
Nata

LumCAT: 3-1549-A3	
Luminaire: TE 2133401-1+92.76.365.00	
Report No: GC2017071202	Voltage(V): 35.2000
Test No: NT-0010	Current(A): 0.5000
LampCAT: CREE CXA1830	Power (W): 17.6000
Lamp flux(lm): 1976.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1848.79
Efficiency(%): 93.56%
Lumens(lm)/Power(W): 105.05
Central intensity(cd): 7773.276
Maximum intensity(cd): 7773.276
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=21.0
[C90/270]Total=21.0
Field angle(10%Imax): [C0/180]Total=54.5
[C90/270]Total=54.5
Maximum s/h(1/2): C0_180=0.35 C90_270=0.35
Maximum s/h(1/4): C0_180=0.37 C90_270=0.37
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.56%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.714%

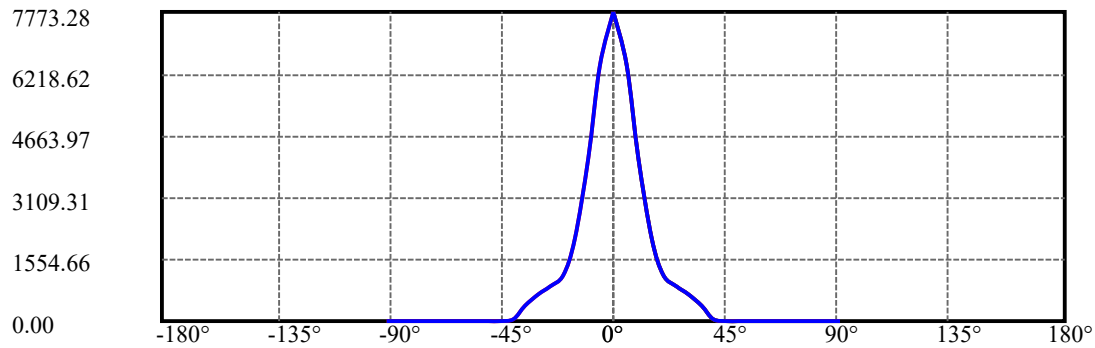
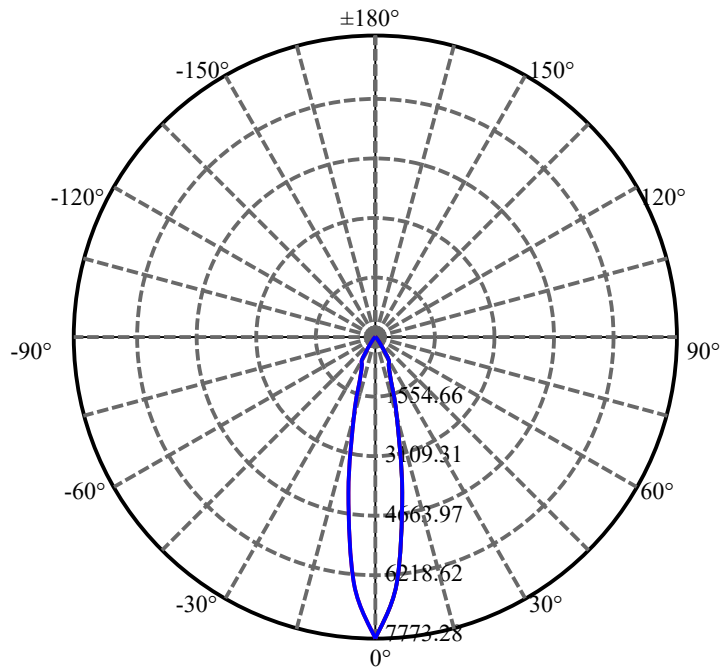
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7773.276	0.000	0	.000%	.000%
5.0	6436.177	169.870	169.87	8.597%	9.188%
10.0	4086.845	376.442	546.312	19.051%	29.550%
15.0	2062.796	364.793	911.104	18.461%	49.281%
20.0	1136.273	263.648	1174.752	13.343%	63.542%
25.0	845.334	207.834	1382.586	10.518%	74.783%
30.0	695.047	194.936	1577.523	9.865%	85.327%
35.0	373.401	157.336	1734.859	7.962%	93.837%
40.0	42.859	69.450	1804.309	3.515%	97.594%
45.0	9.767	9.744	1814.053	.493%	98.121%
50.0	8.515	3.694	1817.747	.187%	98.321%
55.0	8.063	3.604	1821.352	.182%	98.516%
60.0	7.805	3.668	1825.02	.186%	98.714%
65.0	7.666	3.761	1828.781	.190%	98.918%
70.0	7.596	3.865	1832.645	.196%	99.127%
75.0	7.513	3.949	1836.595	.200%	99.340%
80.0	7.478	4.011	1840.606	.203%	99.557%
85.0	7.569	4.089	1844.694	.207%	99.778%
90.0	7.395	4.097	1848.791	.207%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1577.52	79.83%	85.33%
0-40	1804.31	91.31%	97.59%
0-60	1825.02	92.36%	98.71%
0-90	1844.69	93.35%	99.78%
0-120	1844.69	93.35%	99.78%
0-180	1848.79	93.56%	100.00%
60-90	23.34	1.18%	1.26%
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%
0-27.47	1479.03	74.85%	80.00%

