
Nata

LumCAT: 1534-E	
Luminaire: 92.70.064.00	
Report No: NT2016062903	Voltage(V): 9.4000
Test No: GC2016062903	Current(A): 0.3000
LampCAT: CITIZEN CLU700	Power (W): 2.8200
Lamp flux(lm): 314.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 26	Width(mm):26
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 293.17
Efficiency(%): 93.37%
Lumens(lm)/Power(W): 103.96
Central intensity(cd): 965.965
Maximum intensity(cd): 965.965
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.4
[C90/270]Total=23.4
Field angle(10%Imax): [C0/180]Total=61.2
[C90/270]Total=61.2
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.37%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.486%

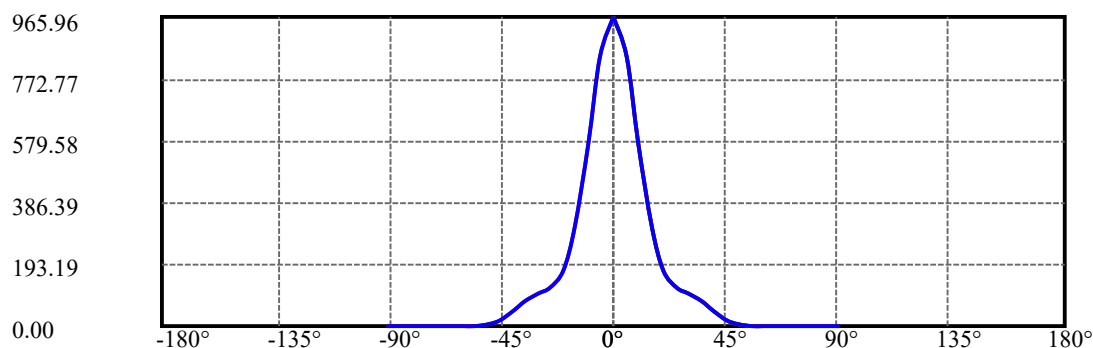
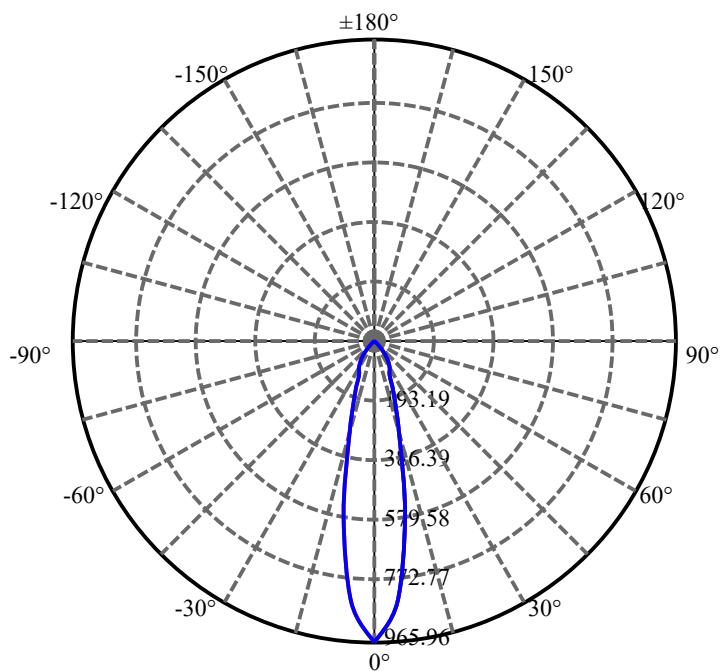
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	965.965	0.000	0	.000%	.000%
5.0	839.380	21.582	21.582	6.873%	7.362%
10.0	571.214	50.461	72.044	16.070%	24.574%
15.0	314.713	52.553	124.596	16.736%	42.500%
20.0	174.171	40.291	164.887	12.831%	56.243%
25.0	119.273	30.777	195.664	9.802%	66.741%
30.0	99.129	27.639	223.303	8.802%	76.168%
35.0	78.053	26.091	249.394	8.309%	85.068%
40.0	48.112	21.050	270.444	6.704%	92.248%
45.0	16.882	12.034	282.478	3.833%	96.353%
50.0	3.358	4.090	286.568	1.302%	97.748%
55.0	2.309	1.232	287.8	.392%	98.168%
60.0	1.714	0.930	288.73	.296%	98.486%
65.0	1.538	0.791	289.52	.252%	98.755%
70.0	1.438	0.754	290.274	.240%	99.012%
75.0	1.487	0.765	291.039	.243%	99.273%
80.0	1.431	0.781	291.819	.249%	99.539%
85.0	1.197	0.714	292.534	.227%	99.783%
90.0	1.125	0.636	293.17	.203%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	223.30	71.12%	76.17%
0-40	270.44	86.13%	92.25%
0-60	288.73	91.95%	98.49%
0-90	292.53	93.16%	99.78%
0-120	292.53	93.16%	99.78%
0-180	293.17	93.37%	100.00%
60-90	4.73	1.51%	1.61%
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%
0-32.15	234.54	74.69%	80.00%

