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Nata

LumCAT: 3-1918-E
Luminaire: 99.02.73.180+92.76.323.00
Report No: GC2016120905
Test No: NT-0010
LampCAT: CREE CXA1830
Lamp flux(lm): 2002.0
Number of Lamps: 1
Length(mm): 84
Phm Type: C

Voltage(V): 217.5000
Current(A): 0.1000
Power (W): 19.6000
PF: 0.8960
Ballast type: DC
Width(mm): 84
Height(mm): 0

Photometric Results

Lumens(lm): 1845.96
Efficiency(%): 92.21%
Lumens(lm)/Power(W): 94.18
Central intensity(cd): 3750.442
Maximum intensity(cd): 3750.442
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=38.3
 [C90/270]Total=38.3
Field angle(10%Imax): [C0/180]Total=70.2
 [C90/270]Total=70.2
Maximum s/h(1/2): C0_180=0.63 C90_270=0.63
Maximum s/h(1/4): C0_180=0.62 C90_270=0.62
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.21%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.587%

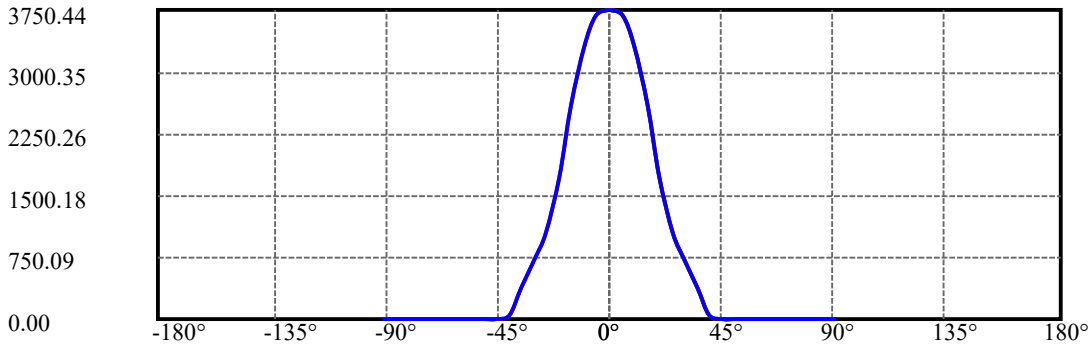
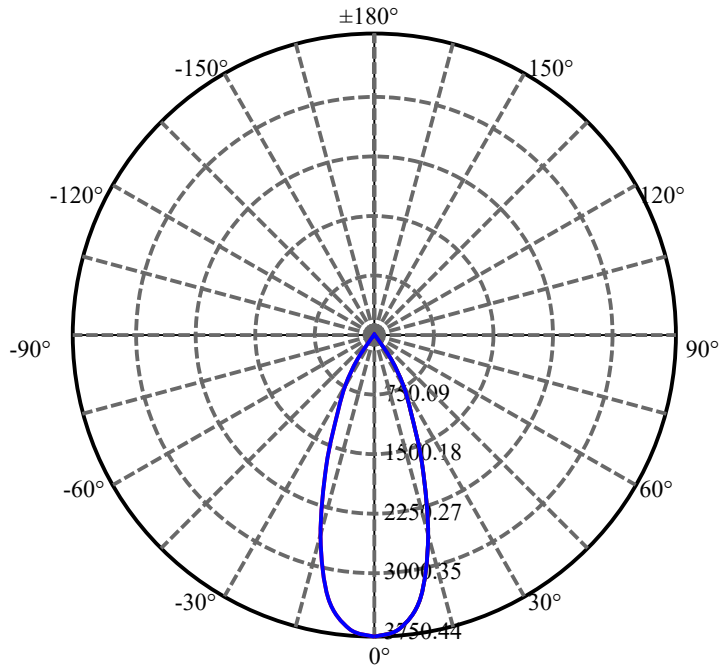
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3750.442	0.000	0	.000%	.000%
5.0	3679.350	88.821	88.821	4.437%	4.812%
10.0	3318.800	250.346	339.167	12.505%	18.373%
15.0	2592.262	350.640	689.807	17.514%	37.369%
20.0	1731.799	356.363	1046.17	17.800%	56.674%
25.0	1053.724	292.150	1338.32	14.593%	72.500%
30.0	728.479	225.539	1563.86	11.266%	84.718%
35.0	381.176	163.404	1727.264	8.162%	93.570%
40.0	41.650	70.545	1797.81	3.524%	97.392%
45.0	11.087	9.765	1807.574	.488%	97.921%
50.0	9.518	4.164	1811.738	.208%	98.146%
55.0	9.022	4.031	1815.769	.201%	98.365%
60.0	8.706	4.098	1819.867	.205%	98.587%
65.0	8.513	4.186	1824.053	.209%	98.813%
70.0	8.327	4.264	1828.317	.213%	99.044%
75.0	8.252	4.333	1832.65	.216%	99.279%
80.0	8.190	4.399	1837.05	.220%	99.517%
85.0	8.162	4.443	1841.493	.222%	99.758%
90.0	8.148	4.466	1845.959	.223%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1563.86	78.11%	84.72%
0-40	1797.81	89.80%	97.39%
0-60	1819.87	90.90%	98.59%
0-90	1841.49	91.98%	99.76%
0-120	1841.49	91.98%	99.76%
0-180	1845.96	92.21%	100.00%
60-90	25.72	1.28%	1.39%
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%
0-28.07	1476.77	73.76%	80.00%