ZONAL LUMEN SUMMARY

0-10	546.31
10-20	628.44
20-30	402.77
30-40	226.79
40-50	13.44
50-60	7.27
60-70	7.63
70-80	7.96
80-90	4.09
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:

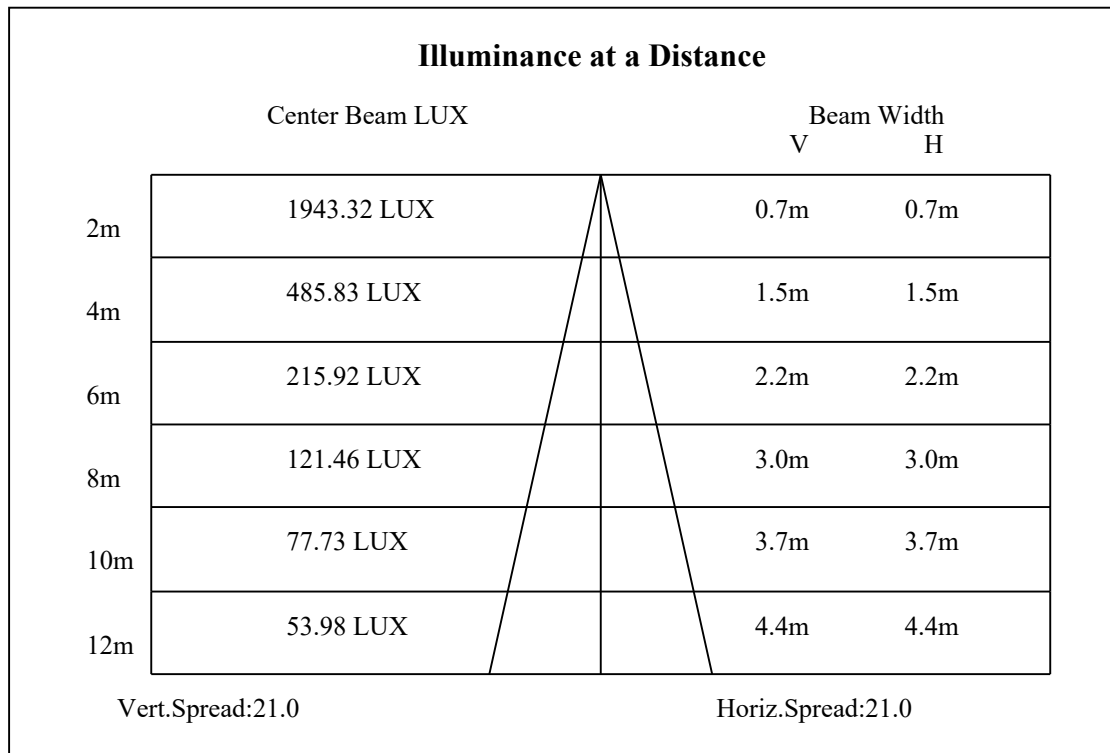
C90/C270:

