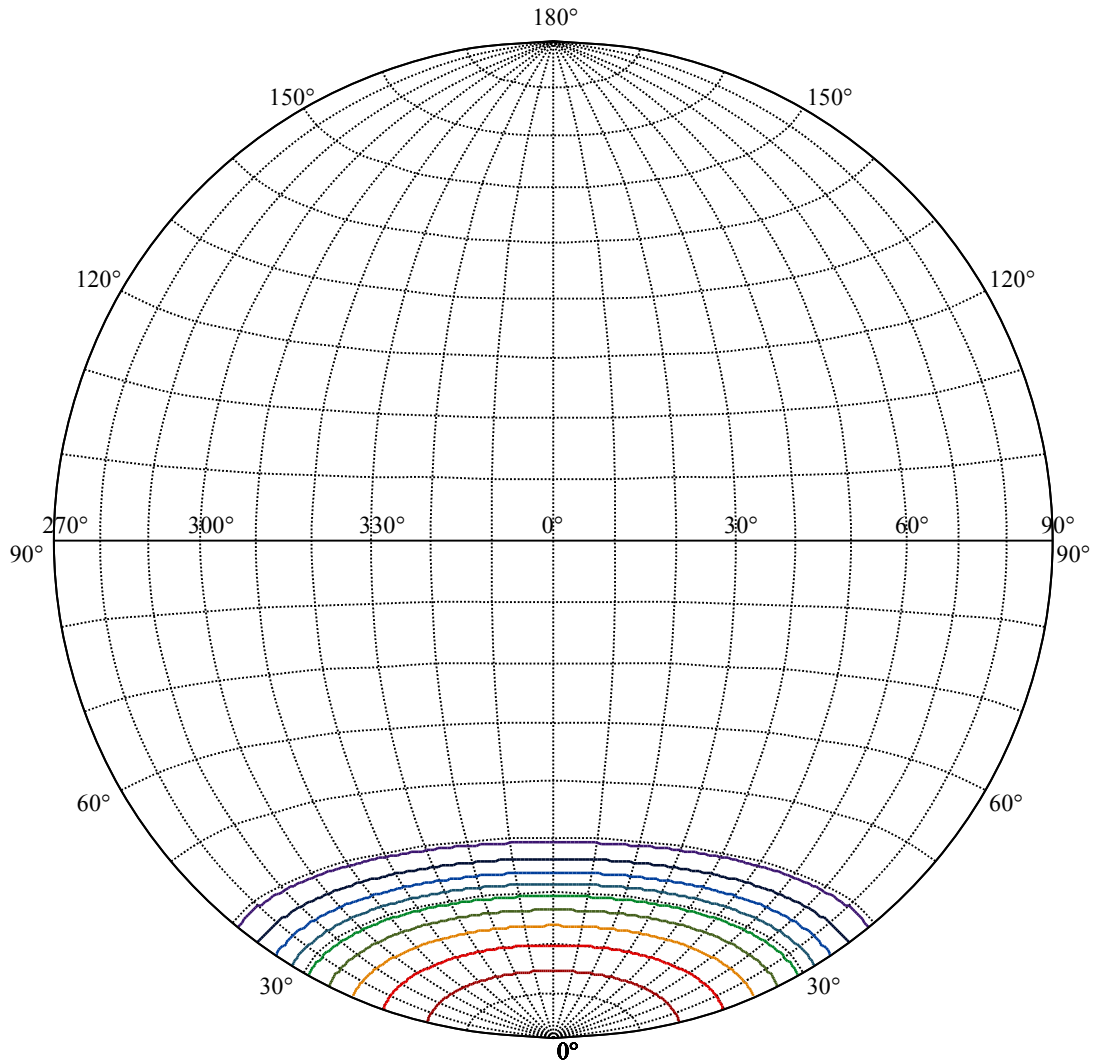
Beam Angle(50%Imax):C0/180Left:29.4 Right:29.4

:C90/270Left:29.4 Right:29.4





(10%Imax) 209.421	—
(20%Imax) 418.842	—
(30%Imax) 628.262	—
(40%Imax) 837.683	—
(50%Imax) 1047.1	—
(60%Imax) 1256.52	—
(70%Imax) 1465.95	—
(80%Imax) 1675.37	—
(90%Imax) 1884.79	—