ZONAL LUMEN SUMMARY

0-10	339.17
10-20	707.00
20-30	517.69
30-40	233.95
40-50	13.93
50-60	8.13
60-70	8.45
70-80	8.73
80-90	4.44
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



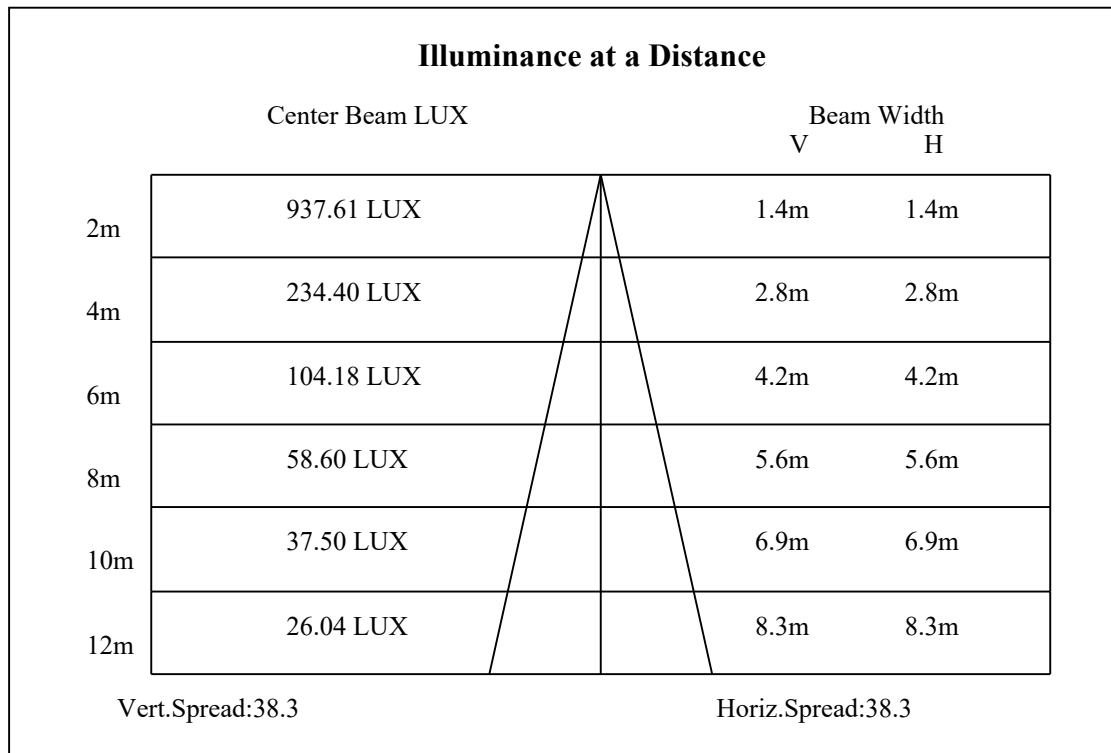
