
Nata

LumCAT: 3-1917-E	
Luminaire: 99.02.73.180+92.76.323.00	
Report No: GC2016120903	Voltage(V): 217.5000
Test No: NT-0010	Current(A): 0.1000
LampCAT: CREE CXA1830	Power (W): 19.5000
Lamp flux(lm): 2002.0	PF: 0.8960
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1858.87
Efficiency(%): 92.85%
Lumens(lm)/Power(W): 95.33
Central intensity(cd): 6265.969
Maximum intensity(cd): 6265.969
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.2
[C90/270]Total=26.2
Field angle(10%Imax): [C0/180]Total=61.6
[C90/270]Total=61.6
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.644%

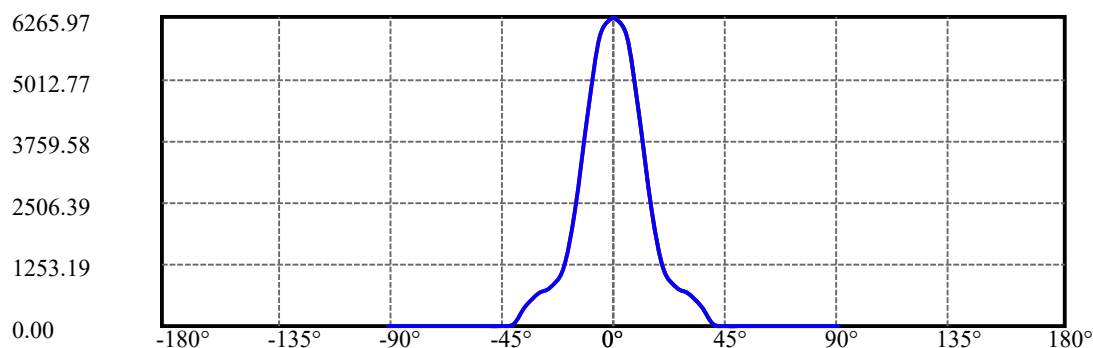
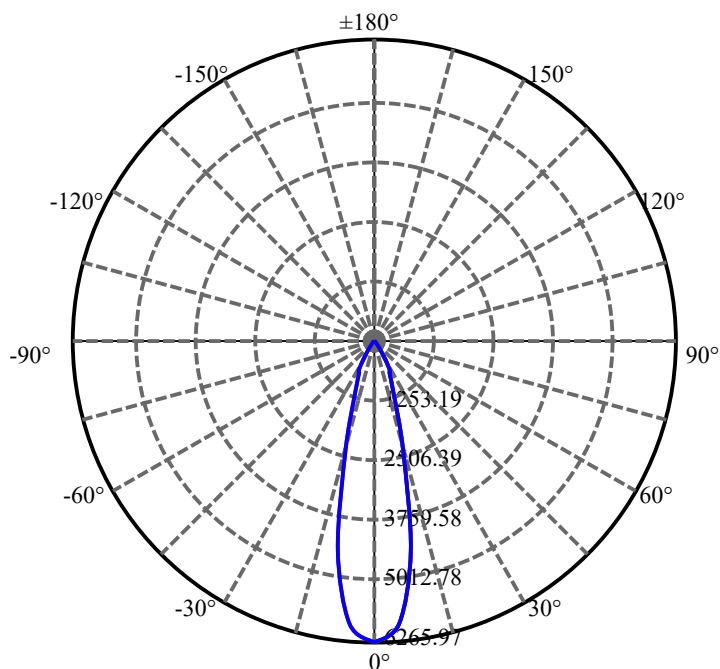
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6265.969	0.000	0	.000%	.000%
5.0	5876.170	145.156	145.156	7.251%	7.809%
10.0	4407.953	367.895	513.051	18.376%	27.600%
15.0	2339.484	400.253	913.305	19.993%	49.132%
20.0	1156.212	288.094	1201.399	14.390%	64.631%
25.0	766.571	201.664	1403.064	10.073%	75.479%
30.0	675.680	182.518	1585.582	9.117%	85.298%
35.0	374.858	154.699	1740.281	7.727%	93.620%
40.0	48.732	70.673	1810.954	3.530%	97.422%
45.0	10.605	10.987	1821.94	.549%	98.013%
50.0	9.057	3.973	1825.913	.198%	98.227%
55.0	8.603	3.840	1829.753	.192%	98.434%
60.0	8.348	3.918	1833.671	.196%	98.644%
65.0	8.141	4.009	1837.68	.200%	98.860%
70.0	8.066	4.104	1841.783	.205%	99.081%
75.0	7.976	4.193	1845.977	.209%	99.306%
80.0	7.935	4.257	1850.234	.213%	99.535%
85.0	7.914	4.307	1854.541	.215%	99.767%
90.0	7.901	4.330	1858.871	.216%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1585.58	79.20%	85.30%
0-40	1810.95	90.46%	97.42%
0-60	1833.67	91.59%	98.64%
0-90	1854.54	92.63%	99.77%
0-120	1854.54	92.63%	99.77%
0-180	1858.87	92.85%	100.00%
60-90	24.79	1.24%	1.33%
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%
0-27.30	1487.10	74.28%	80.00%