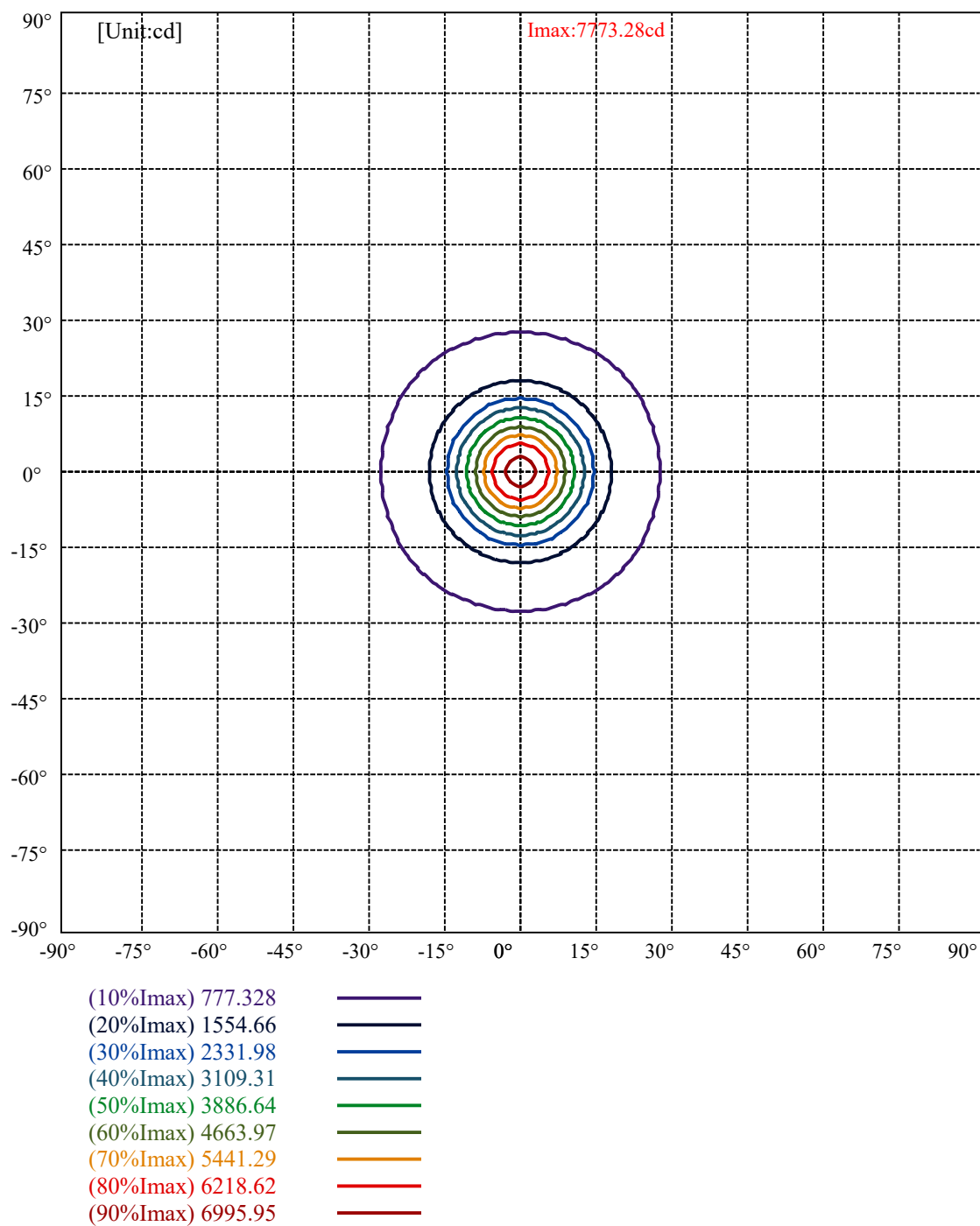
Field angle(10%Imax):C0/180Left:27.3 Right:27.3