C0(Max): —————

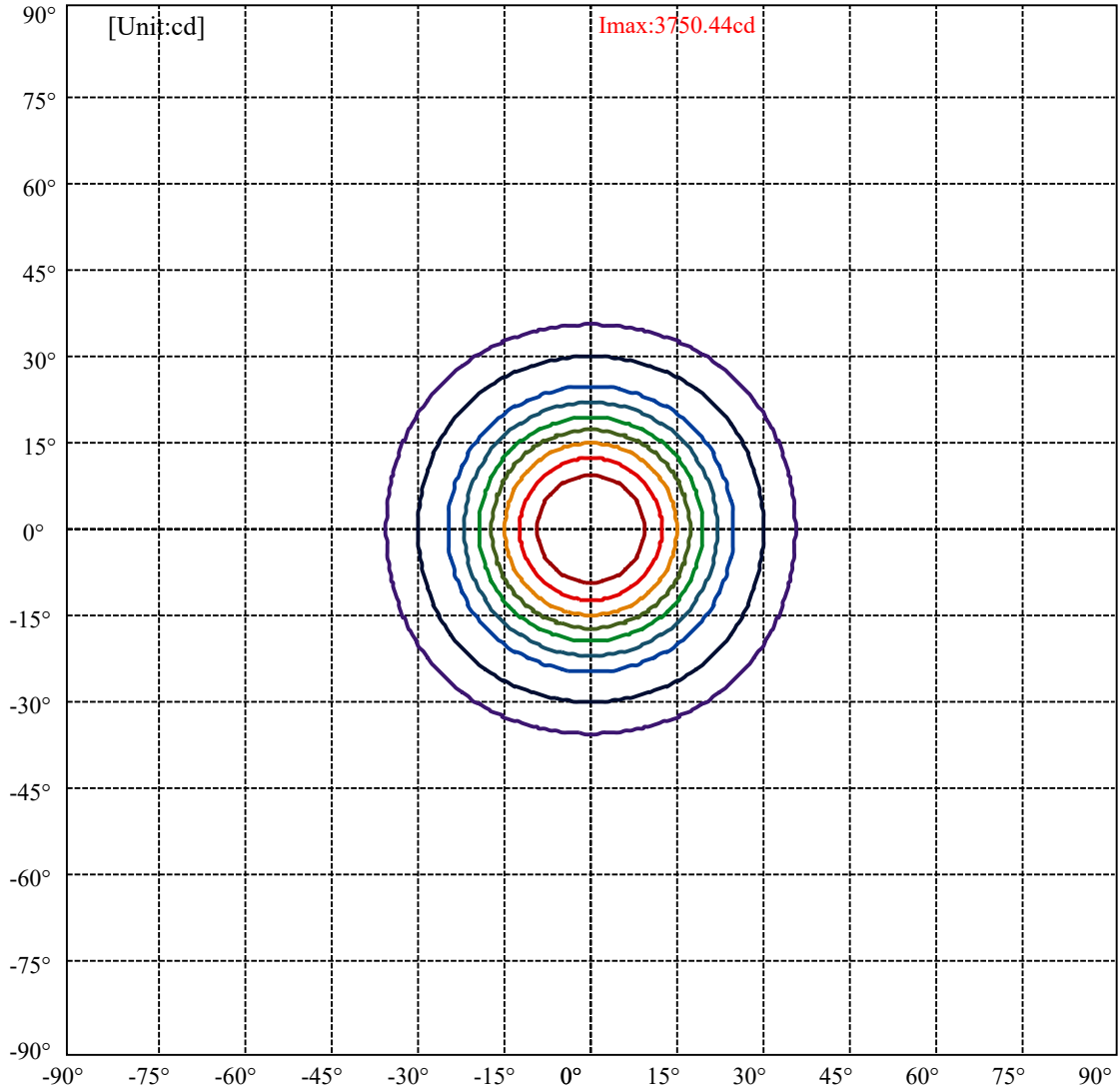
C0/C180: —————

C90/C270: —————

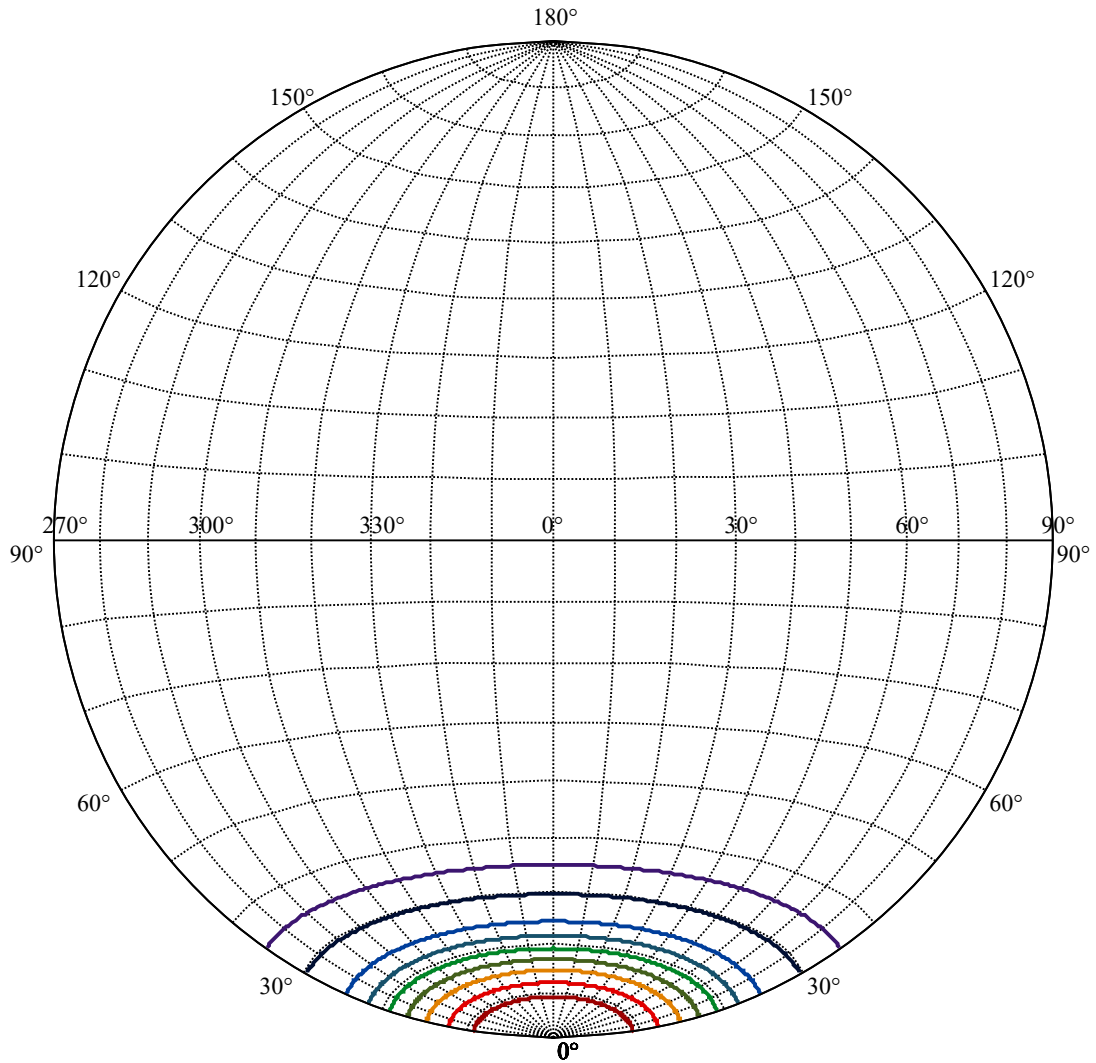
Field angle(10%Imax):C0/180Left:35.1 Right:35.1
:C90/270Left:35.1 Right:35.1