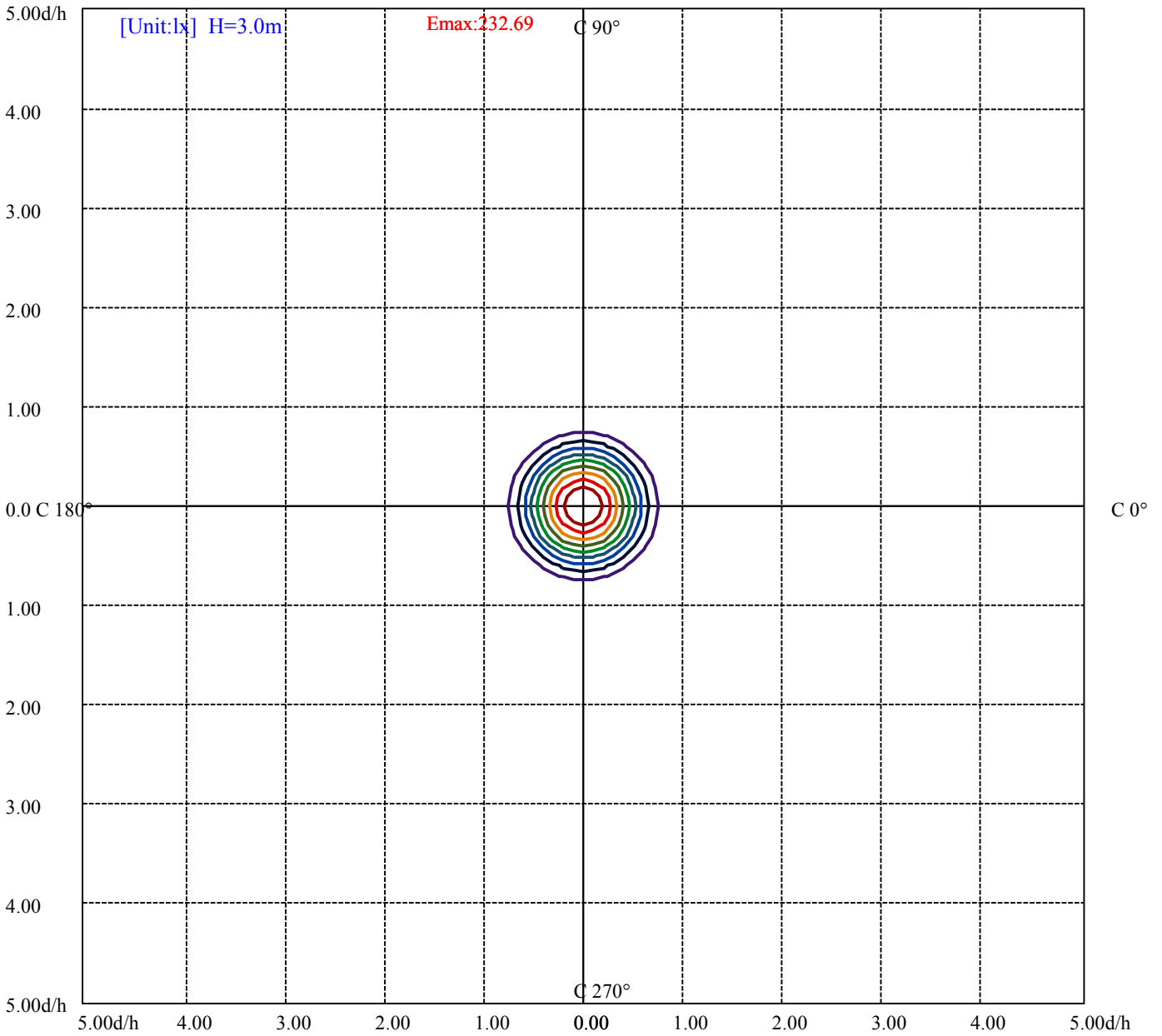
House

[Unit:cd]

