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Nata

LumCAT: 3-1916-E
Luminaire: 99.02.73.180+92.76.323.00
Report No: GC2016120904
Test No: NT-0010
LampCAT: CREE CXA1830
Lamp flux(lm): 2002.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 217.5000
Current(A): 0.1000
Power (W): 19.5000
PF: 0.8960
Ballast type: DC
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 1872.83
Efficiency(%): 93.55%
Lumens(lm)/Power(W): 96.04
Central intensity(cd): 7484.229
Maximum intensity(cd): 7484.229
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=22.3
 [C90/270]Total=22.3
Field angle(10%Imax): [C0/180]Total=55.3
 [C90/270]Total=55.3
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.39 C90_270=0.39
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.55%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.660%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2016/12/9
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

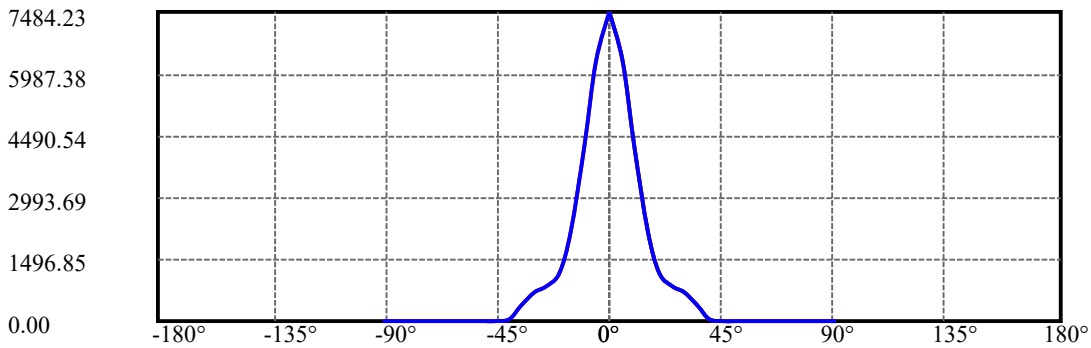
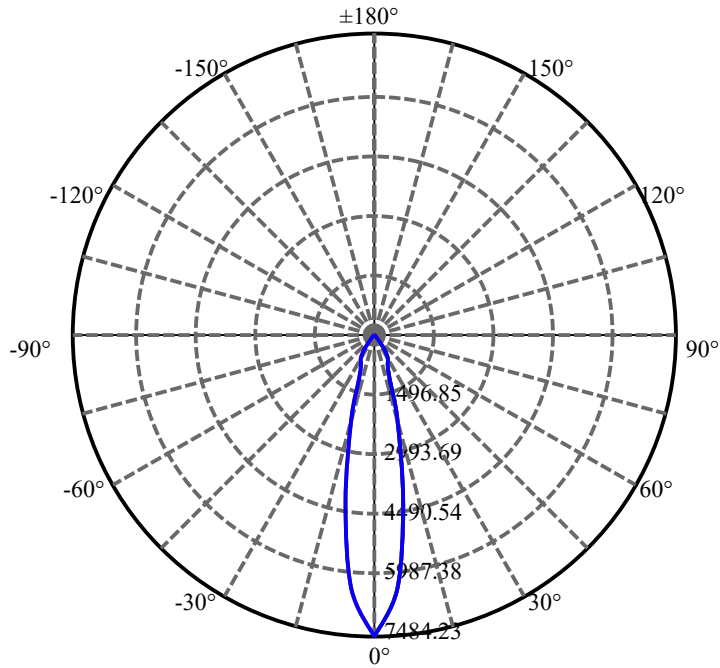
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7484.229	0.000	0	.000%	.000%
5.0	6296.043	164.739	164.739	8.229%	8.796%
10.0	4215.669	376.037	540.776	18.783%	28.875%
15.0	2184.776	379.670	920.446	18.965%	49.147%
20.0	1171.401	276.596	1197.042	13.816%	63.916%
25.0	822.611	209.135	1406.177	10.446%	75.083%
30.0	683.312	190.576	1596.753	9.519%	85.259%
35.0	382.697	156.977	1753.731	7.841%	93.640%
40.0	47.232	71.730	1825.461	3.583%	97.470%
45.0	10.764	10.738	1836.199	.536%	98.044%
50.0	8.843	3.962	1840.161	.198%	98.255%
55.0	8.382	3.745	1843.906	.187%	98.455%
60.0	8.210	3.835	1847.742	.192%	98.660%
65.0	8.080	3.960	1851.702	.198%	98.872%
70.0	8.011	4.074	1855.776	.204%	99.089%
75.0	7.956	4.173	1859.949	.208%	99.312%
80.0	7.921	4.248	1864.198	.212%	99.539%
85.0	7.907	4.301	1868.499	.215%	99.768%
90.0	7.928	4.336	1872.835	.217%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1596.75	79.76%	85.26%
0-40	1825.46	91.18%	97.47%
0-60	1847.74	92.29%	98.66%
0-90	1868.50	93.33%	99.77%
0-120	1868.50	93.33%	99.77%
0-180	1872.83	93.55%	100.00%
60-90	24.59	1.23%	1.31%
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%
0-27.42	1498.27	74.84%	80.00%