Beam Angle(50%Imax):C0/180Left:19.2 Right:19.2
:C90/270Left:19.2 Right:19.2





(10%Imax) 375.044	—
(20%Imax) 750.088	—
(30%Imax) 1125.13	—
(40%Imax) 1500.18	—
(50%Imax) 1875.22	—
(60%Imax) 2250.26	—
(70%Imax) 2625.31	—
(80%Imax) 3000.35	—
(90%Imax) 3375.4	—



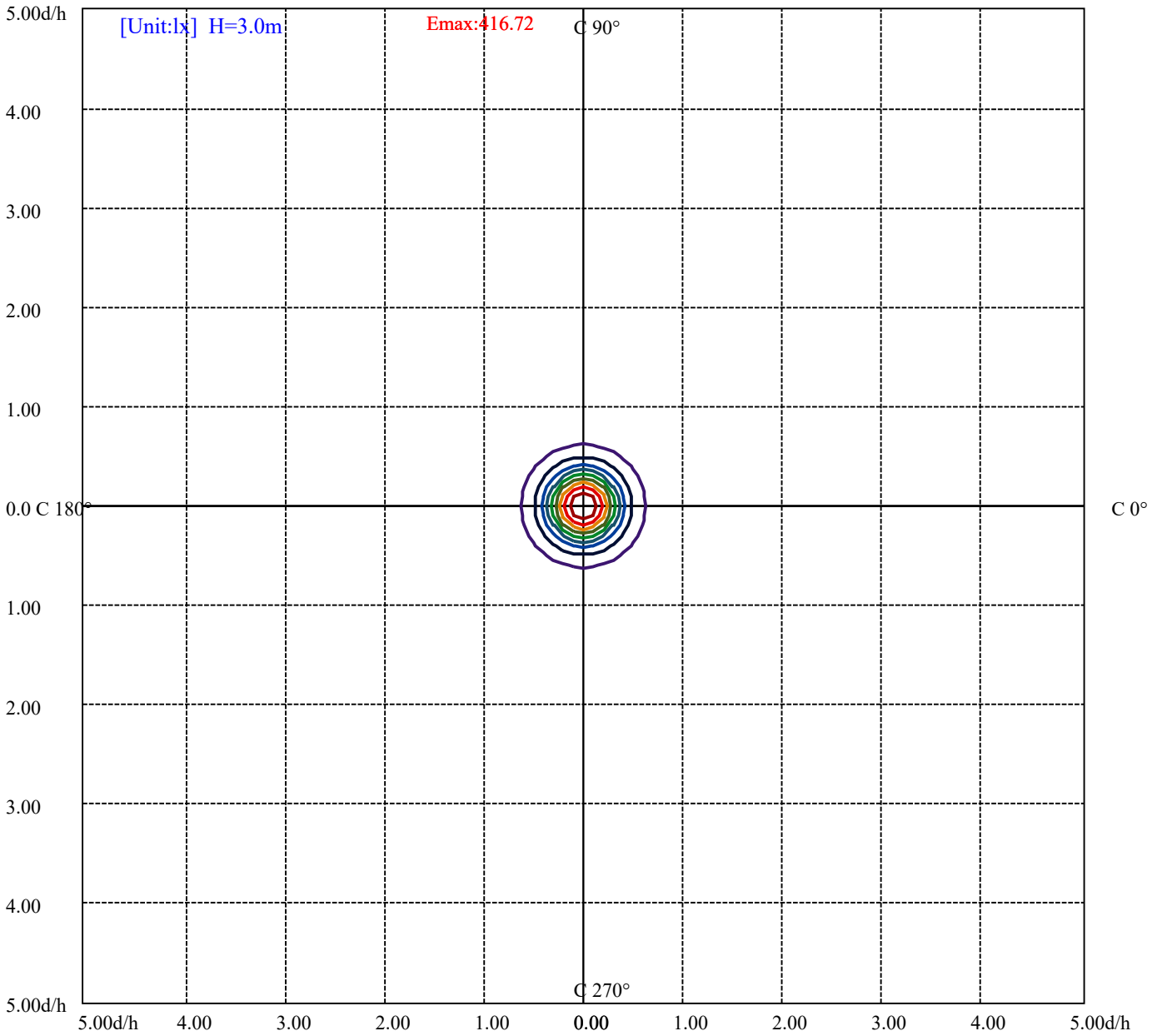
House

[Unit:cd]