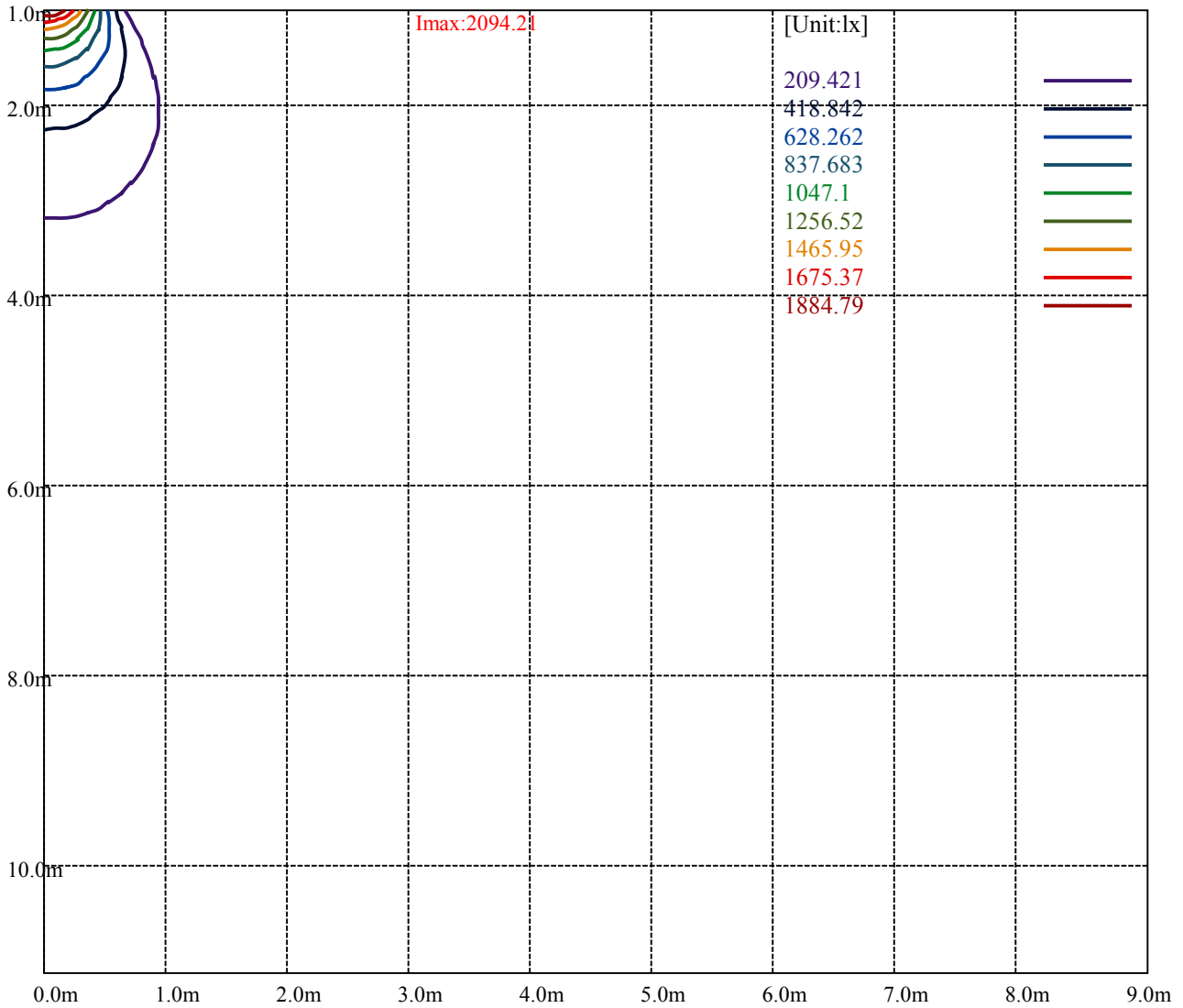
Road

I_{max}:2094.21

(10%I _{max}) 209.421	—
(20%I _{max}) 418.842	—
(30%I _{max}) 628.262	—
(40%I _{max}) 837.683	—
(50%I _{max}) 1047.1	—
(60%I _{max}) 1256.52	—
(70%I _{max}) 1465.95	—
(80%I _{max}) 1675.37	—
(90%I _{max}) 1884.79	—



(10%Emax) 23.269	—
(20%Emax) 46.538	—
(30%Emax) 69.80689	—
(40%Emax) 93.07589	—
(50%Emax) 116.3444	—
(60%Emax) 139.6133	—
(70%Emax) 162.8833	—
(80%Emax) 186.1522	—
(90%Emax) 209.4211	—