ZONAL LUMEN SUMMARY

0-10	72.04
10-20	92.84
20-30	58.42
30-40	47.14
40-50	16.12
50-60	2.16
60-70	1.54
70-80	1.55
80-90	0.71
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:

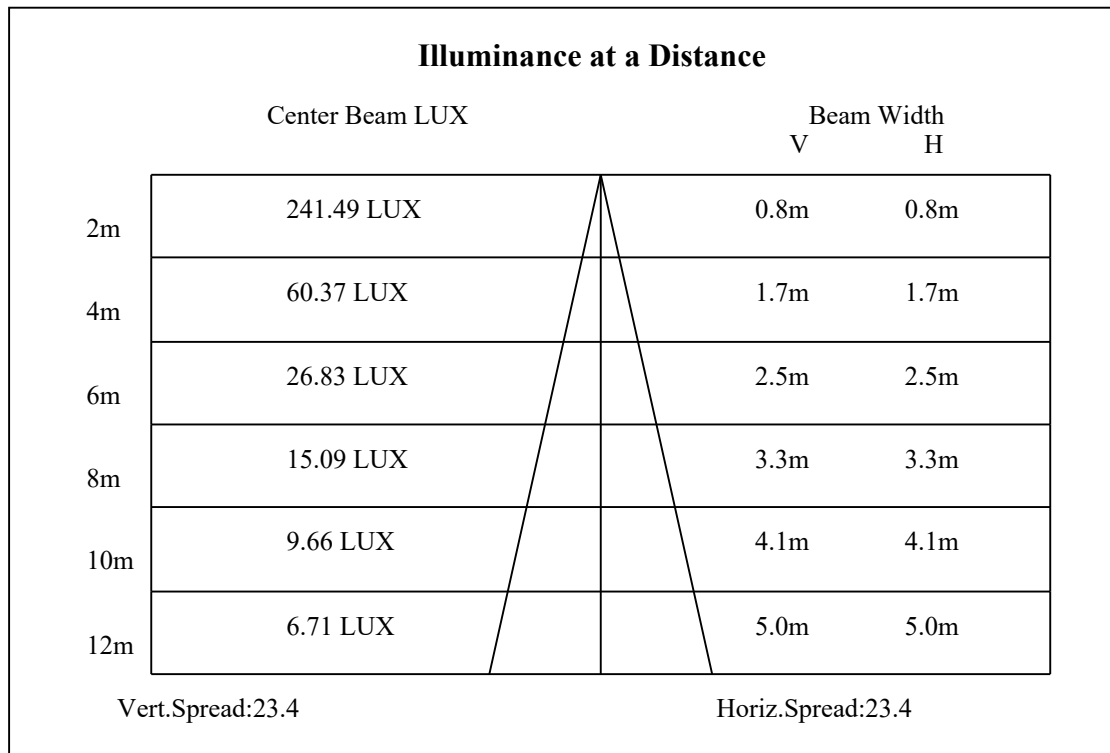
C90/C270:

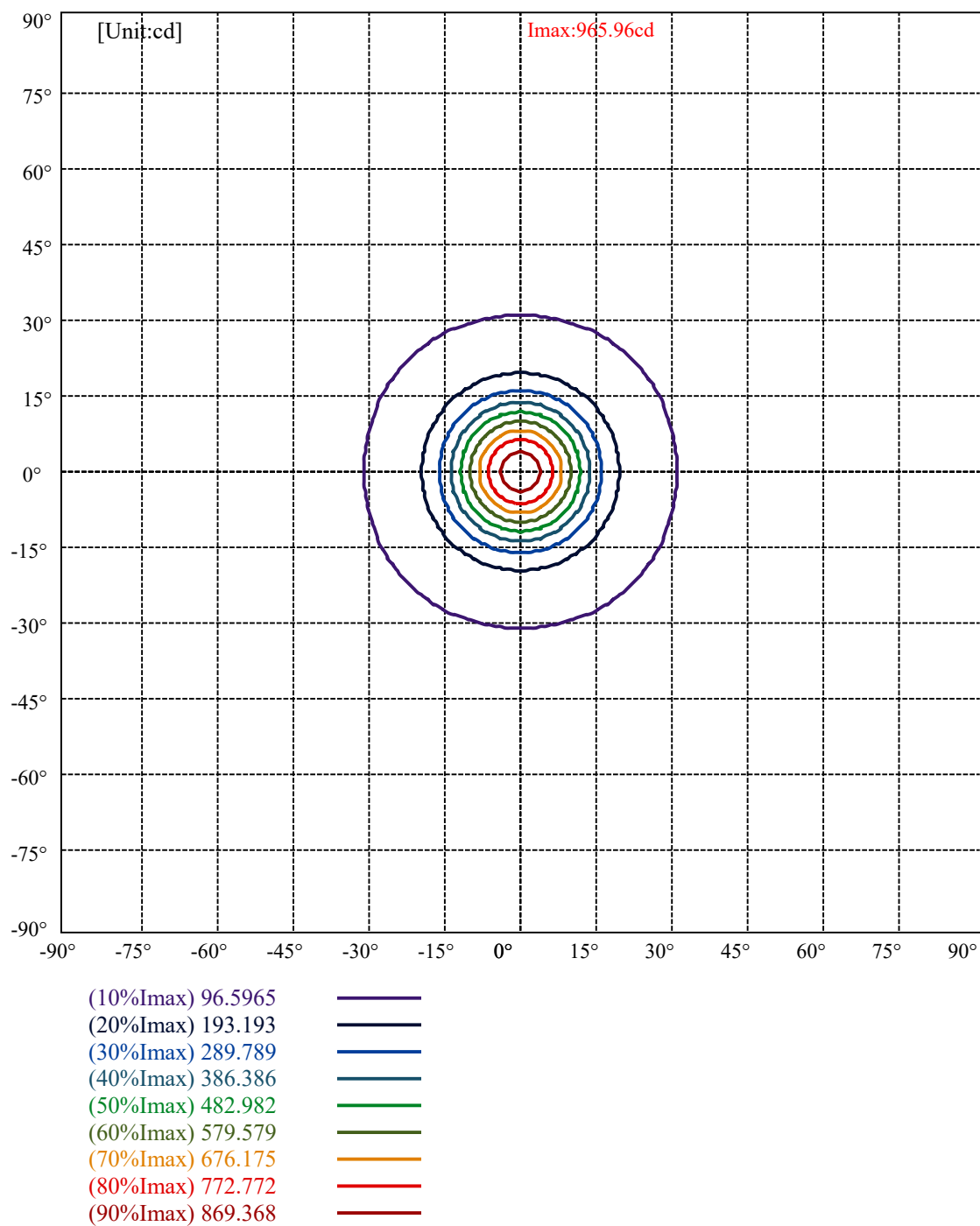
Field angle(10%Imax):C0/180Left:30.6 Right:30.6