ZONAL LUMEN SUMMARY

0-10	540.78
10-20	656.27
20-30	399.71
30-40	228.71
40-50	14.70
50-60	7.58
60-70	8.03
70-80	8.42
80-90	4.30
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: —————

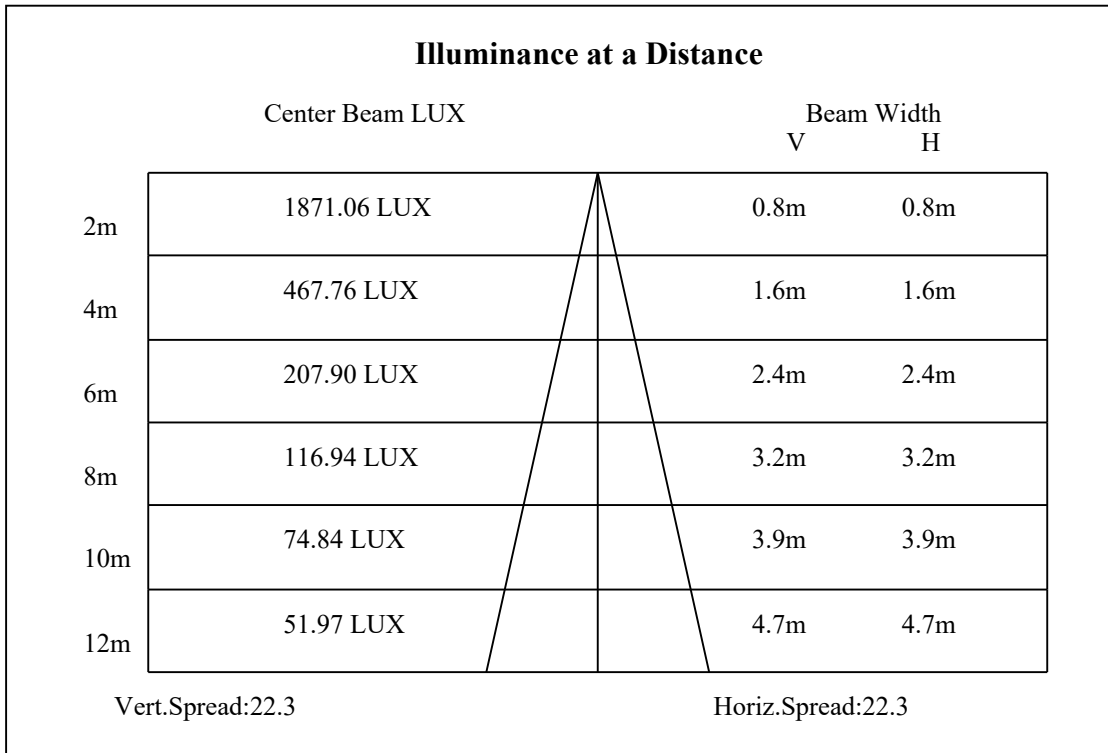