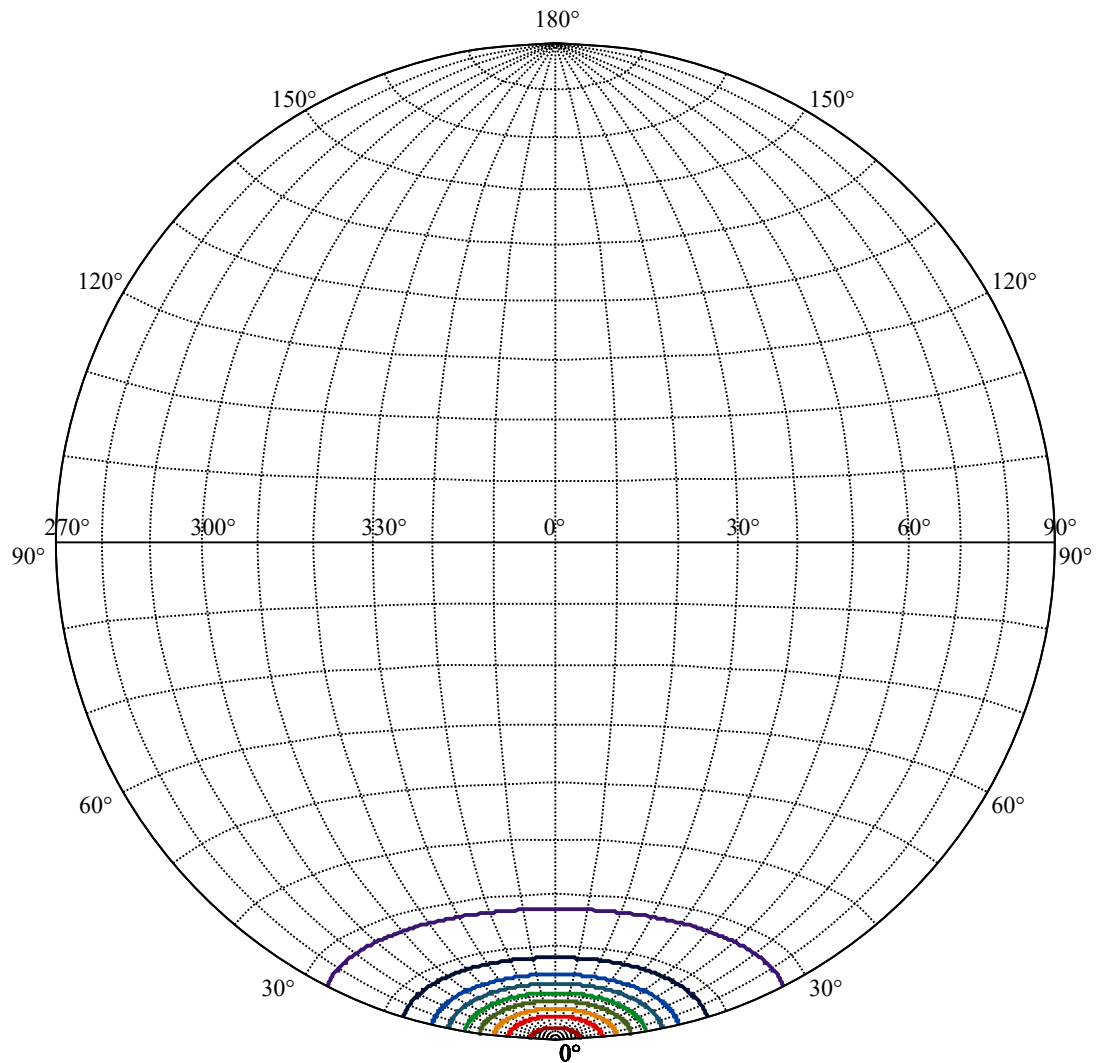
:C90/270Left:27.3 Right:27.3

Beam Angle(50%Imax):C0/180Left:10.5 Right:10.5

:C90/270Left:10.5 Right:10.5







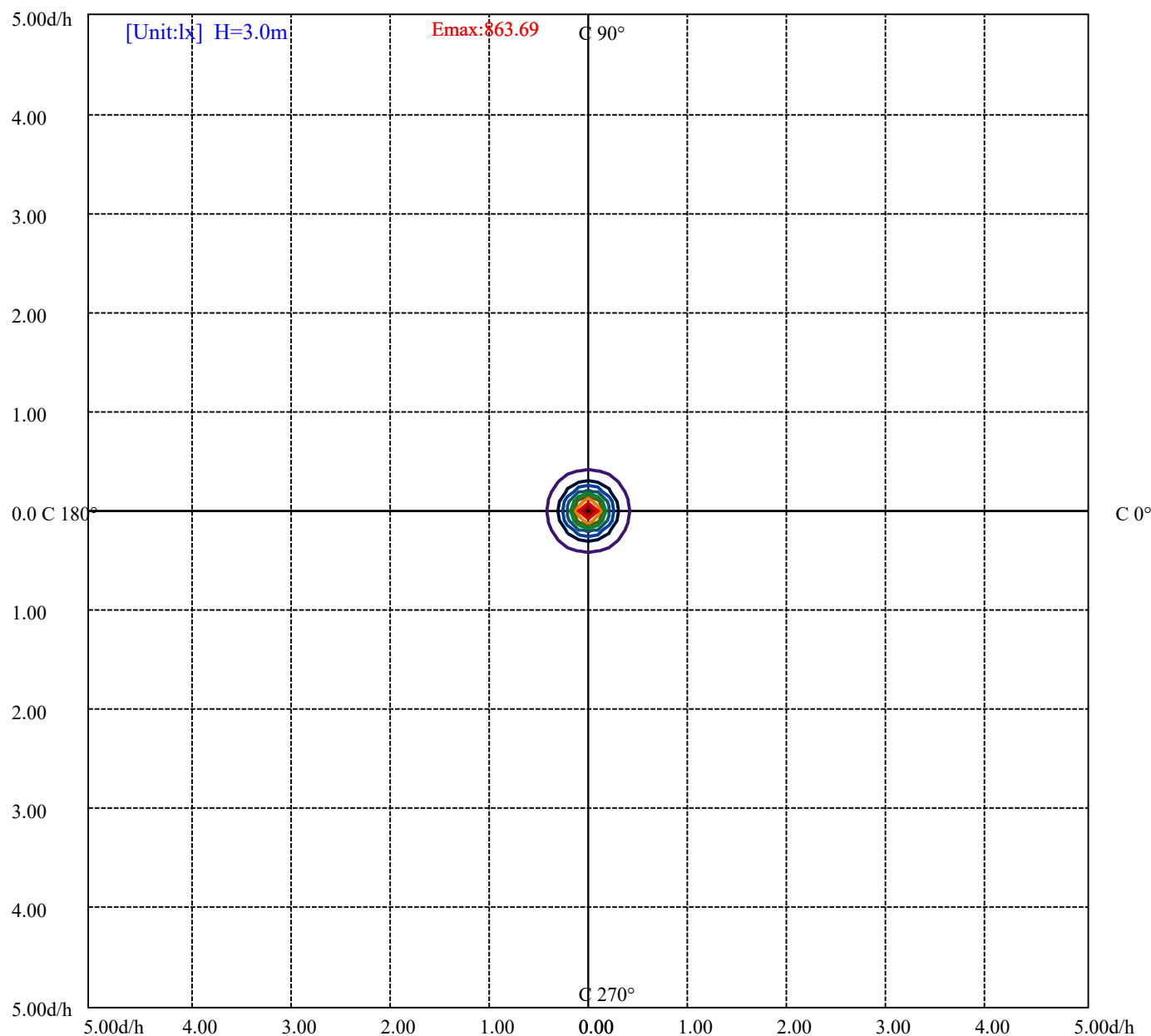
House

[Unit:cd]