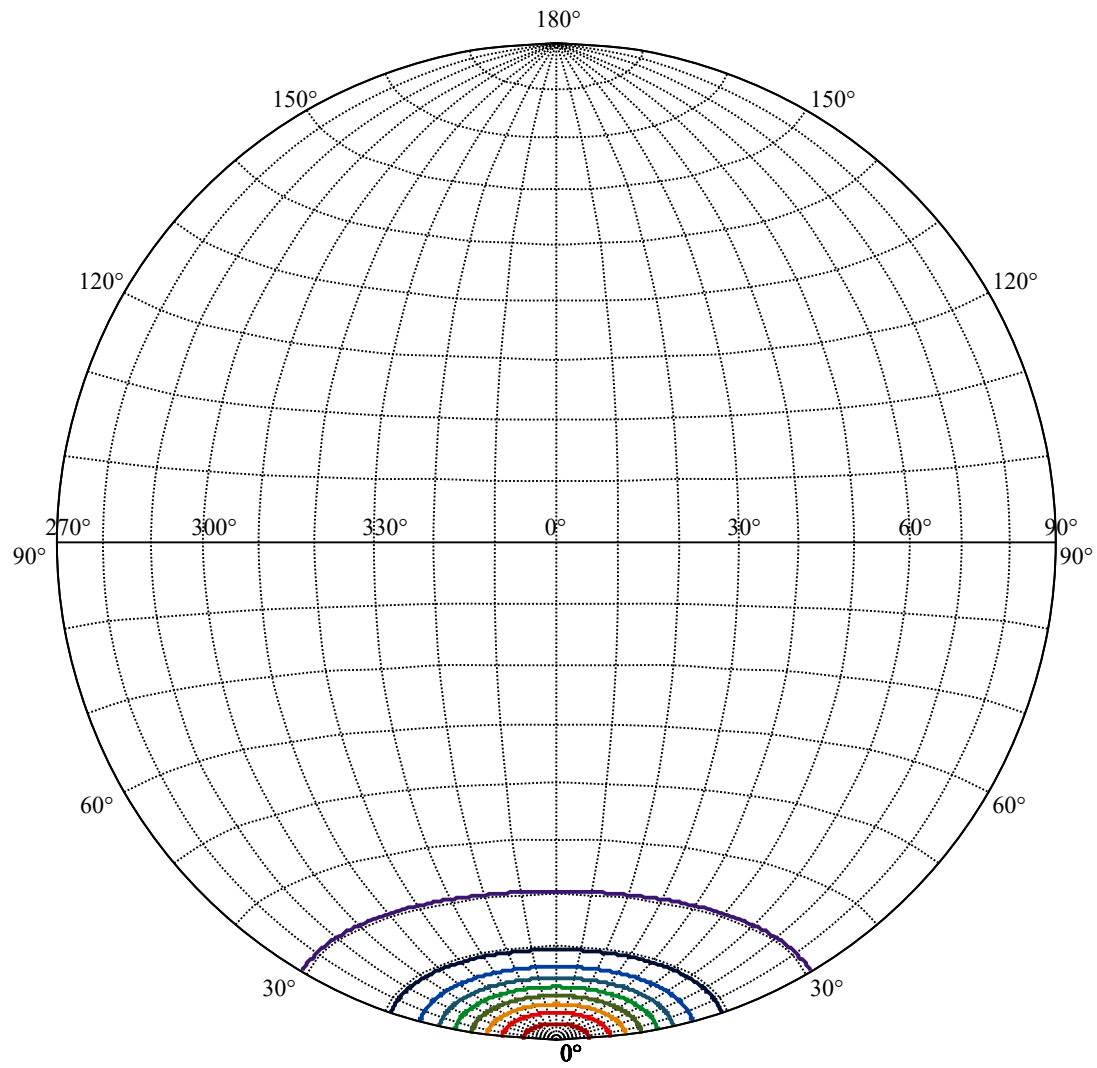
:C90/270Left:30.6 Right:30.6

Beam Angle(50%Imax):C0/180Left:11.7 Right:11.7