C90/C270: —————

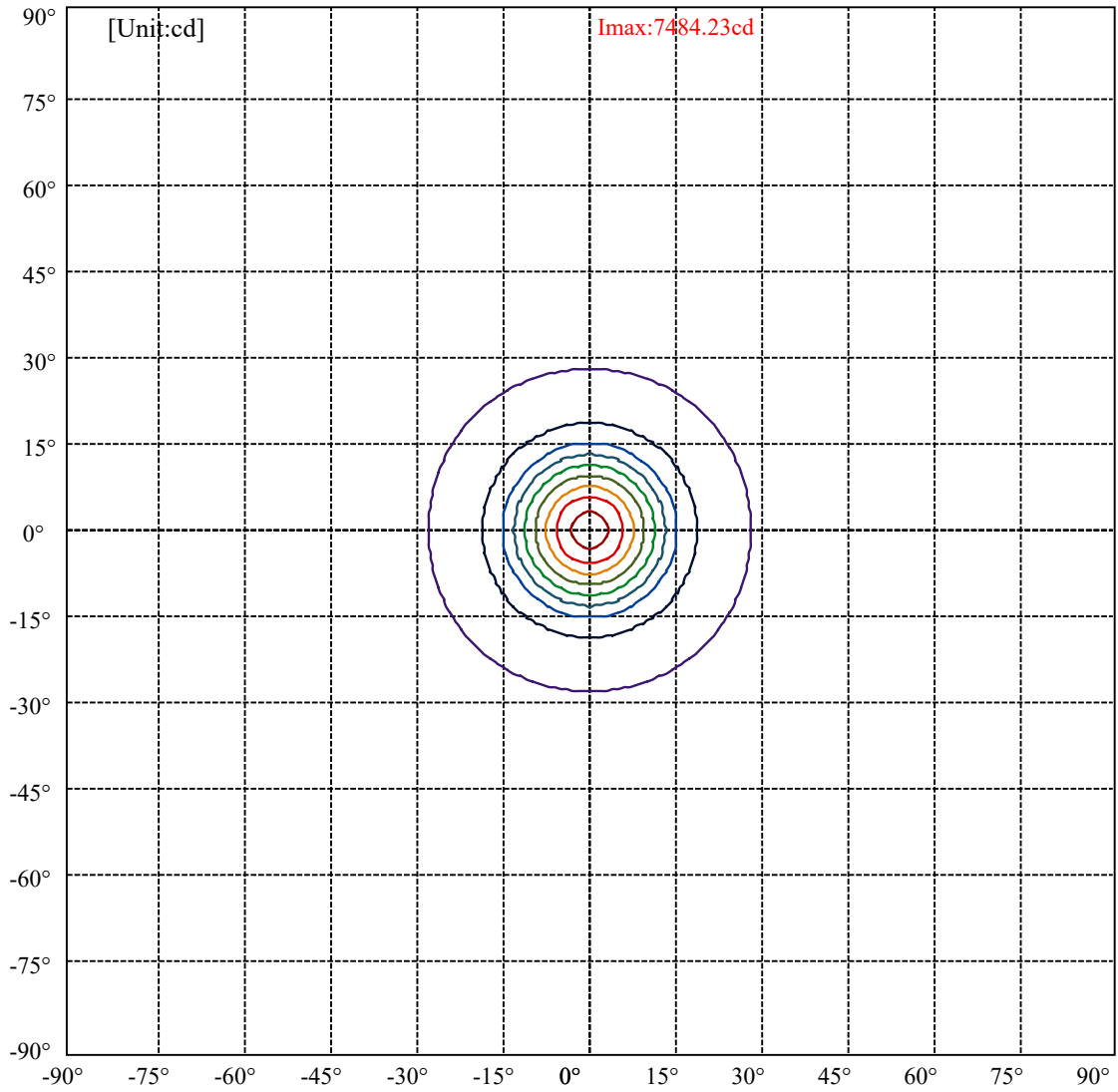
Field angle(10%Imax):C0/180Left:27.7 Right:27.7

:C90/270Left:27.7 Right:27.7

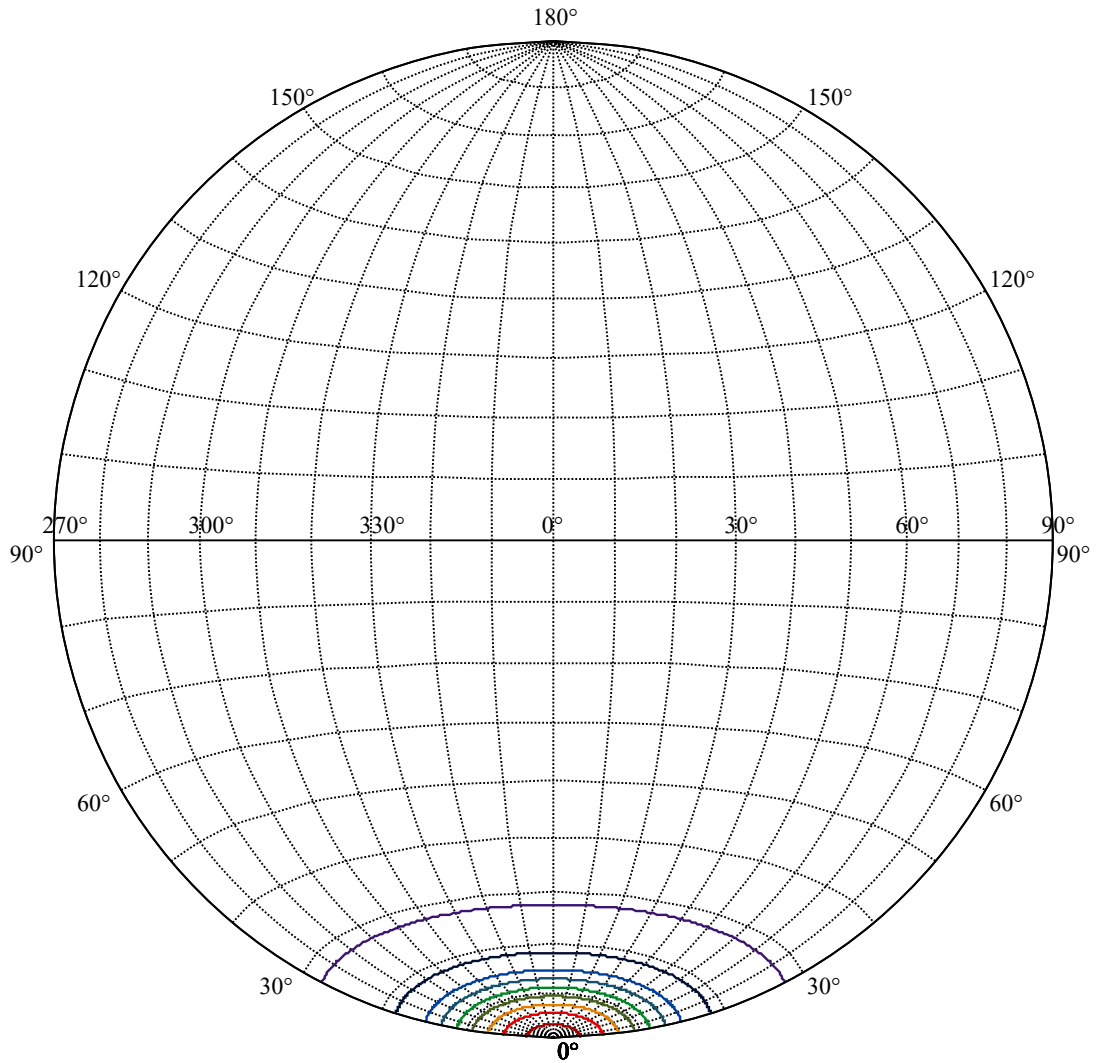
Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2