Luminance Table

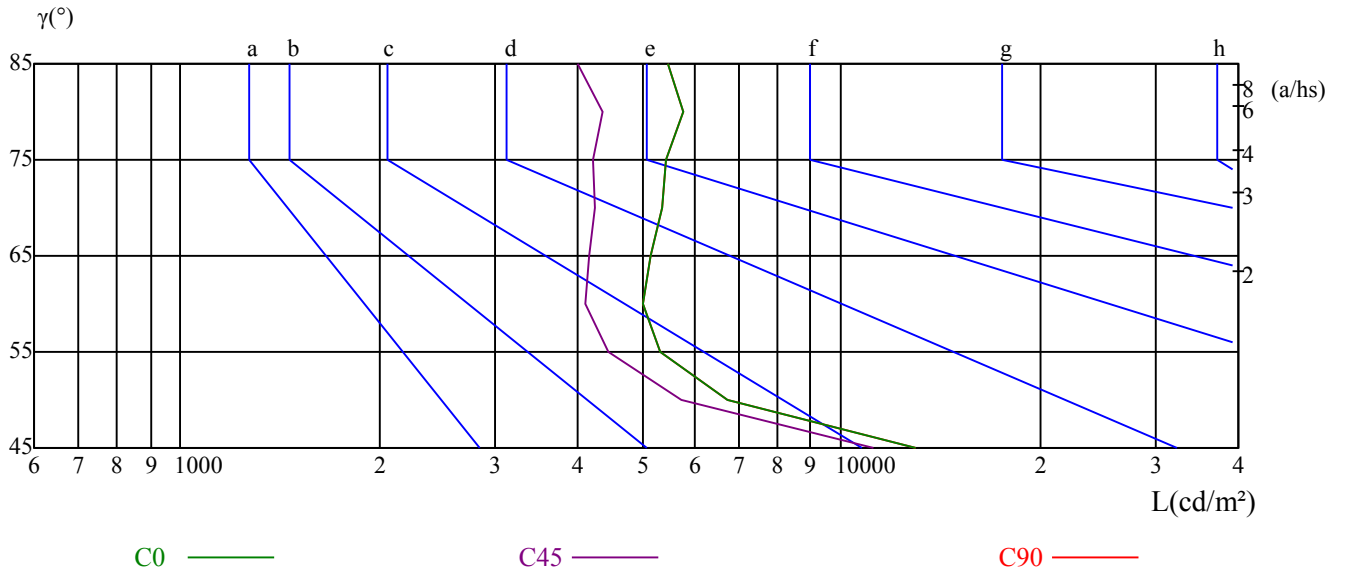
γ	45	50	55	60	65	70	75	80	85
C0	12979	6739	5328	5007	5147	5372	5435	5755	5455
C45	11175	5716	4449	4113	4153	4251	4207	4345	3999
C90	12979	6739	5328	5007	5147	5372	5435	5755	5455