:C90/270Left:11.7 Right:11.7





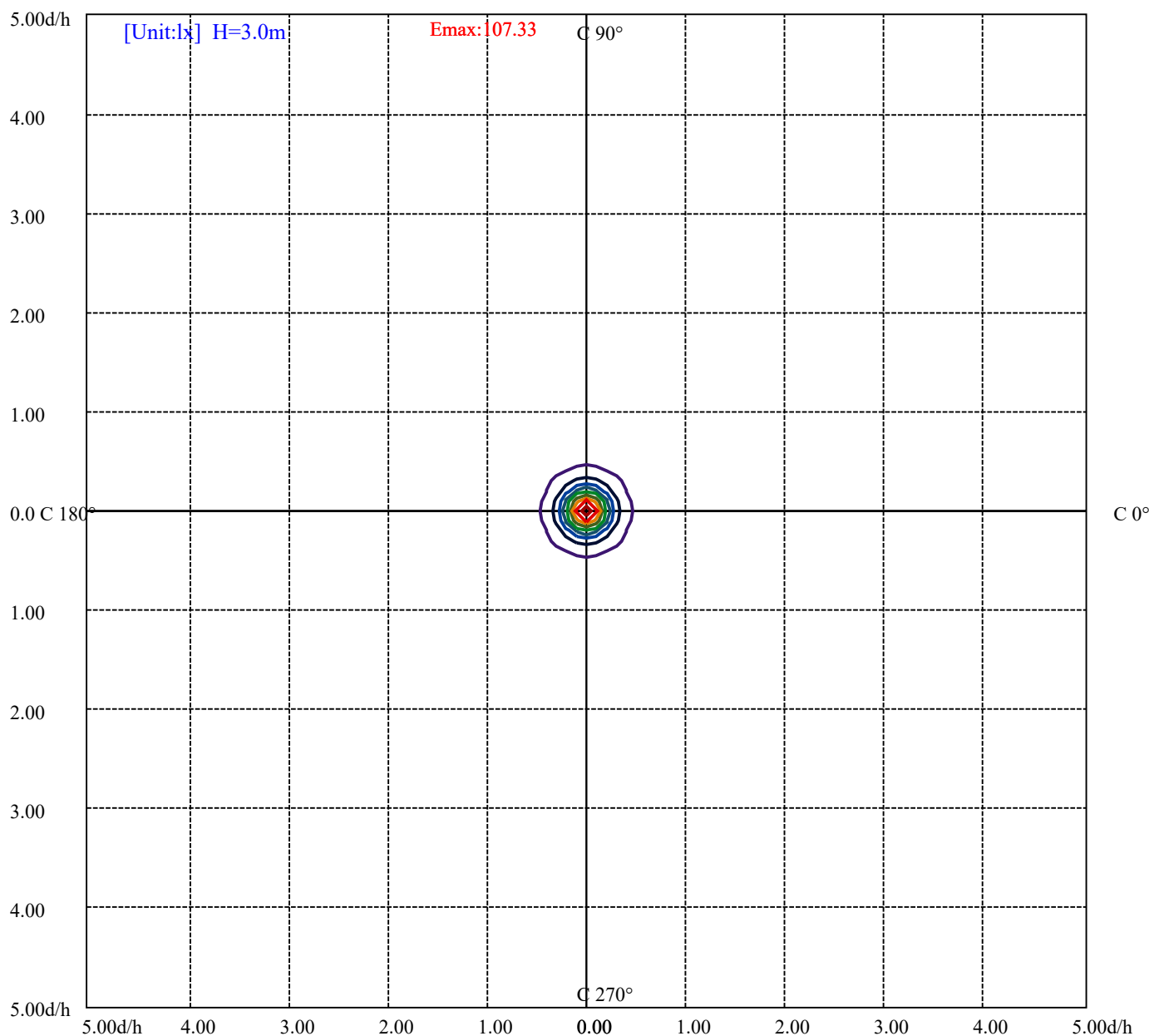


House

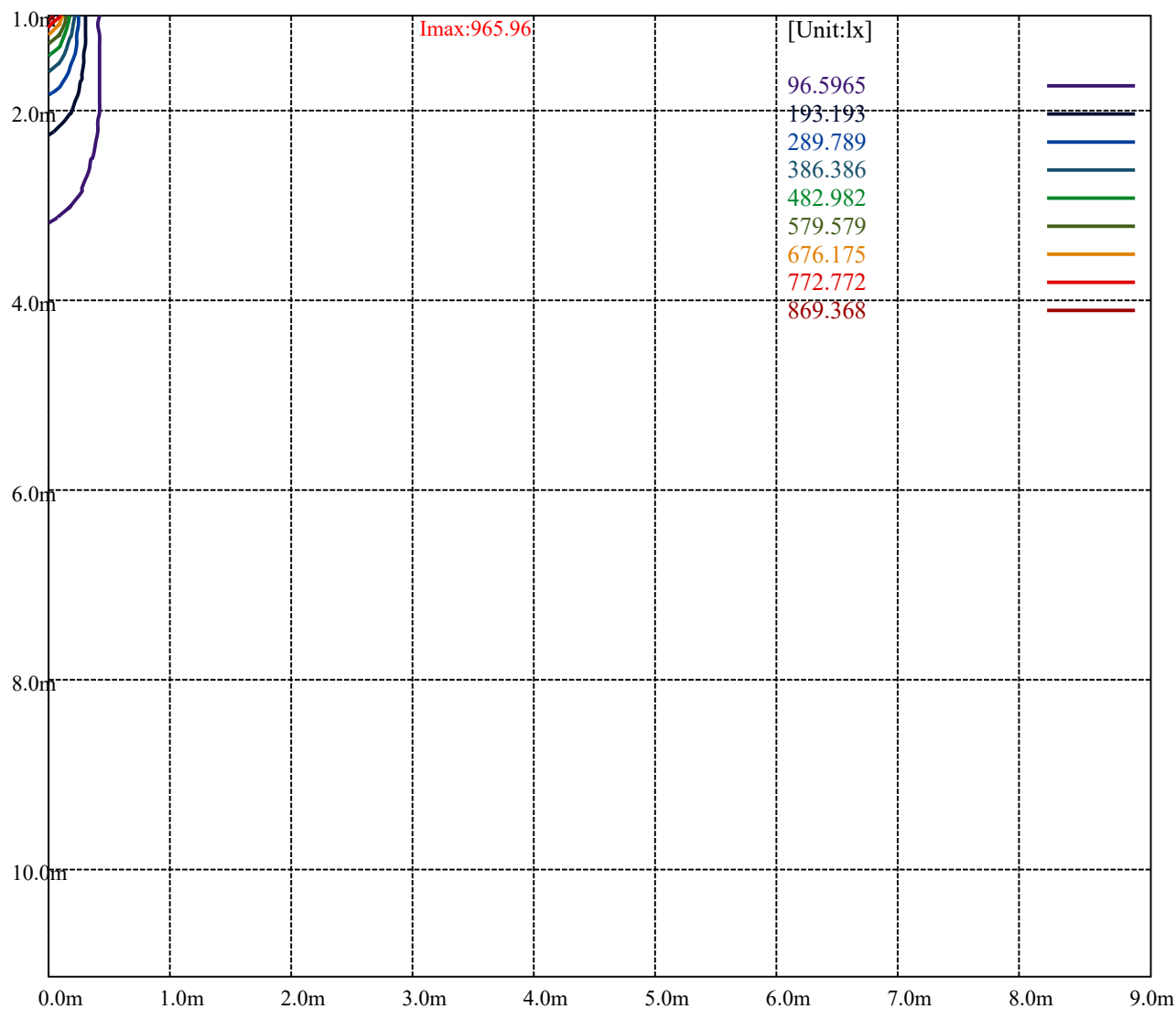
[Unit:cd]