:C90/270Left:11.2 Right:11.2





(10%Imax) 748.423	—
(20%Imax) 1496.85	—
(30%Imax) 2245.27	—
(40%Imax) 2993.69	—
(50%Imax) 3742.11	—
(60%Imax) 4490.54	—
(70%Imax) 5238.96	—
(80%Imax) 5987.38	—
(90%Imax) 6735.81	—



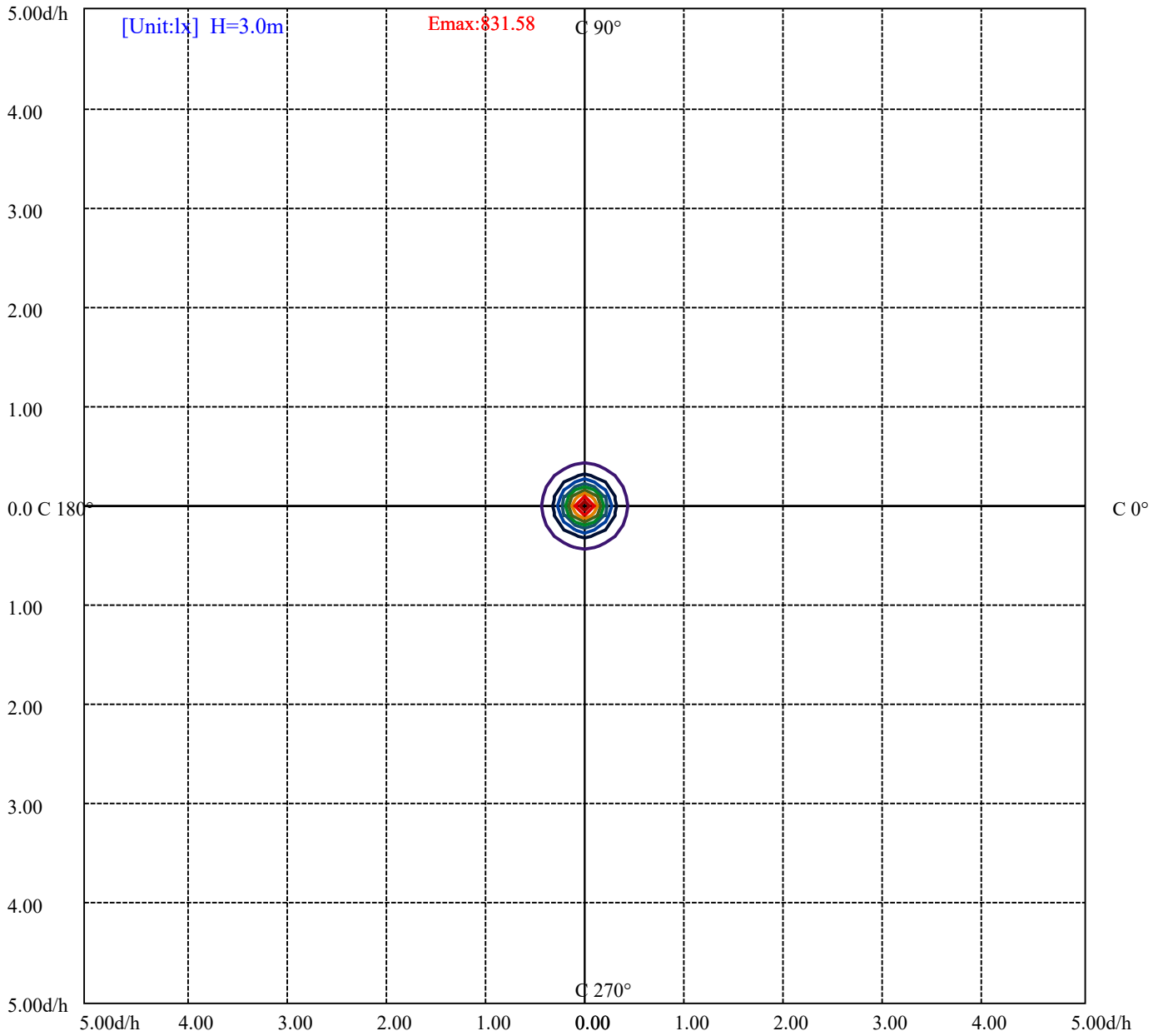
House

[Unit:cd]