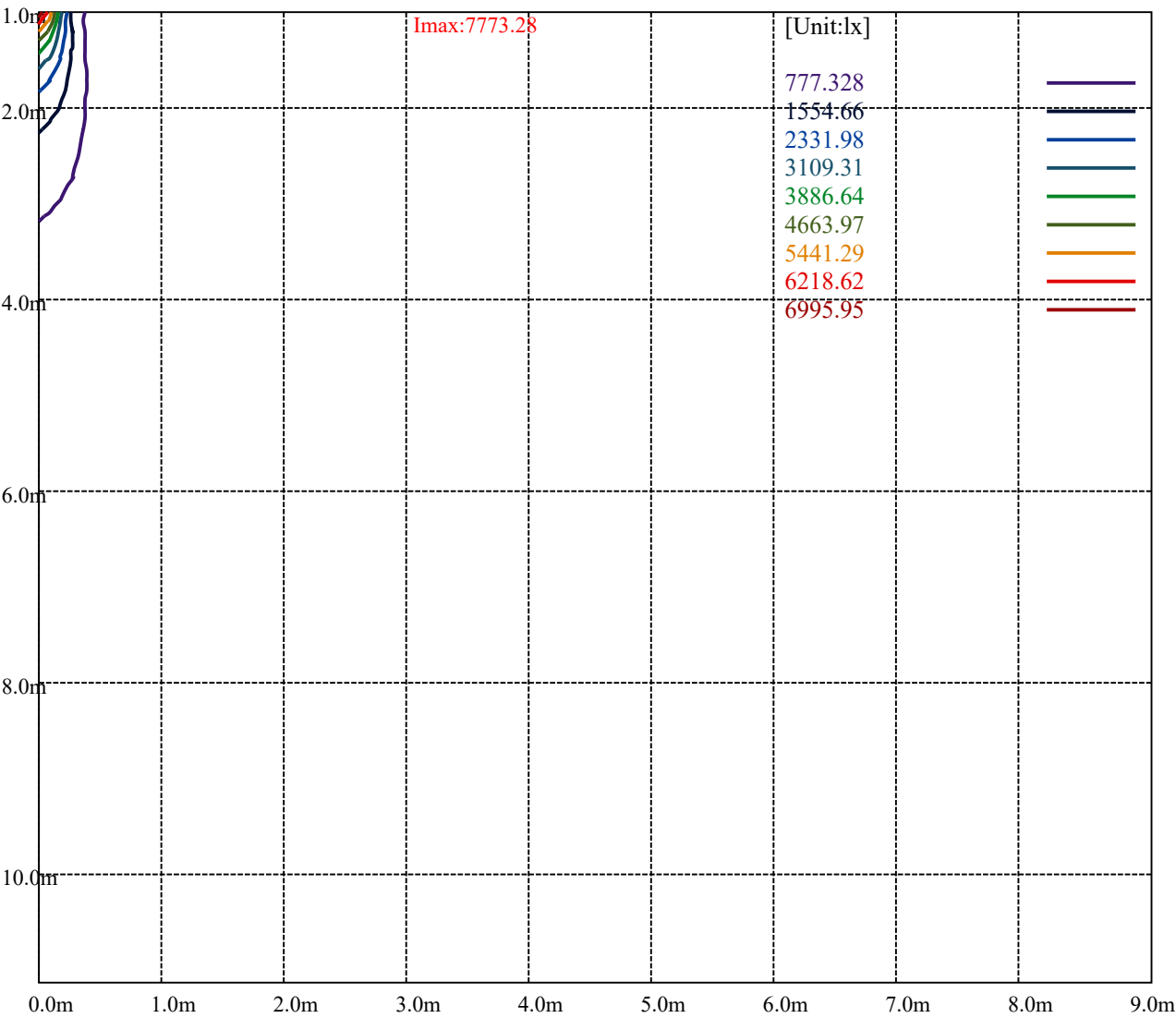
Road

Imax:7773.28

(10%Imax)	777.328	—
(20%Imax)	1554.66	—
(30%Imax)	2331.98	—
(40%Imax)	3109.31	—
(50%Imax)	3886.64	—
(60%Imax)	4663.97	—
(70%Imax)	5441.29	—
(80%Imax)	6218.62	—
(90%Imax)	6995.95	—