Road

Imax:965.96	
(10%Imax) 96.5965	
(20%Imax) 193.193	
(30%Imax) 289.789	
(40%Imax) 386.386	
(50%Imax) 482.982	
(60%Imax) 579.579	
(70%Imax) 676.175	
(80%Imax) 772.772	
(90%Imax) 869.368	



(10%Emax) 10.7329	—
(20%Emax) 21.46578	—
(30%Emax) 32.19867	—
(40%Emax) 42.93156	—
(50%Emax) 53.66444	—
(60%Emax) 64.39733	—
(70%Emax) 75.13022	—
(80%Emax) 85.86322	—
(90%Emax) 96.59611	—



Luminance Table

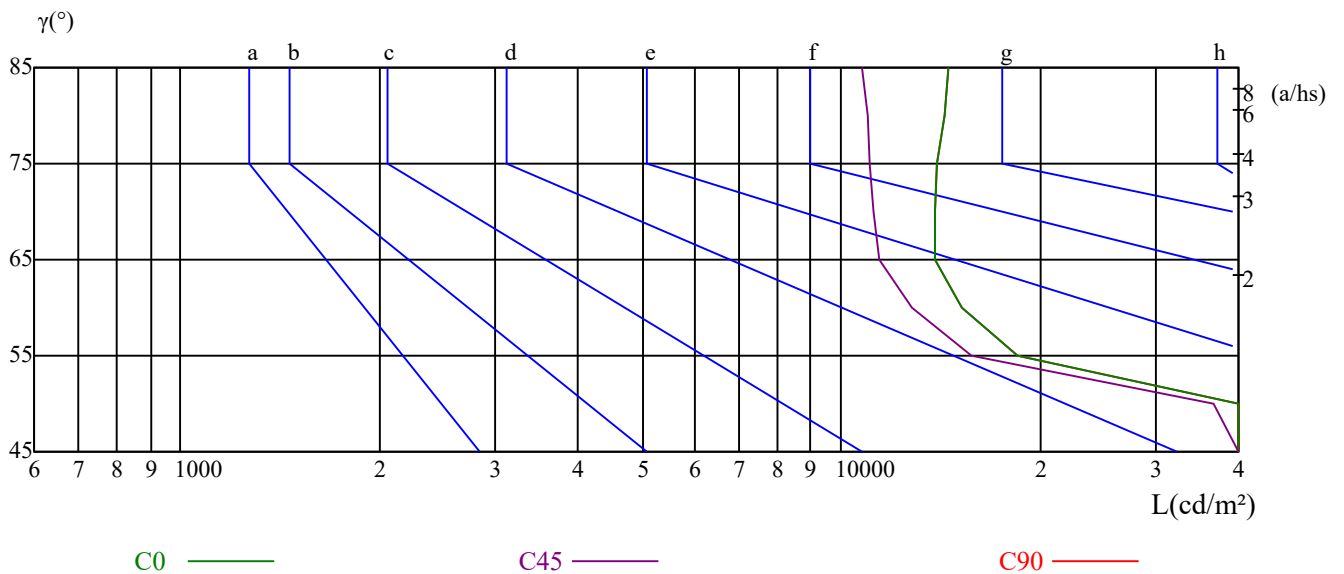
γ	45	50	55	60	65	70	75	80	85
C0	106007	42199	18472	15252	13892	13911	14009	14351	14594
C45	93146	36547	15754	12793	11440	11221	11034	10987	10790
C90	106007	42199	18472	15252	13892	13911	14009	14351	14594