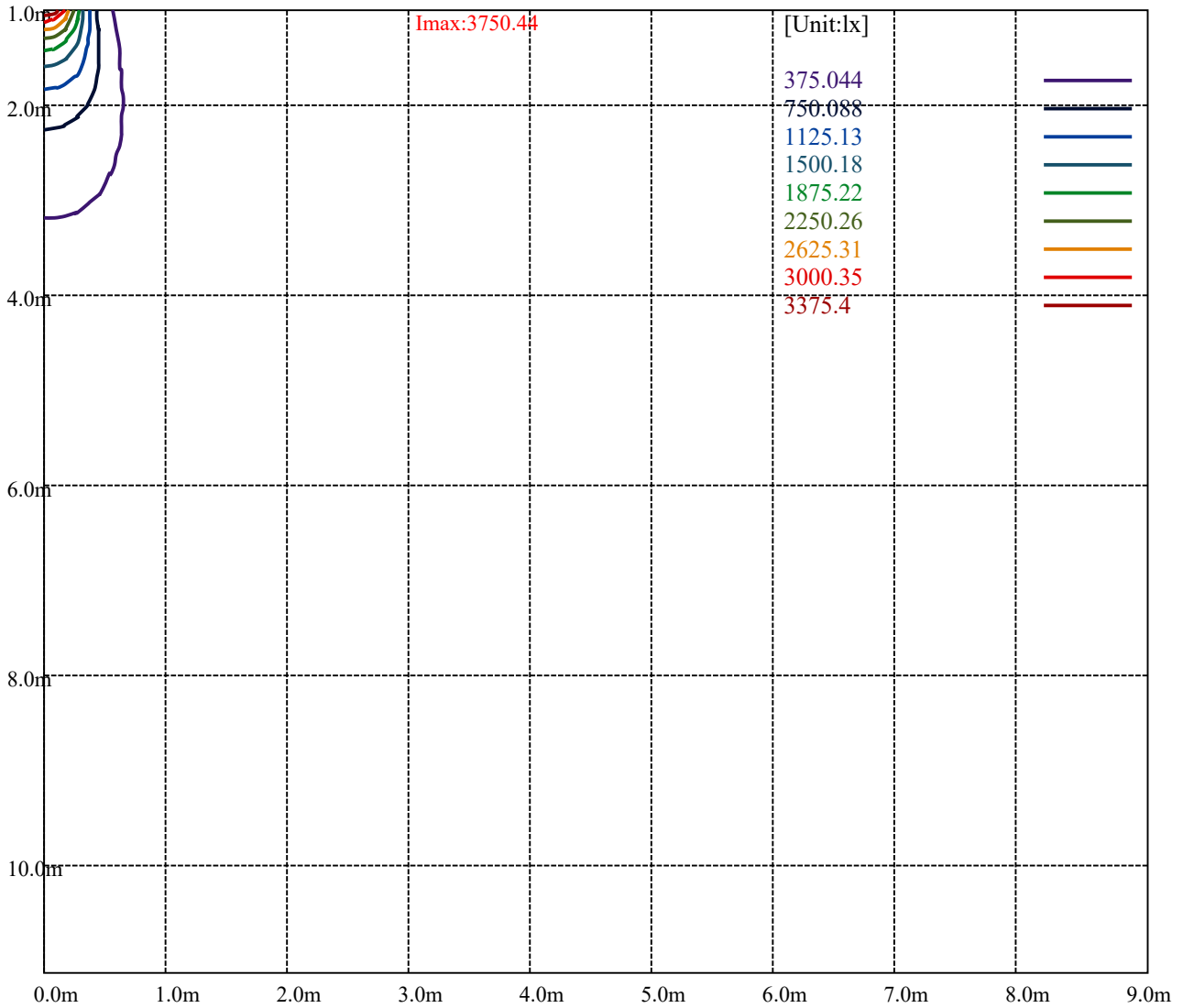
Road

Imax:3750.44

(10%Imax)	375.044	—
(20%Imax)	750.088	—
(30%Imax)	1125.13	—
(40%Imax)	1500.18	—
(50%Imax)	1875.22	—
(60%Imax)	2250.26	—
(70%Imax)	2625.31	—
(80%Imax)	3000.35	—
(90%Imax)	3375.4	—



- (10%Emax) 41.67155
- (20%Emax) 83.34311
- (30%Emax) 125.0144
- (40%Emax) 166.6867