(10%Emax) 86.36933	—
(20%Emax) 172.7389	—
(30%Emax) 259.1078	—
(40%Emax) 345.4767	—
(50%Emax) 431.8467	—
(60%Emax) 518.2156	—
(70%Emax) 604.5844	—
(80%Emax) 690.9544	—
(90%Emax) 777.3234	—



Luminance Table

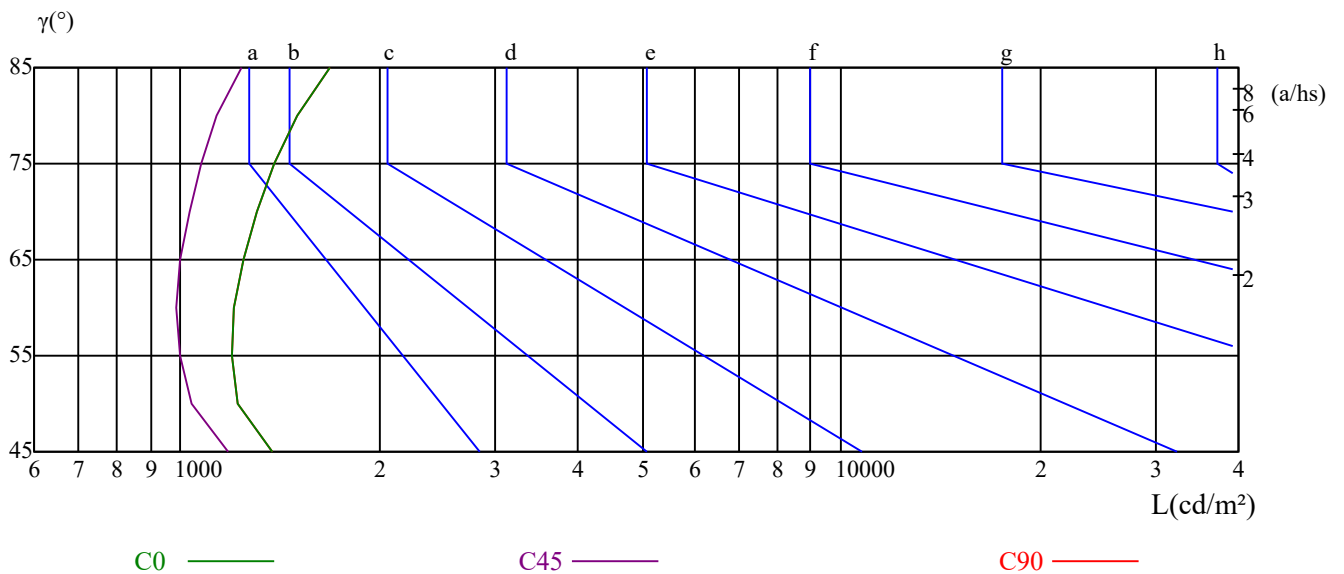
γ	45	50	55	60	65	70	75	80	85
C0	1373	1224	1195	1203	1241	1305	1387	1503	1684
C45	1180	1036	996	986	999	1031	1072	1134	1234
C90	1373	1224	1195	1203	1241	1305	1387	1503	1684