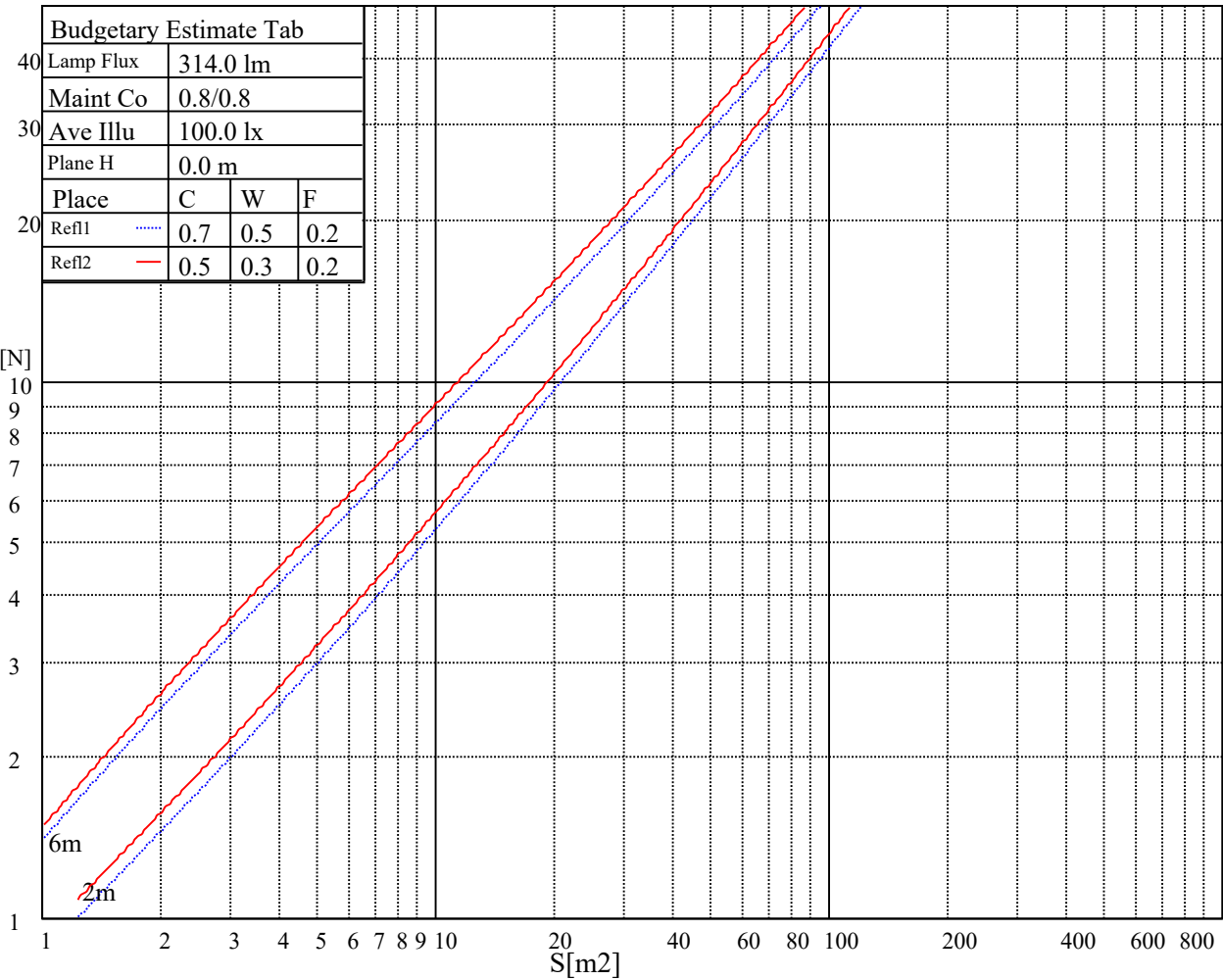
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
28787	28787	28787	40151	40151	40151	98001	98001	98001