- (50%Emax) 208.3578
- (60%Emax) 250.0289
- (70%Emax) 291.7011
- (80%Emax) 333.3722
- (90%Emax) 375.0444



Luminance Table

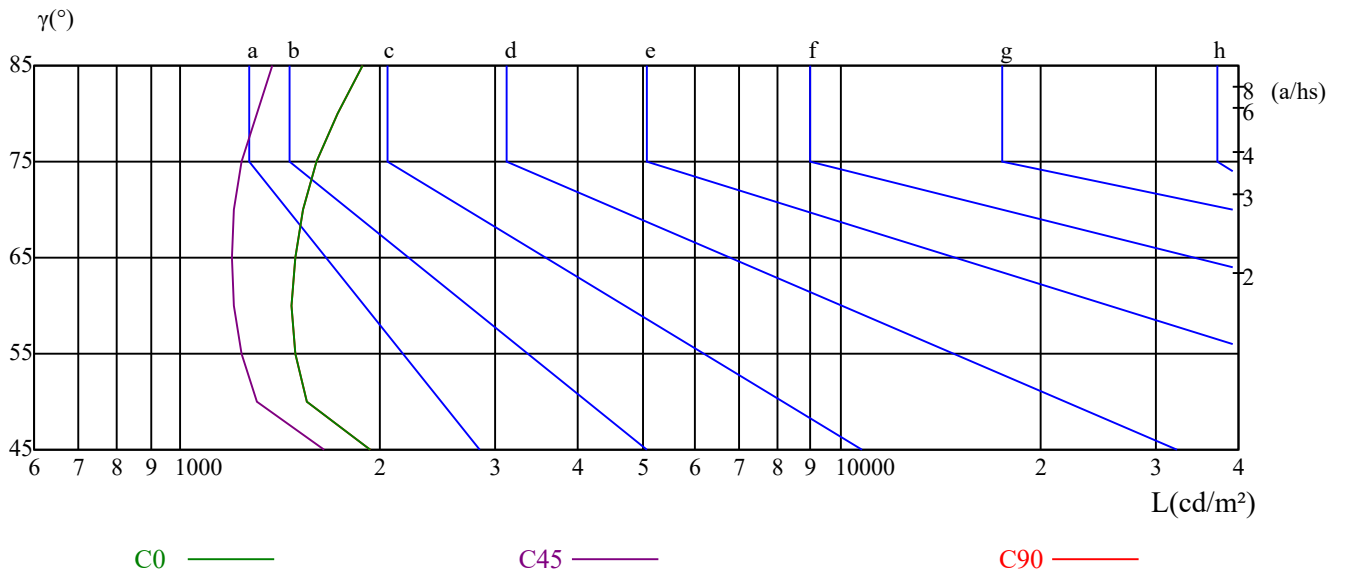
γ	45	50	55	60	65	70	75	80	85
C0	1931	1548	1488	1474	1489	1536	1610	1731	1884
C45	1652	1304	1234	1202	1193	1208	1240	1302	1378
C90	1931	1548	1488	1474	1489	1536	1610	1731	1884