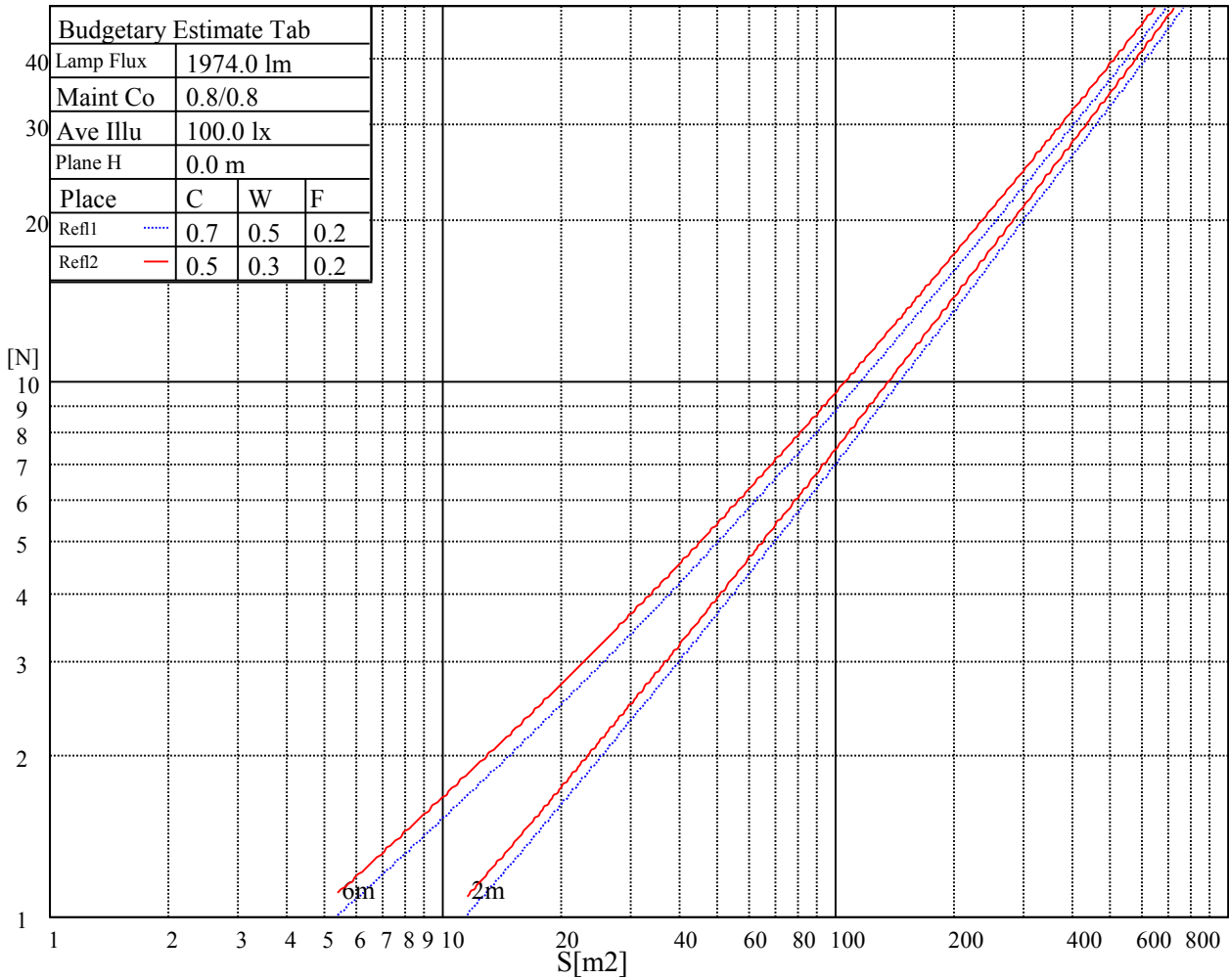
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12193	12193	12193	18381	18381	18381	45254	45254	45254