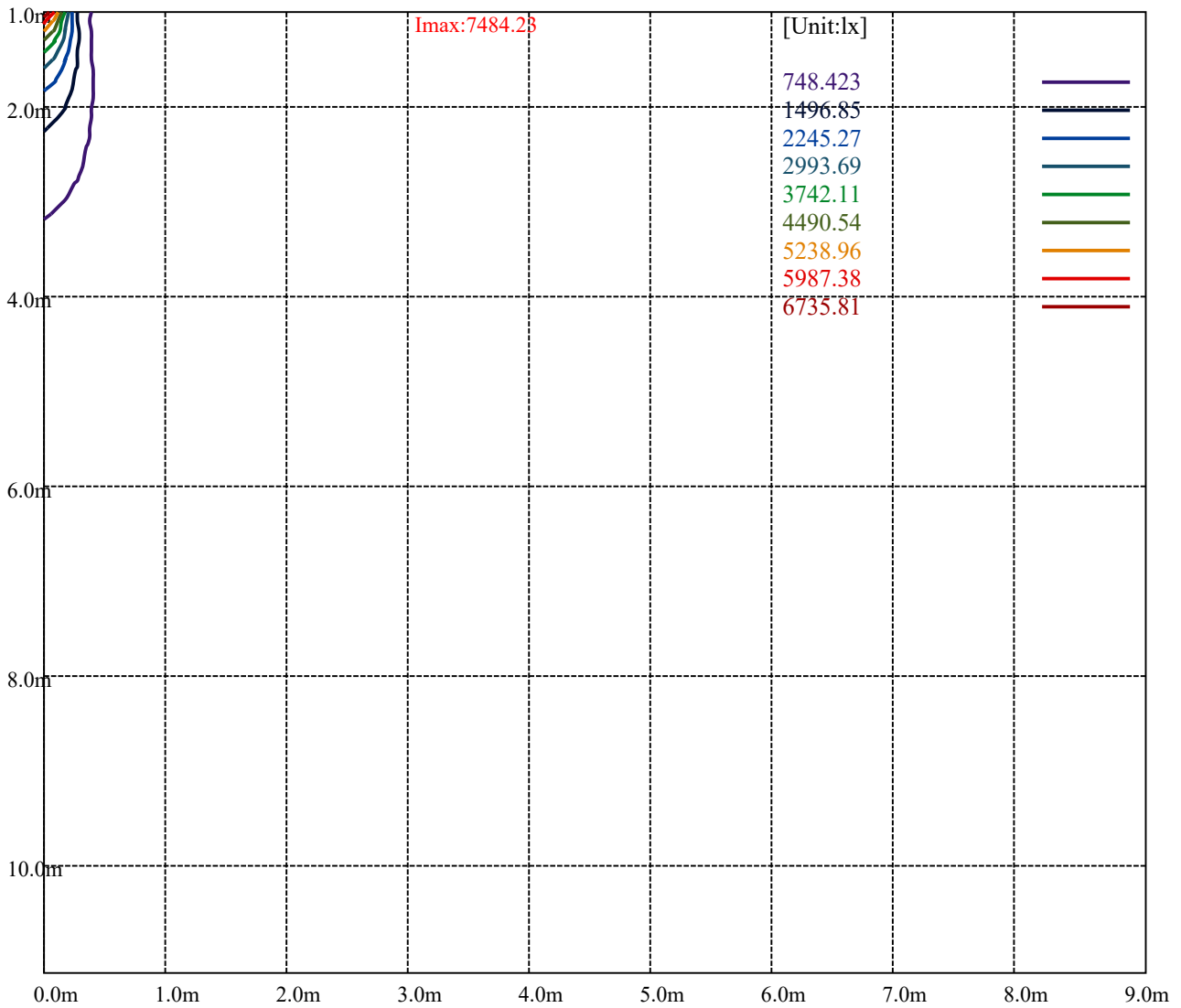
Road

Imax:7484.23

(10%Imax) 748.423	—
(20%Imax) 1496.85	—
(30%Imax) 2245.27	—
(40%Imax) 2993.69	—
(50%Imax) 3742.11	—
(60%Imax) 4490.54	—
(70%Imax) 5238.96	—
(80%Imax) 5987.38	—
(90%Imax) 6735.81	—



(10%Emax) 83.15767	—