ZONAL LUMEN SUMMARY

0-10	513.05
10-20	688.35
20-30	384.18
30-40	225.37
40-50	14.96
50-60	7.76
60-70	8.11
70-80	8.45
80-90	4.31
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:

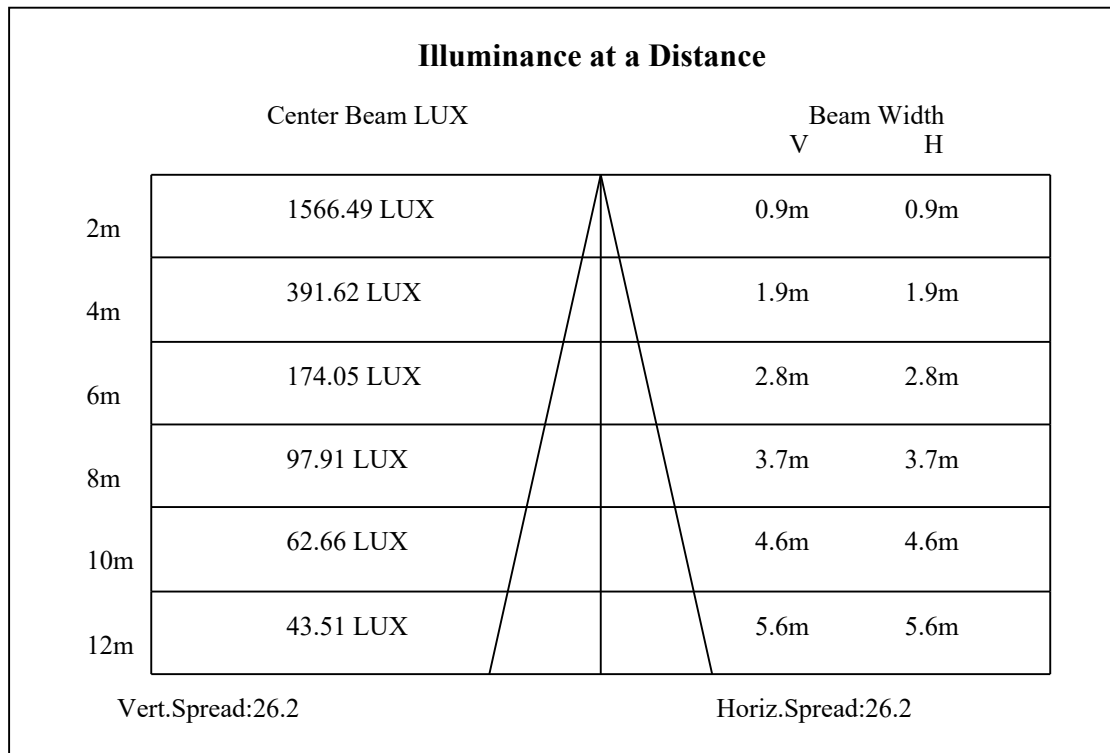
C90/C270:

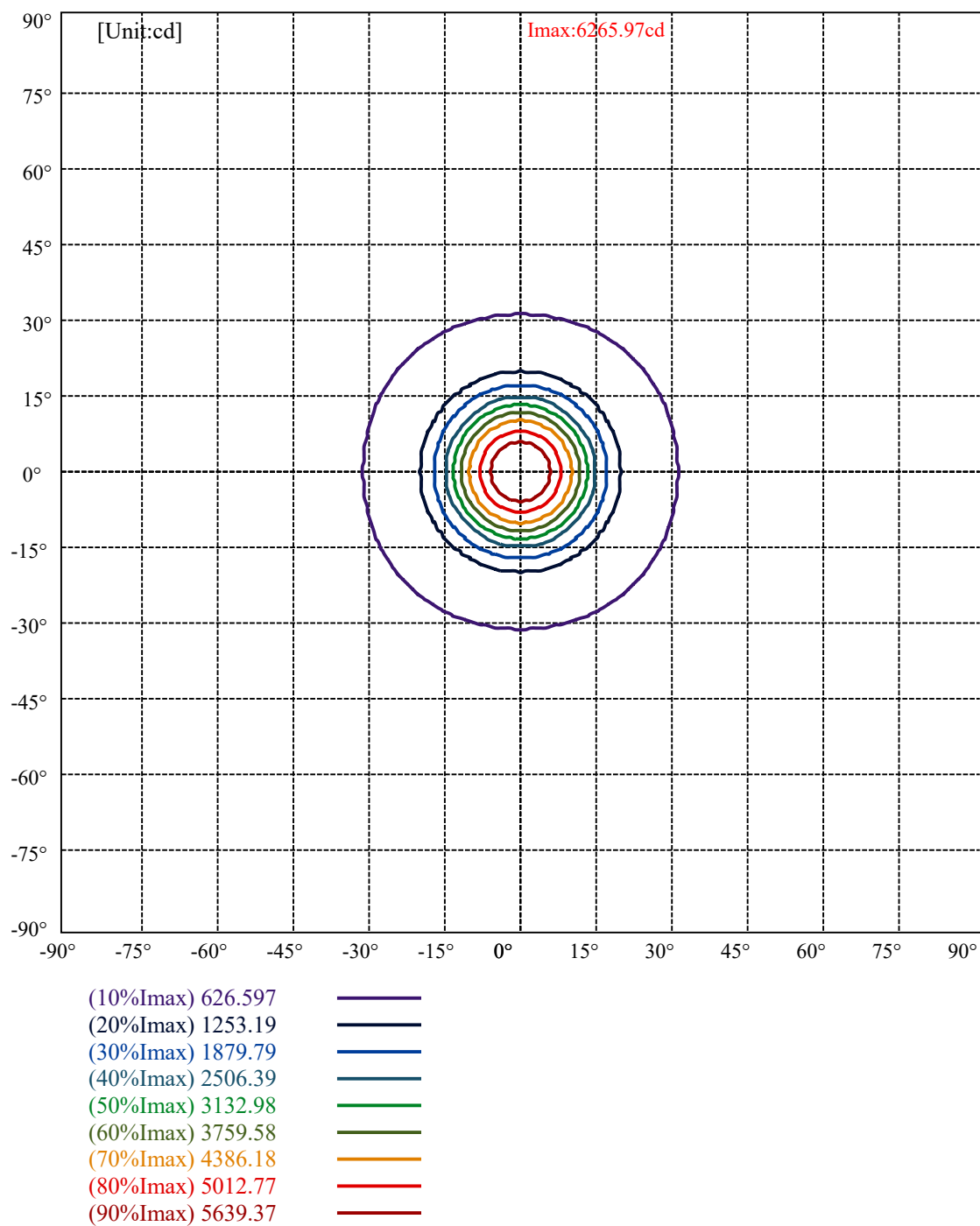
Field angle(10%Imax):C0/180Left:30.8 Right:30.8