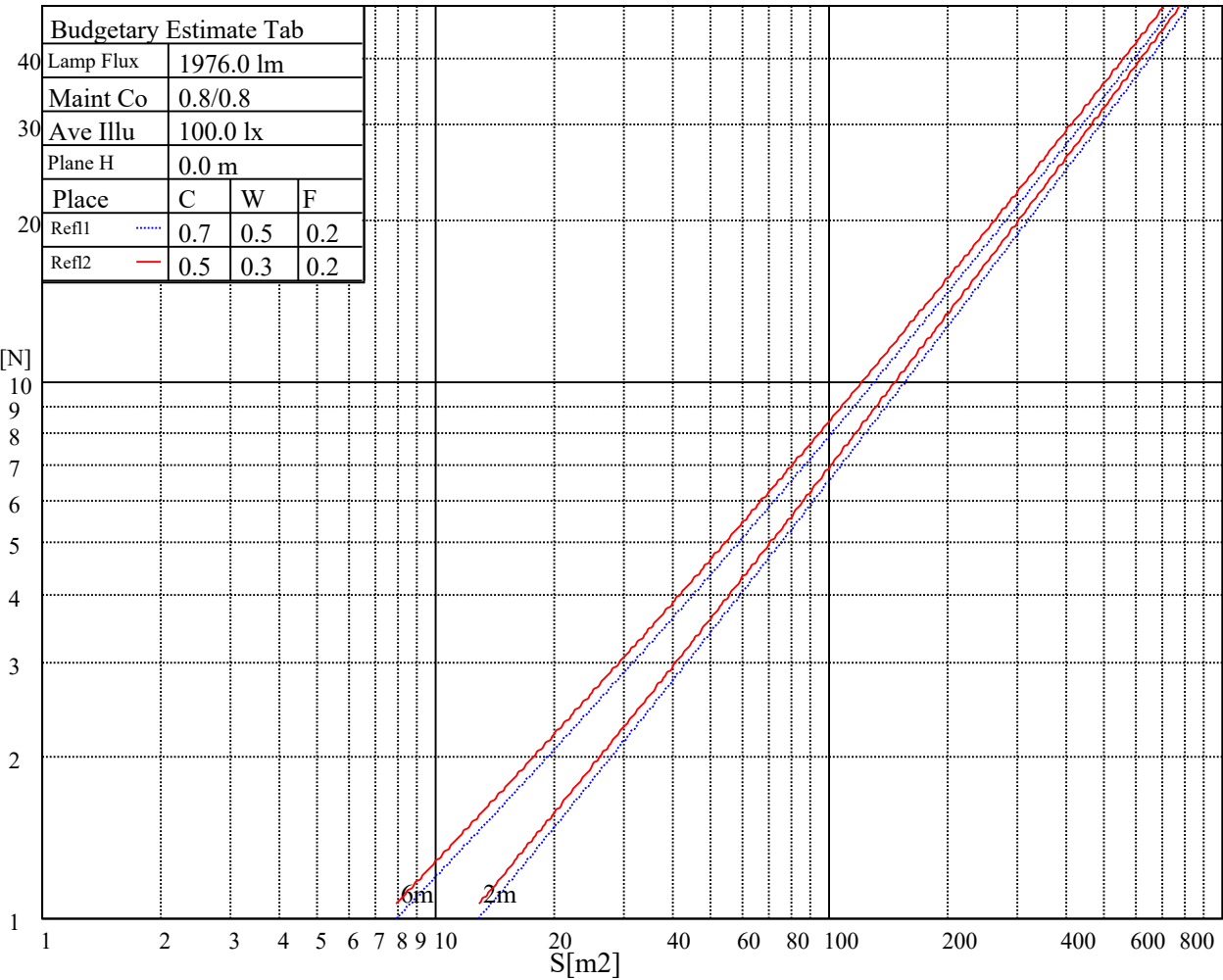
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2981	2981	2981	4771	4771	4771	14274	14274	14274