Glare Table

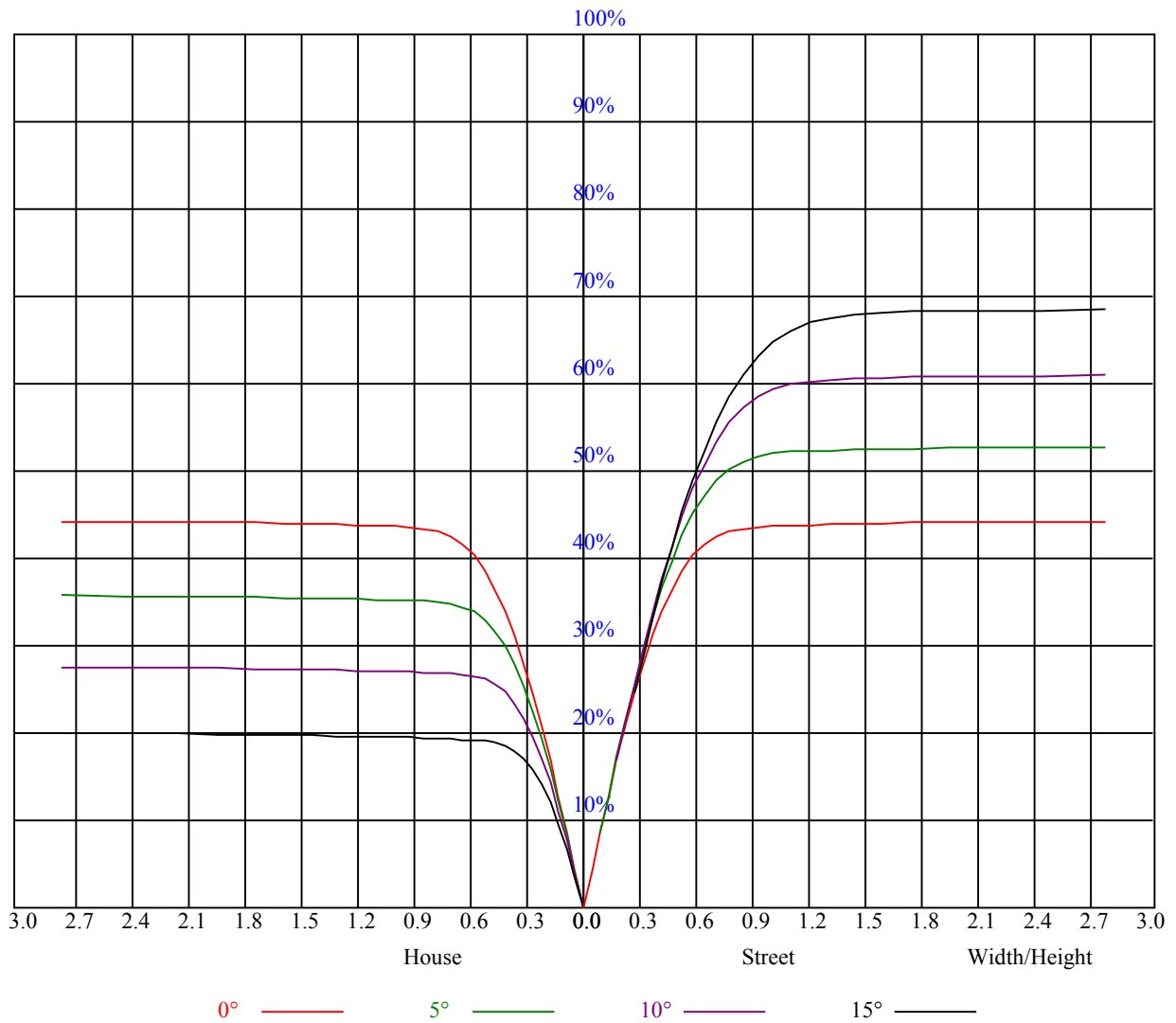
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.96	0.94	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.85	0.83
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.86	0.83	0.86	0.83	0.82	0.83	0.81	0.80	0.78
3	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.80	0.78	0.81	0.79	0.76	0.79	0.77	0.75	0.74
4	0.82	0.78	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.70
5	0.78	0.73	0.69	0.77	0.73	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.65	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.63
7	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.60
8	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.57
9	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.54
10	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.59	0.55	0.53	0.52



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	2098.20	2081.68	2021.12	1871.92	1685.28	1452.94	1072.50	607.27	302.81
45.0	2092.14	2076.73	2001.30	1834.48	1637.93	1380.81	980.55	516.98	177.39
90.0	2091.04	2087.19	1987.54	1816.31	1590.58	1283.36	887.67	427.84	94.75
135.0	2095.45	2099.85	2028.28	1884.03	1692.98	1415.50	1040.57	537.35	115.89
180.0	2098.20	2104.26	2039.84	1872.47	1665.46	1364.30	956.00	417.49	85.45
225.0	2092.14	2112.51	2069.57	1935.78	1734.83	1434.77	1023.99	488.35	97.12
270.0	2091.04	2100.40	2061.31	1937.43	1734.28	1449.08	1047.17	573.14	285.74
315.0	2095.45	2079.48	2007.36	1844.39	1637.93	1373.11	978.85	482.73	114.52
360.0	2098.20	2081.68	2021.12	1871.92	1685.28	1452.94	1072.50	607.27	302.81
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	42.01	19.38	13.65	11.67	10.63	9.86	9.19	8.92	8.53
45.0	34.19	17.18	12.99	11.34	10.46	9.86	9.03	8.75	8.42
90.0	28.74	15.36	12.72	11.73	11.73	12.28	12.22	10.79	8.70
135.0	33.80	16.79	12.66	11.56	11.56	11.56	10.52	10.68	8.59
180.0	28.79	15.75	12.77	11.95	12.22	10.85	9.25	9.03	8.81
225.0	28.68	15.91	12.55	11.51	11.51	11.18	9.30	8.81	8.59
270.0	35.62	17.78	13.43	12.39	12.66	14.04	15.64	15.91	9.63
315.0	33.86	16.63	12.44	11.01	10.30	9.80	8.92	8.70	8.42
360.0	42.01	19.38	13.65	11.67	10.63	9.86	9.19	8.92	8.53
C/γ(°)	90.0								
0.0	8.09								
45.0	8.09								
90.0	8.04								
135.0	7.98								
180.0	7.93								
225.0	8.04								
270.0	7.98								
315.0	8.04								
360.0	8.09								