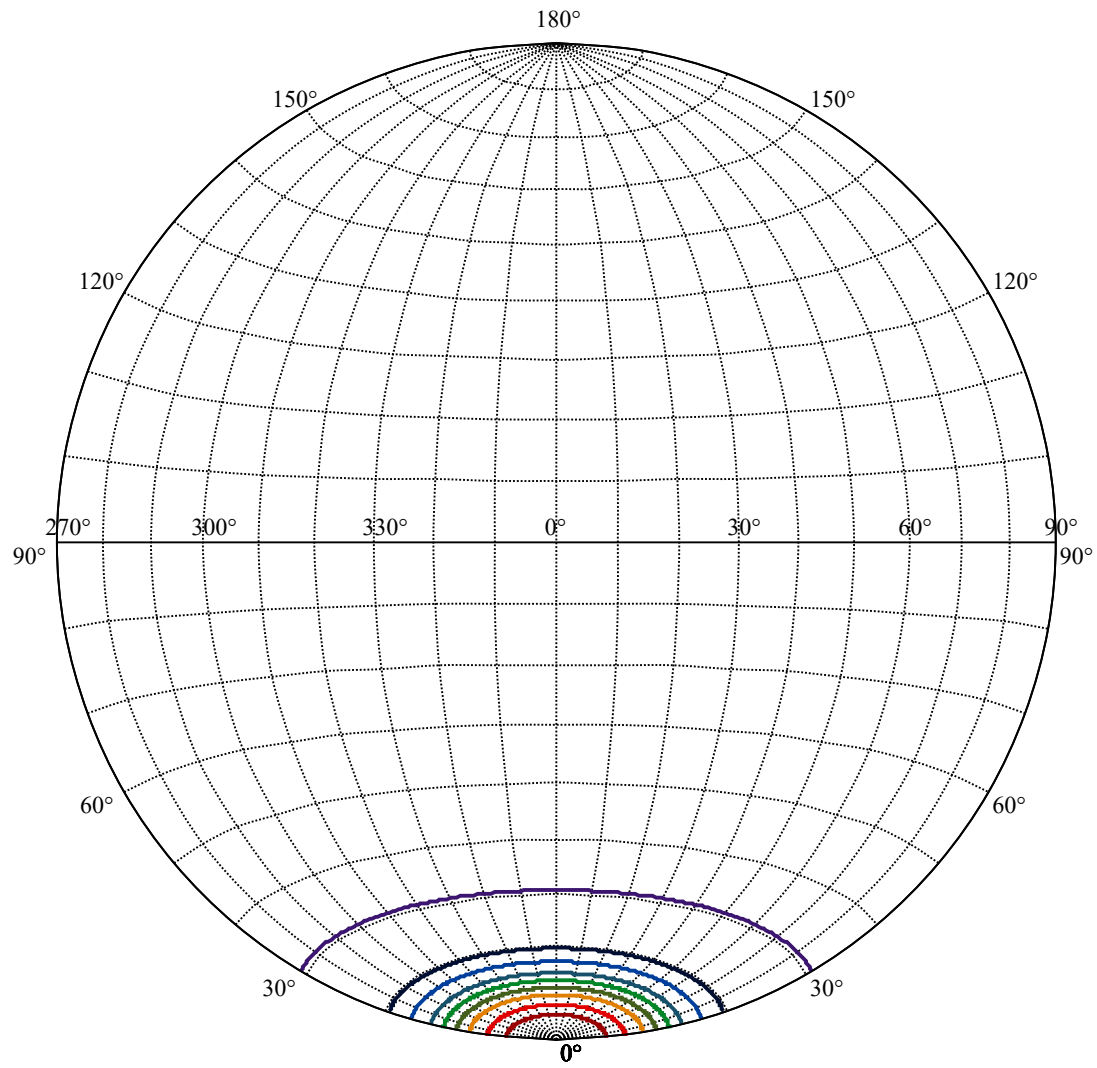
:C90/270Left:30.8 Right:30.8

Beam Angle(50%Imax):C0/180Left:13.1 Right:13.1