Glare Table

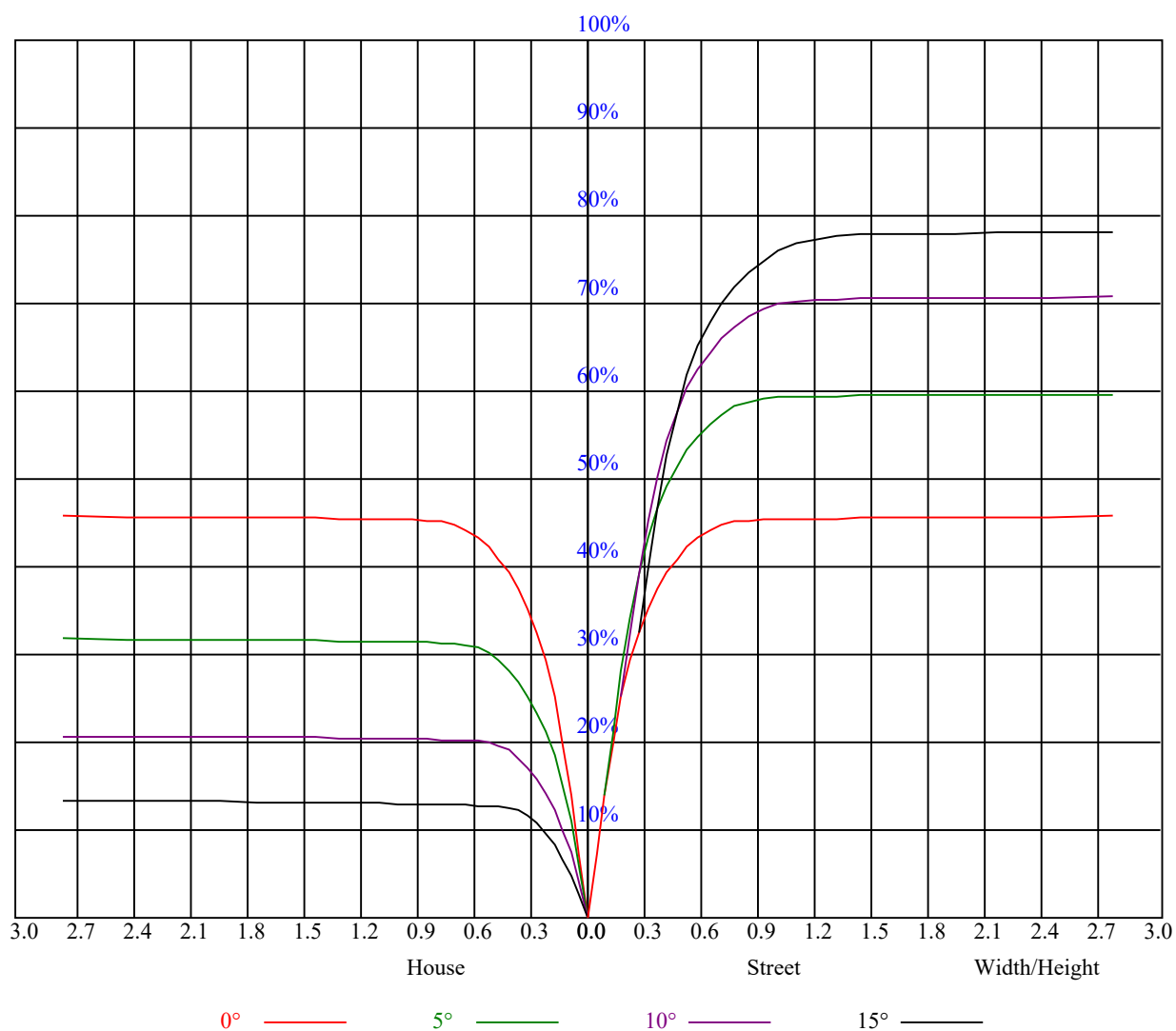
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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 RHOC=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	0.85	0.82	0.87	0.83	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.78
5	0.85	0.81	0.78	0.85	0.81	0.77	0.83	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	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	0.78	0.75	0.72	0.71
7	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.69
8	0.76	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	0.72	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	0.69	0.65	0.63	0.68	0.65	0.63	0.62



Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	7797.90	6674.85	4241.76	2255.56	1185.94	855.37	708.44	419.61	45.02		
45.0	7815.15	6278.06	3774.85	1884.92	1104.13	818.64	697.31	321.67	19.26		
90.0	7675.47	5856.22	3465.98	1680.12	1031.56	795.93	652.74	256.22	15.64		
135.0	7804.58	6576.91	4113.77	2078.59	1161.45	841.45	692.86	364.52	36.06		
180.0	7797.90	6265.81	3878.36	1888.82	1092.22	821.58	672.61	352.78	26.60		
225.0	7815.15	6579.13	4387.02	2187.11	1105.07	873.34	706.00	413.55	59.99		
270.0	7675.47	6910.26	4813.31	2489.85	1308.93	916.03	734.60	485.84	106.18		
315.0	7804.58	6348.18	4019.72	2037.41	1100.90	840.34	695.81	373.03	34.11		
360.0	7797.90	6674.85	4241.76	2255.56	1185.94	855.37	708.44	419.61	45.02		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	9.91	8.46	8.07	7.74	7.62	7.57	7.46	7.46	7.68		
45.0	9.13	8.35	7.96	7.85	7.62	7.62	7.57	7.46	7.51		
90.0	9.07	8.46	8.07	7.79	7.74	7.62	7.51	7.51	7.57		
135.0	9.79	8.51	8.18	7.85	7.79	7.68	7.62	7.51	7.74		
180.0	9.24	8.46	7.96	7.79	7.62	7.57	7.46	7.46	7.57		
225.0	10.18	8.57	8.07	7.74	7.62	7.51	7.51	7.46	7.51		
270.0	10.96	8.79	8.18	7.90	7.68	7.62	7.46	7.51	7.46		
315.0	9.85	8.51	8.01	7.79	7.62	7.57	7.51	7.46	7.51		
360.0	9.91	8.46	8.07	7.74	7.62	7.57	7.46	7.46	7.68		
C/γ(°)	90.0										
0.0	7.40										
45.0	7.40										
90.0	7.40										
135.0	7.40										
180.0	7.40										
225.0	7.40										
270.0	7.40										
315.0	7.35										
360.0	7.40										