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	1.09	1.09	1.09	1.04	1.04	1.04	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	0.93	0.92	0.91	0.91	0.90	0.88
2	0.97	0.94	0.91	0.96	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.84	0.83
3	0.92	0.88	0.84	0.91	0.87	0.84	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.78
4	0.87	0.82	0.79	0.86	0.82	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	0.74
5	0.82	0.77	0.74	0.81	0.77	0.74	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	0.78	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	0.75	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.64
8	0.71	0.66	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
9	0.68	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.59
10	0.66	0.61	0.58	0.65	0.61	0.58	0.65	0.60	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.56

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	969.82	948.18	648.67	352.86	188.24	121.40	101.96	91.12	65.41
22.5	984.02	790.06	476.62	248.97	148.10	110.66	98.06	84.02	45.37
45.0	946.75	667.72	360.56	189.56	129.49	104.44	94.26	66.62	27.14
67.5	982.32	642.01	365.02	190.33	128.01	105.16	95.14	66.29	25.99
90.0	930.29	555.68	303.09	167.98	120.24	102.46	90.46	50.38	12.55
112.5	995.97	638.10	332.54	184.77	126.35	105.87	87.65	47.13	10.90
135.0	928.91	600.39	309.64	170.51	125.09	105.16	83.52	42.72	10.08
157.5	984.46	685.62	389.58	200.46	135.60	108.46	96.40	68.66	27.80
180.0	969.82	697.45	401.25	213.40	137.09	108.46	96.24	76.03	33.86
202.5	984.02	867.91	542.91	279.80	159.28	116.77	99.43	88.04	54.29
225.0	946.75	985.40	717.55	404.06	206.13	131.53	104.39	93.82	72.62
247.5	982.32	1053.28	763.19	435.17	213.56	132.63	105.93	93.93	73.83
270.0	930.29	1098.43	971.19	588.00	281.34	149.81	111.49	96.68	85.94
292.5	995.97	1097.33	922.97	504.92	239.17	139.73	108.13	95.58	75.48
315.0	928.91	1089.24	913.06	530.08	255.02	141.77	110.00	96.29	79.12
337.5	994.81	1013.26	721.57	374.55	194.02	124.04	103.01	91.56	69.43
360.0	969.82	948.18	648.67	352.86	188.24	121.40	101.96	91.12	65.41
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	21.53	2.42	1.87	1.65	1.54	1.43	1.38	1.49	1.27
22.5	6.39	2.26	1.71	1.54	1.43	1.38	1.32	1.27	1.10
45.0	2.53	1.87	1.65	1.49	1.38	1.32	1.87	1.32	1.05
67.5	2.70	1.93	1.65	1.54	1.38	1.38	1.93	1.43	1.10
90.0	3.25	2.20	1.76	1.54	1.38	1.32	1.27	1.21	1.10
112.5	4.68	2.97	2.15	1.76	1.49	1.43	1.27	1.27	1.16
135.0	4.35	2.92	2.20	1.76	1.54	1.49	1.32	1.21	1.10
157.5	3.58	2.53	1.98	1.76	1.54	1.49	1.82	1.65	1.16
180.0	3.19	2.53	1.76	1.65	1.49	1.43	1.82	2.09	1.16
202.5	12.83	2.53	1.76	1.60	1.49	1.32	1.32	1.87	1.21
225.0	30.01	3.25	2.37	1.65	1.54	1.38	1.32	1.21	1.10
247.5	33.69	3.96	3.14	1.65	1.54	1.38	1.32	1.27	1.21
270.0	46.58	9.25	3.74	1.82	1.65	1.54	1.43	1.38	1.32
292.5	33.20	4.79	3.91	2.15	1.82	1.60	1.49	1.43	1.43
315.0	36.50	5.73	3.25	2.15	1.82	1.65	1.49	1.49	1.43
337.5	25.11	2.59	2.04	1.71	1.60	1.49	1.43	1.32	1.27
360.0	21.53	2.42	1.87	1.65	1.54	1.43	1.38	1.49	1.27
C/ γ (°)	90.0								
0.0	1.10								
22.5	1.05								
45.0	1.05								
67.5	1.10								
90.0	1.05								
112.5	1.10								
135.0	1.10								
157.5	1.10								
180.0	1.10								
202.5	0.99								
225.0	1.10								
247.5	1.10								
270.0	1.21								
292.5	1.38								
315.0	1.32								
337.5	1.16								
360.0	1.10								