:C90/270Left:13.1 Right:13.1





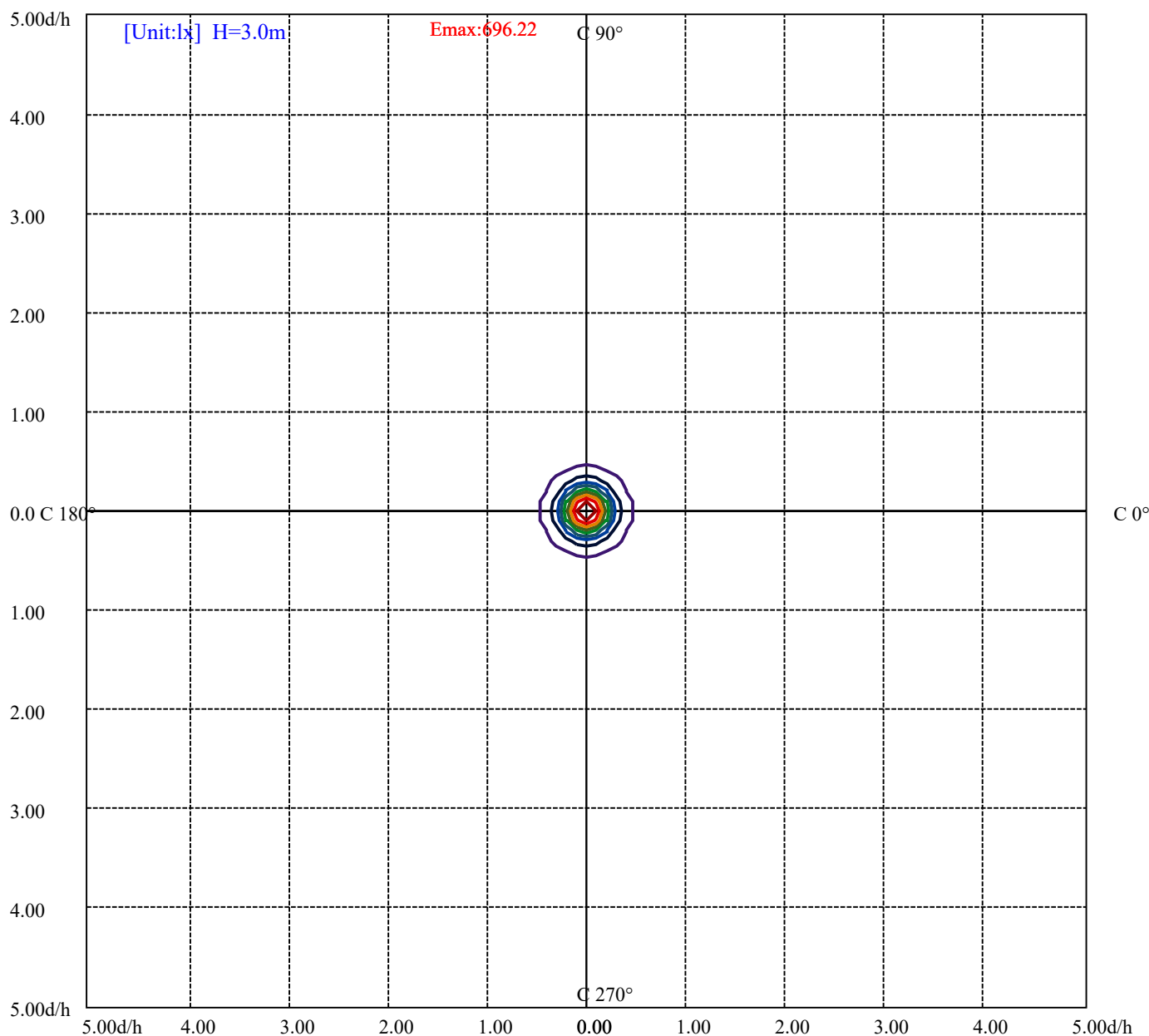


House

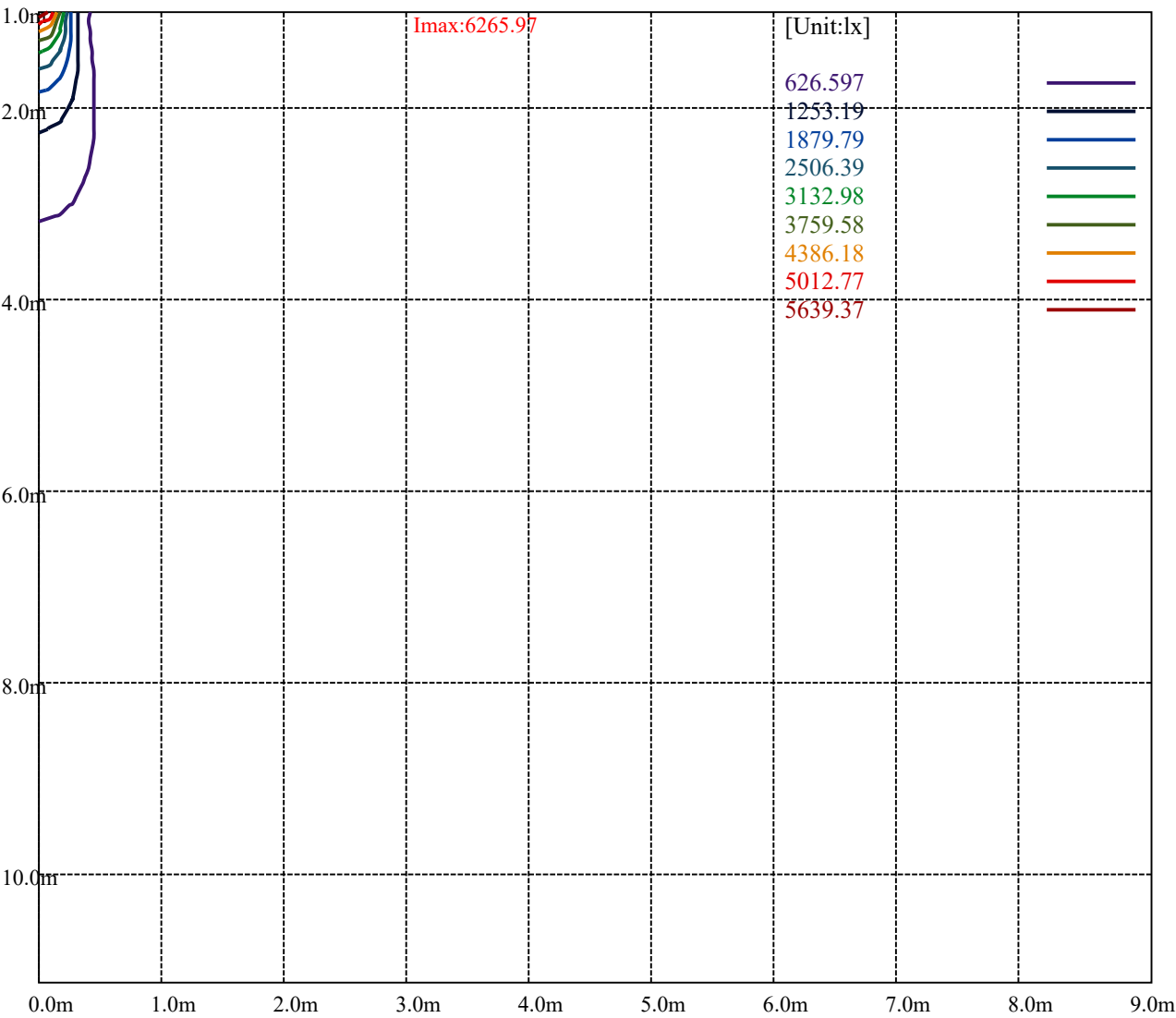
[Unit:cd]