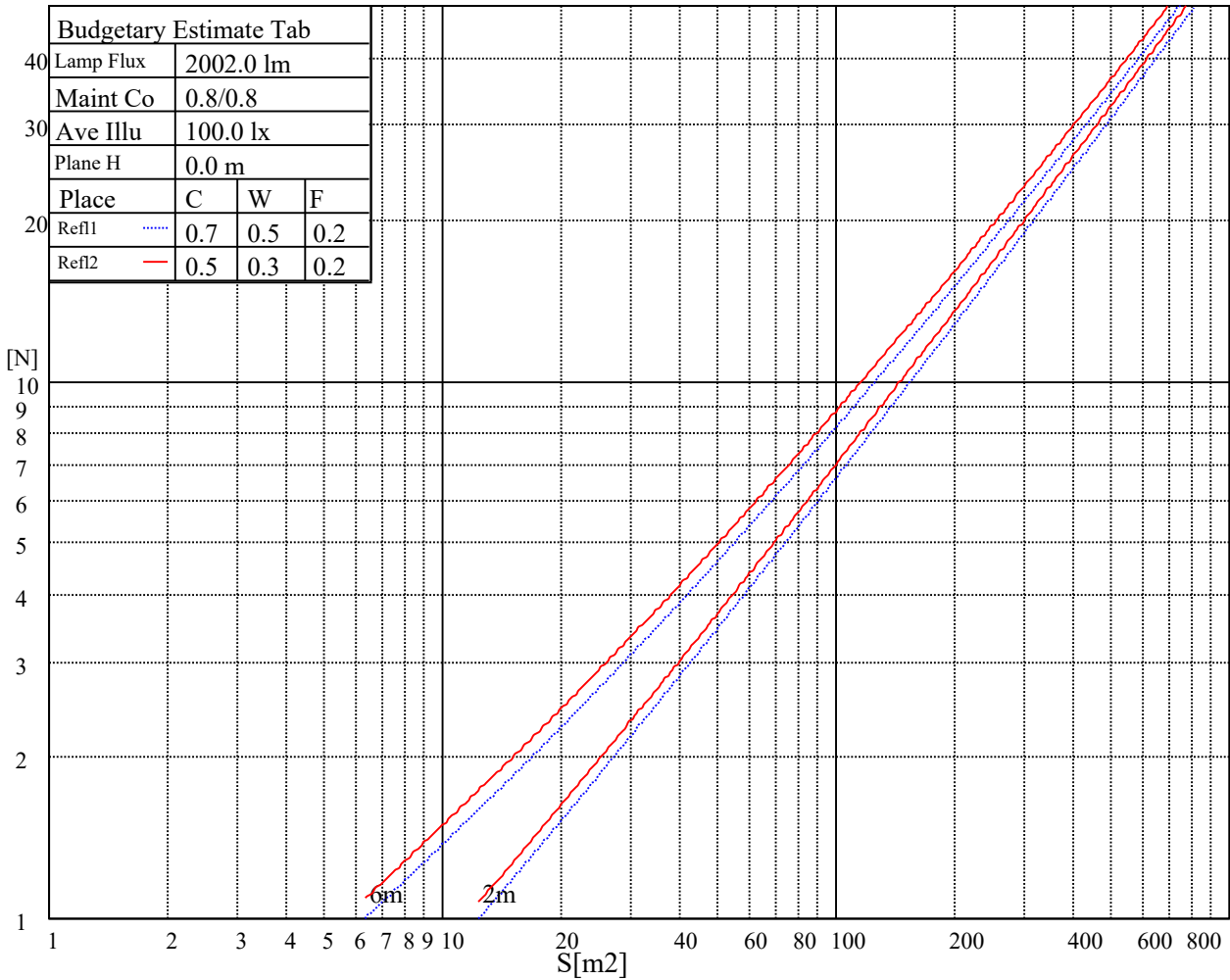
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3693	3693	3693	5758	5758	5758	16753	16753	16753