(20%Emax) 166.3156	—
(30%Emax) 249.4733	—
(40%Emax) 332.6311	—
(50%Emax) 415.7889	—
(60%Emax) 498.9467	—
(70%Emax) 582.1044	—
(80%Emax) 665.2611	—
(90%Emax) 748.4189	—



Luminance Table

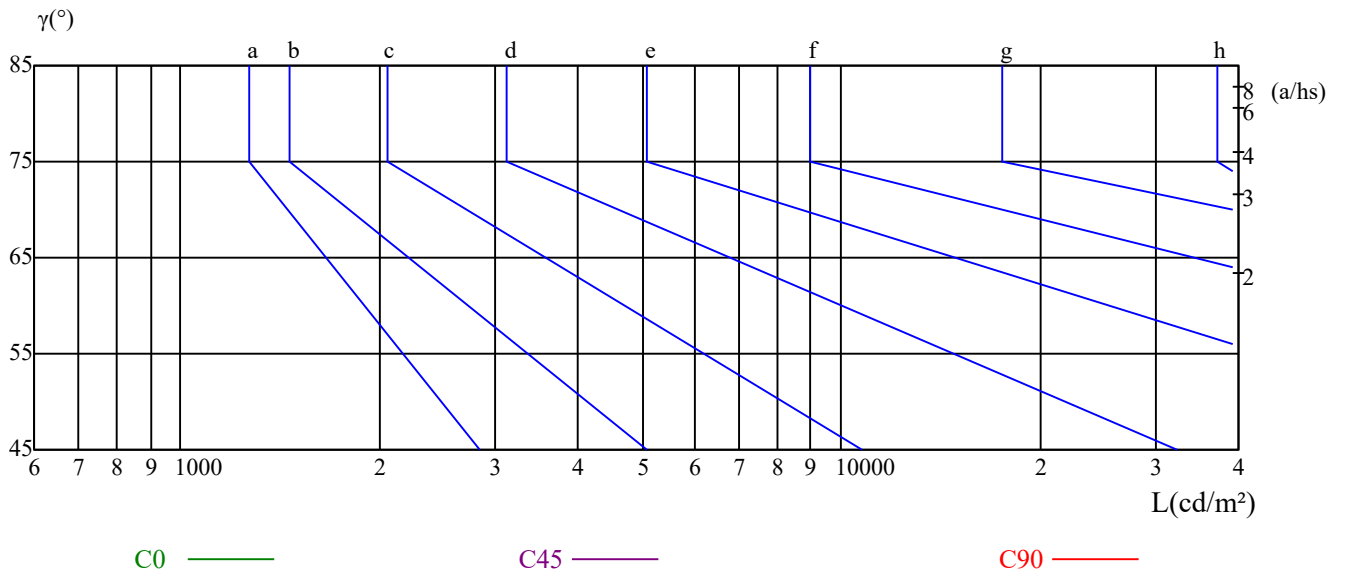
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