Road

Imax:6265.97	
(10%Imax)	626.597
(20%Imax)	1253.19
(30%Imax)	1879.79
(40%Imax)	2506.39
(50%Imax)	3132.98
(60%Imax)	3759.58
(70%Imax)	4386.18
(80%Imax)	5012.77
(90%Imax)	5639.37



(10%Emax)	69.62178	
(20%Emax)	139.2433	
(30%Emax)	208.8656	
(40%Emax)	278.4867	
(50%Emax)	348.1089	
(60%Emax)	417.73	
(70%Emax)	487.3522	
(80%Emax)	556.9744	
(90%Emax)	626.5955	



Luminance Table

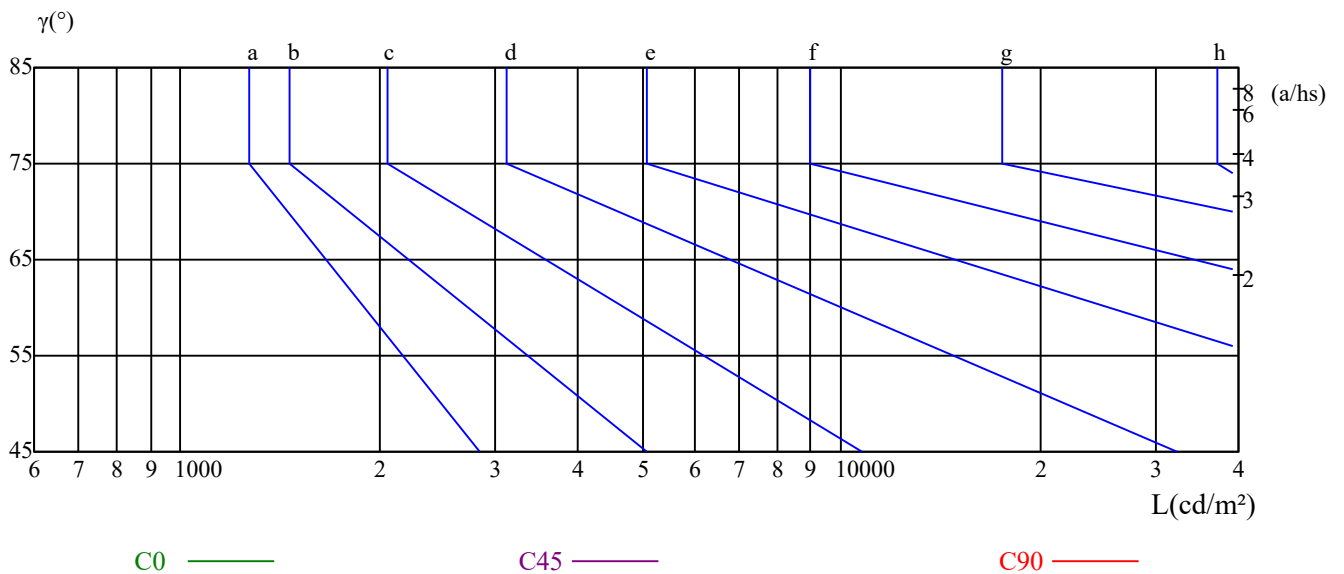
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