Glare Table

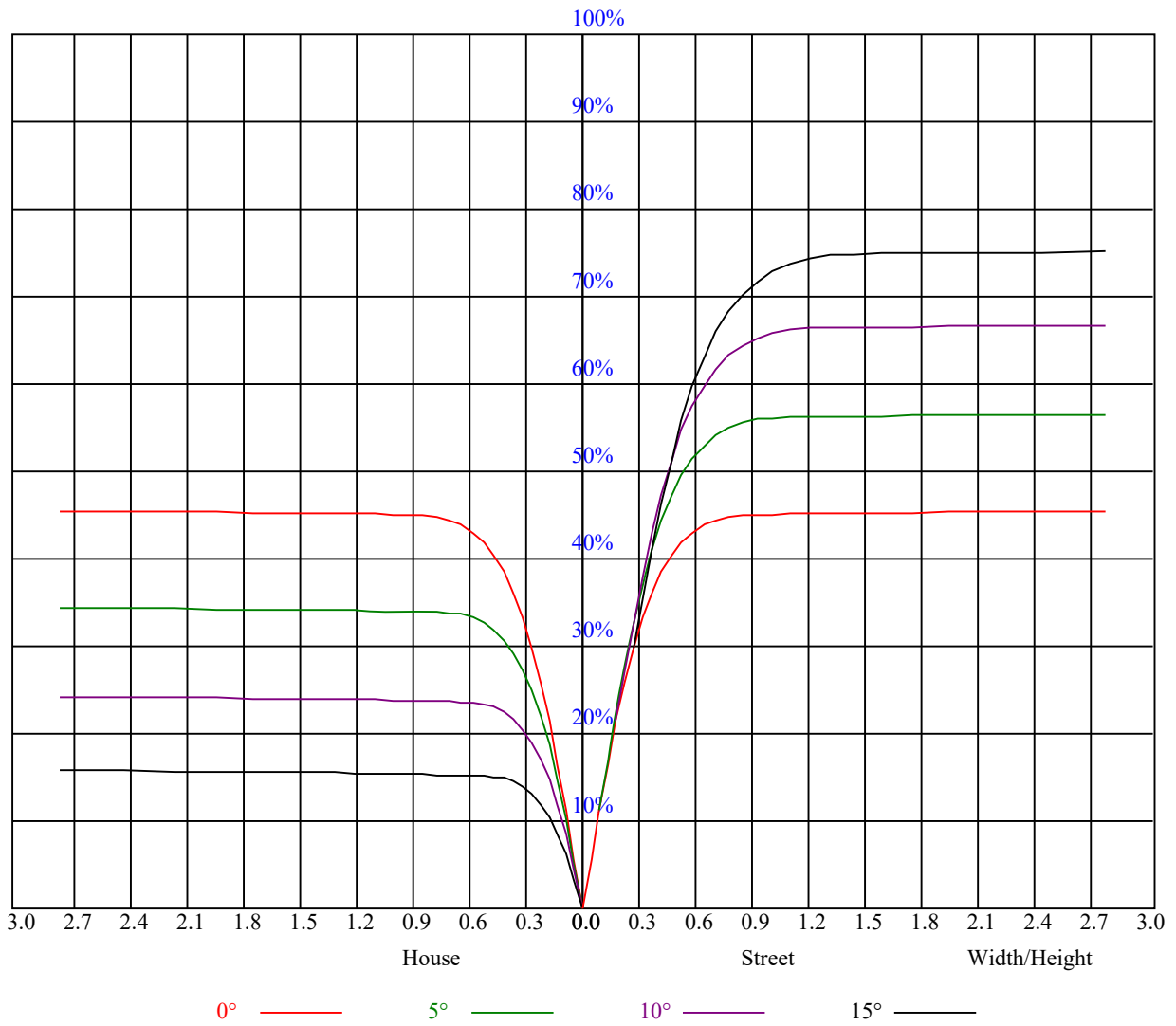
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.03	1.01	0.99	1.01	0.99	0.97	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.90	0.89	0.87
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.90	0.87	0.89	0.87	0.86	0.87	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.74
5	0.82	0.77	0.74	0.81	0.77	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.70
6	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
7	0.74	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.64
8	0.71	0.66	0.63	0.71	0.66	0.63	0.70	0.65	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
9	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
10	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.56



Nata 3-1918-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	3743.28	3682.72	3228.51	2466.53	1615.91	979.45	684.35	309.42	24.28
45.0	3754.85	3727.32	3444.88	2675.19	1782.73	1109.39	743.81	415.68	44.71
90.0	3760.90	3706.95	3348.53	2593.16	1702.89	1051.58	724.93	368.00	33.53
135.0	3742.73	3724.01	3470.76	2896.52	1983.68	1194.72	802.72	521.38	90.95
180.0	3743.28	3676.67	3355.14	2688.40	1884.03	1085.60	762.75	477.50	66.01
225.0	3754.85	3608.40	3202.08	2476.99	1643.98	1019.09	709.90	338.05	23.67
270.0	3760.90	3670.61	3324.86	2606.92	1743.64	1051.03	732.80	390.90	28.35
315.0	3742.73	3638.13	3175.65	2334.39	1497.53	938.93	666.57	228.48	21.69
360.0	3743.28	3682.72	3228.51	2466.53	1615.91	979.45	684.35	309.42	24.28
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.35	9.52	8.97	8.64	8.42	8.26	8.15	8.15	8.15
45.0	11.56	9.74	9.19	8.86	8.59	8.42	8.37	8.26	8.20
90.0	10.79	9.47	9.03	8.75	8.53	8.37	8.31	8.20	8.15
135.0	12.55	9.63	9.14	8.81	8.64	8.42	8.31	8.20	8.20
180.0	11.84	9.69	9.14	8.81	8.53	8.37	8.31	8.20	8.15
225.0	10.57	9.41	8.97	8.59	8.37	8.31	8.20	8.20	8.15
270.0	11.07	9.47	8.97	8.64	8.59	8.26	8.20	8.15	8.15
315.0	9.97	9.19	8.75	8.53	8.42	8.20	8.15	8.15	8.15
360.0	10.35	9.52	8.97	8.64	8.42	8.26	8.15	8.15	8.15
C/ γ (°)	90.0								
0.0	8.09								
45.0	8.20								
90.0	8.15								
135.0	8.15								
180.0	8.09								
225.0	8.15								
270.0	8.15								
315.0	8.20								
360.0	8.09								