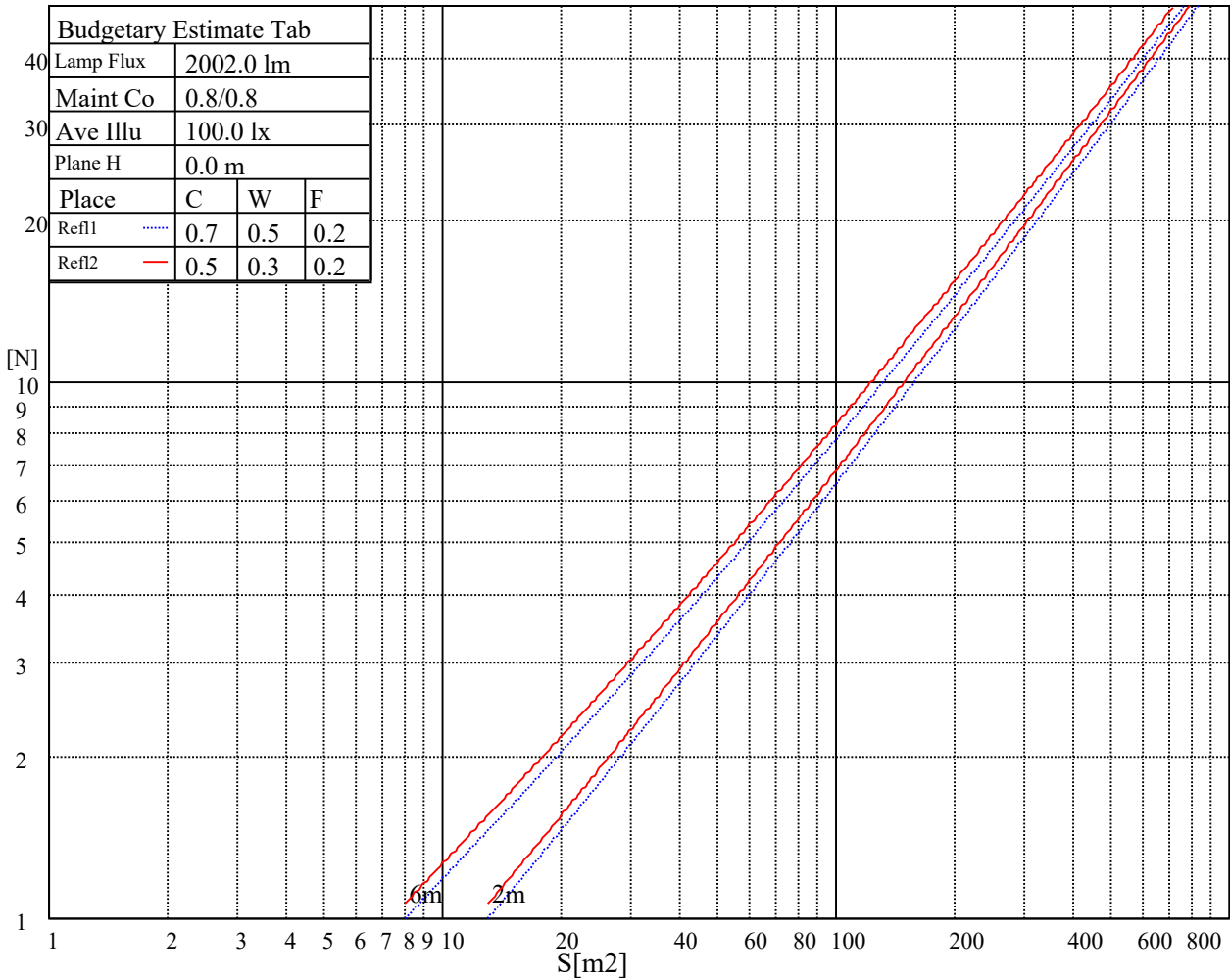
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