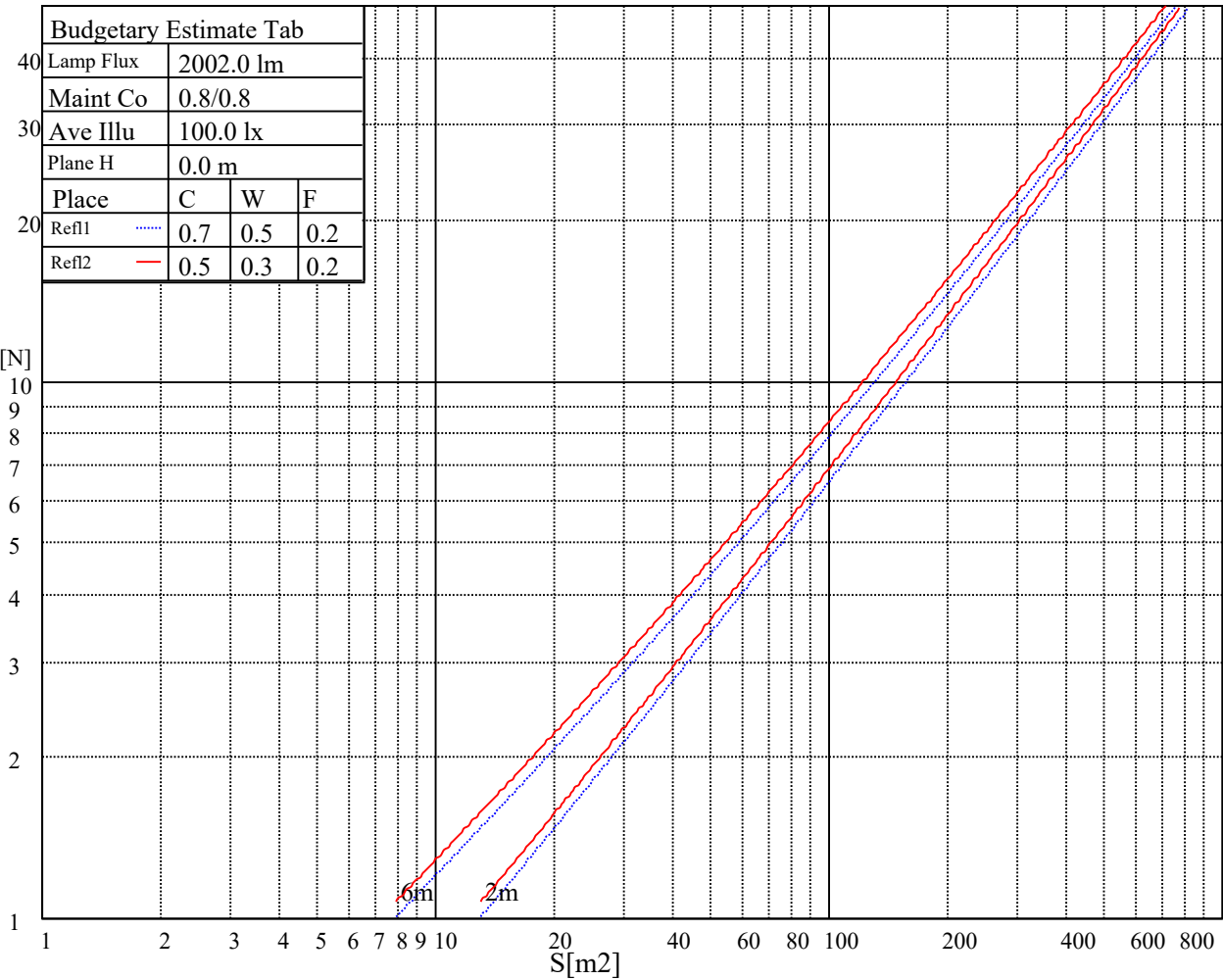
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