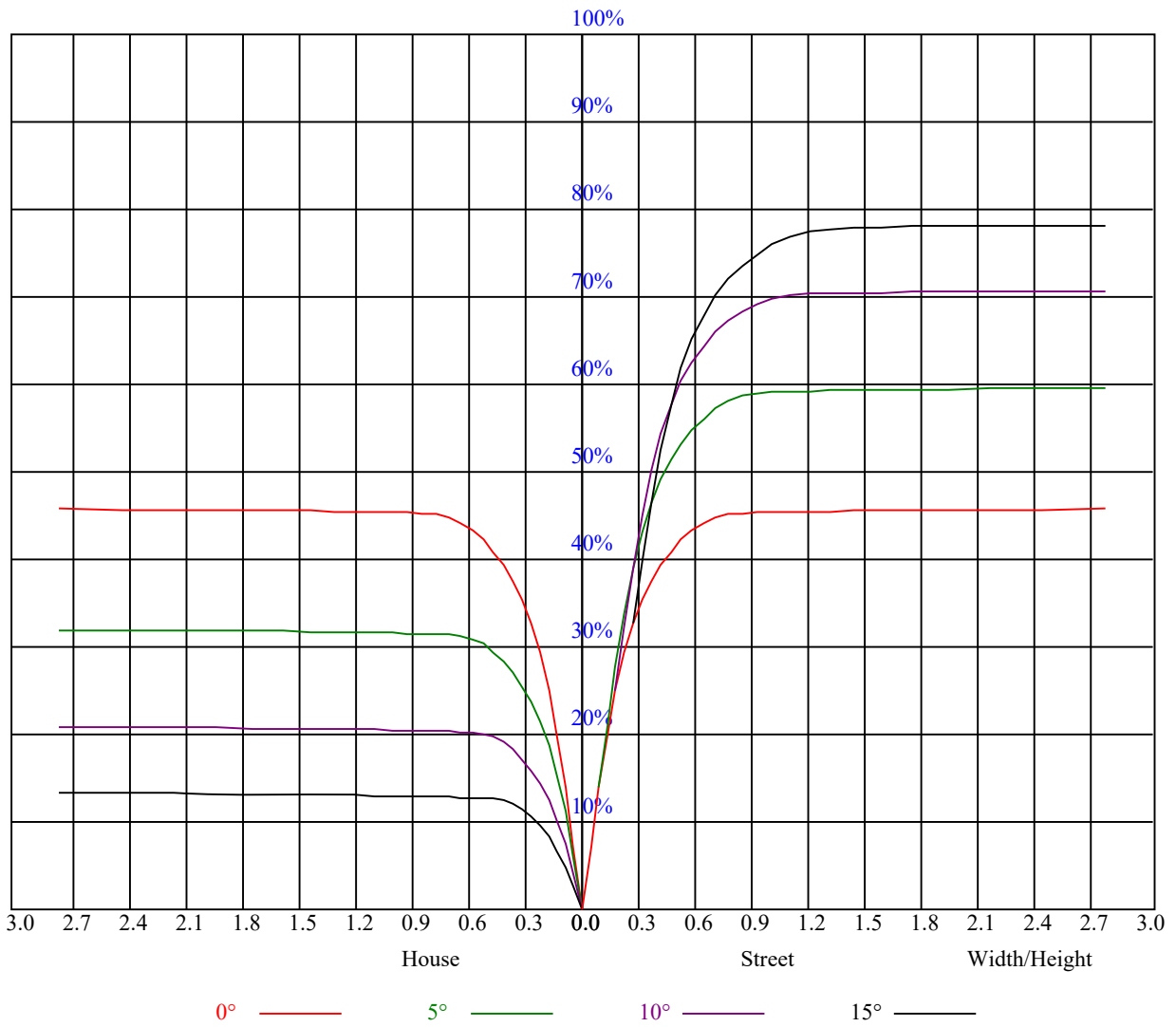
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.94
1	1.05	1.03	1.01	1.03	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.91	0.89
2	0.99	0.96	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.85
3	0.94	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.85	0.88	0.86	0.84	0.86	0.84	0.82	0.81
4	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.80	0.83	0.81	0.79	0.77
5	0.85	0.81	0.78	0.85	0.80	0.77	0.83	0.79	0.77	0.82	0.78	0.76	0.80	0.78	0.75	0.74
6	0.82	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.75	0.72	0.71
7	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.68
8	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
9	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64
10	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.62	0.61



Nata 3-1916-E

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	7519.05	6490.05	4521.78	2339.35	1248.13	841.81	694.26	430.54	50.21
45.0	7395.18	6822.04	4861.48	2581.04	1367.60	873.75	706.37	483.95	100.59
90.0	7503.64	6250.55	4043.89	2118.02	1091.49	790.61	671.85	361.78	26.04
135.0	7519.05	6485.09	4468.38	2306.86	1243.17	850.07	697.56	411.82	57.31
180.0	7519.05	6107.96	3999.30	2027.18	1073.71	801.29	669.16	337.17	30.28
225.0	7395.18	5769.91	3433.32	1820.72	1047.72	754.99	649.23	281.23	22.79
270.0	7503.64	6323.23	4335.14	2233.64	1209.59	856.68	697.56	406.87	61.66
315.0	7519.05	6119.52	4062.06	2051.40	1089.79	811.70	680.50	348.23	28.96
360.0	7519.05	6490.05	4521.78	2339.35	1248.13	841.81	694.26	430.54	50.21
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.68	8.86	8.42	8.20	8.09	8.04	7.93	7.98	7.98
45.0	10.96	8.92	8.48	8.26	8.15	8.04	7.98	7.93	7.93
90.0	10.13	8.81	8.37	8.20	8.09	7.98	7.93	7.87	7.87
135.0	12.66	9.03	8.53	8.37	8.20	8.09	8.04	8.04	7.93
180.0	11.01	8.86	8.48	8.31	8.15	8.09	8.09	7.98	7.98
225.0	9.47	8.59	8.26	8.04	7.93	7.93	7.87	7.82	7.82
270.0	10.90	8.86	8.20	8.15	7.98	7.93	7.93	7.87	7.87
315.0	10.30	8.81	8.31	8.15	8.04	7.98	7.87	7.87	7.87
360.0	10.68	8.86	8.42	8.20	8.09	8.04	7.93	7.98	7.98
C/γ(°)	90.0								
0.0	7.98								
45.0	7.87								
90.0	7.87								
135.0	7.98								
180.0	7.98								
225.0	7.87								
270.0	7.87								
315.0	7.98								
360.0	7.98								