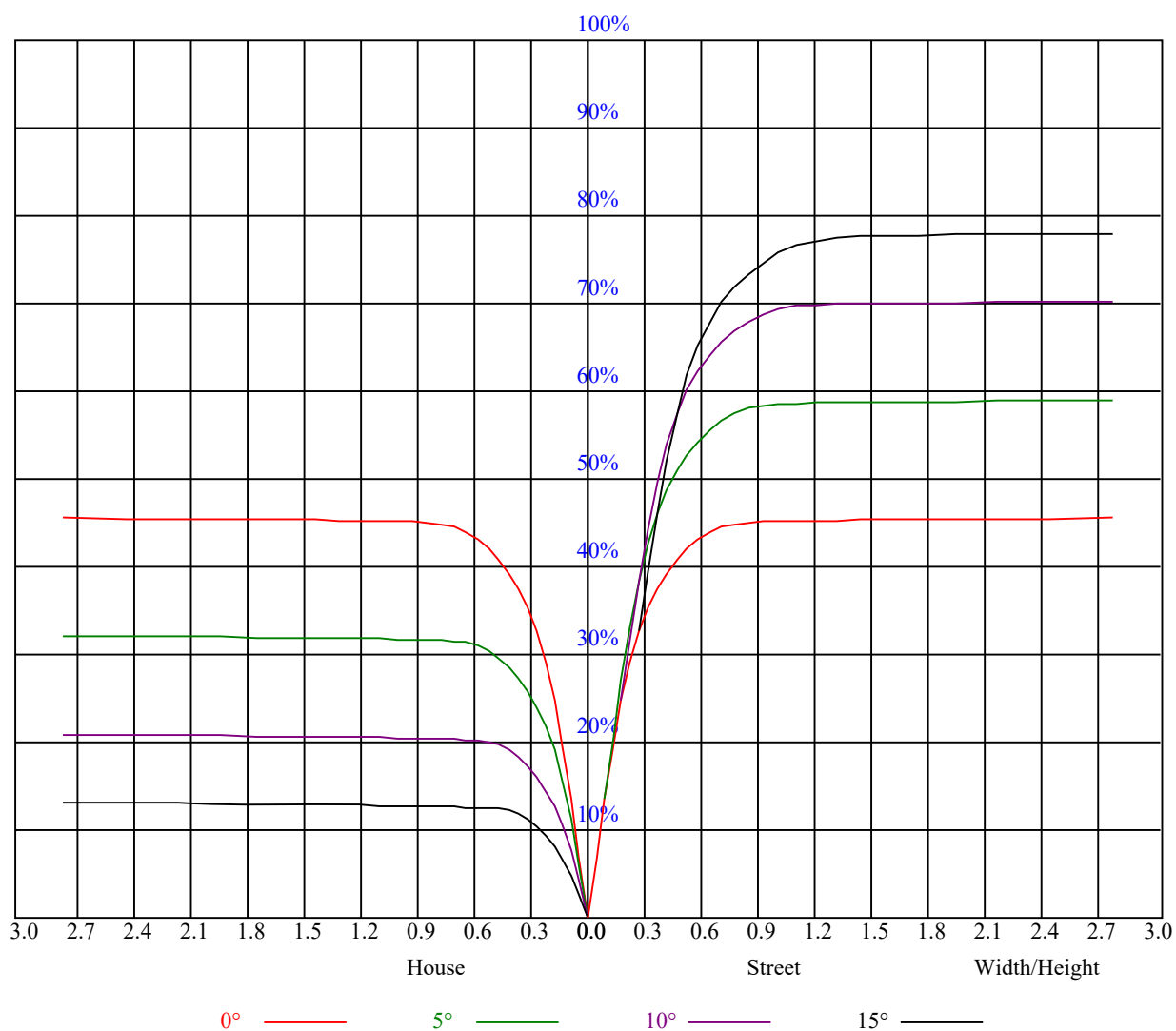
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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 RHOF=20 CU															
0	1.11	1.11	1.11	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.04	1.02	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.95	0.94	0.93	0.92	0.91	0.90	0.88
2	0.98	0.95	0.92	0.97	0.94	0.91	0.94	0.91	0.89	0.91	0.89	0.87	0.88	0.87	0.86	0.84
3	0.93	0.89	0.86	0.92	0.88	0.85	0.89	0.87	0.84	0.87	0.85	0.83	0.85	0.83	0.82	0.80
4	0.89	0.84	0.81	0.88	0.84	0.81	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
5	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.75	0.74
6	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
8	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.72	0.69	0.66	0.65
9	0.72	0.68	0.65	0.72	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61



Intensity data(cd)

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C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	6284.14	5931.23	4564.18	2431.84	1202.98	789.51	690.41	416.78	41.29
45.0	6223.58	6177.88	5055.83	2859.08	1406.14	809.88	703.07	532.40	162.53
90.0	6281.38	6022.07	4586.75	2485.25	1068.75	753.89	675.21	407.31	34.80
135.0	6274.78	6089.24	4881.85	2673.54	1289.42	792.81	691.51	439.90	57.37
180.0	6284.14	5815.61	4269.07	2252.36	1064.90	747.61	660.46	331.66	25.60
225.0	6223.58	5494.08	3751.54	1746.94	994.59	721.90	628.08	231.79	20.32
270.0	6281.38	5826.62	4293.85	2206.11	1166.09	769.69	683.25	336.39	25.60
315.0	6274.78	5652.64	3860.55	2060.76	1056.81	747.28	673.45	302.65	22.35
360.0	6284.14	5931.23	4564.18	2431.84	1202.98	789.51	690.41	416.78	41.29

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	10.74	9.08	8.59	8.31	8.09	8.04	7.98	7.93	7.93
45.0	10.79	9.19	8.70	8.42	8.26	8.15	8.09	7.98	7.93
90.0	10.30	9.14	8.64	8.37	8.15	8.09	7.98	7.93	7.93
135.0	12.72	9.30	8.81	8.53	8.31	8.15	8.04	7.98	7.93
180.0	10.96	9.03	8.59	8.42	8.15	8.09	8.04	7.98	7.93
225.0	9.36	8.75	8.42	8.20	8.04	7.98	7.87	7.87	7.93
270.0	10.02	8.92	8.53	8.26	8.04	8.04	7.93	7.93	7.87
315.0	9.97	9.03	8.53	8.26	8.09	7.98	7.87	7.87	7.87
360.0	10.74	9.08	8.59	8.31	8.09	8.04	7.98	7.93	7.93

C/ γ (°)	90.0
0.0	7.93
45.0	7.93
90.0	7.87
135.0	7.87
180.0	7.93
225.0	7.93
270.0	7.87
315.0	7.87
360.0	7.93