
Nata

LumCAT: 1567-E	
Luminaire: 92.70.064.00	
Report No: NT2017090507	Voltage(V): 0.0000
Test No: GC2017090507	Current(A): 0.0000
LampCAT: CITIZEN CLU028	Power (W): 0.0000
Lamp flux(lm): 1463.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 21	Width(mm): 21
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1224.86
Efficiency(%): 83.72%
Lumens(lm)/Power(W): 0.00
Central intensity(cd): 747.515
Maximum intensity(cd): 752.187
Angle of maximum intensity: C=0.0 γ =10.0
Beam Angle(50%Imax): [C0/180]Total=81.7
[C90/270]Total=81.7
Field angle(10%Imax): [C0/180]Total=109.5
[C90/270]Total=109.5
Maximum s/h(1/2): C0_180=1.23 C90_270=1.23
Maximum s/h(1/4): C0_180=1.17 C90_270=1.17
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 83.72%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.274%

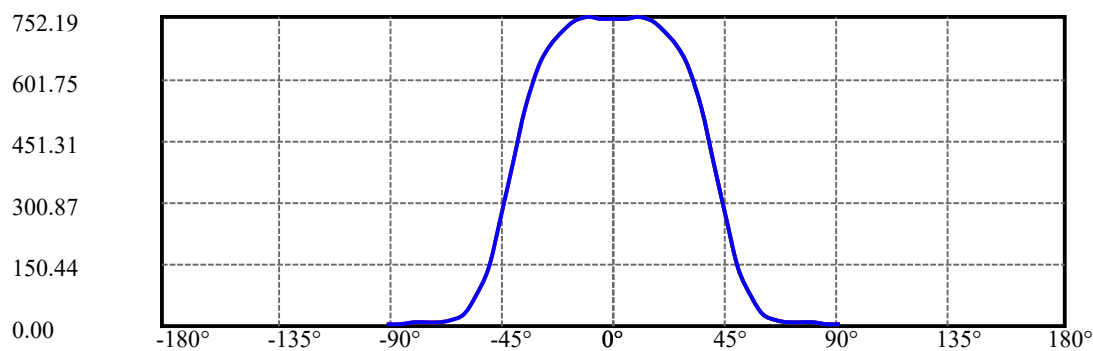
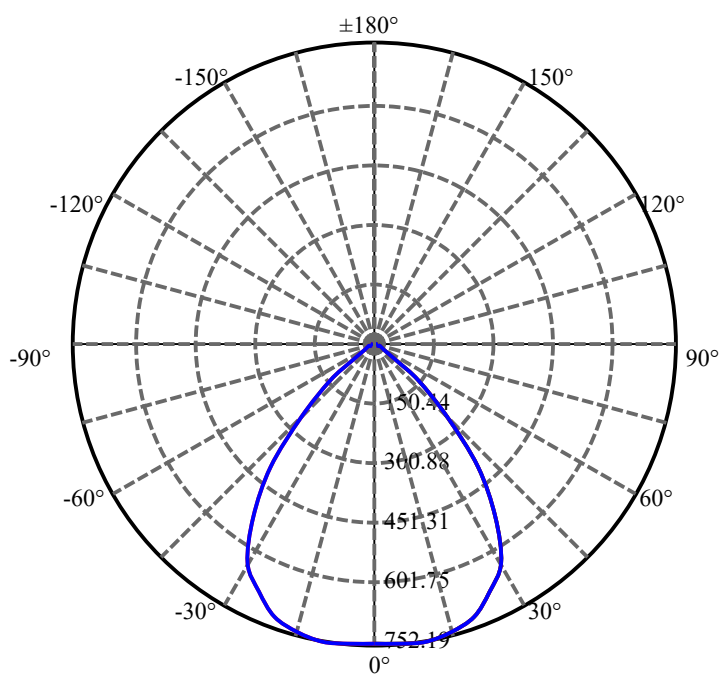
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	747.515	0.000	0	.000%	.000%
5.0	748.210	17.881	17.881	1.222%	1.460%
10.0	752.187	53.674	71.555	3.669%	5.842%
15.0	741.885	88.627	160.182	6.058%	13.078%
20.0	721.734	120.623	280.805	8.245%	22.925%
25.0	682.851	147.315	428.12	10.069%	34.952%
30.0	631.359	166.314	594.434	11.368%	48.531%
35.0	526.690	170.531	764.965	11.656%	62.453%
40.0	401.065	154.789	919.754	10.580%	75.090%
45.0	256.212	121.700	1041.455	8.319%	85.026%
50.0	141.288	80.321	1121.775	5.490%	91.584%
55.0	71.835	46.340	1168.115	3.167%	95.367%
60.0	29.207	23.356	1191.471	1.596%	97.274%
65.0	14.666	10.666	1202.137	.729%	98.145%
70.0	10.894	6.472	1208.609	.442%	98.673%
75.0	9.022	5.206	1213.815	.356%	99.098%
80.0	7.591	4.445	1218.26	.304%	99.461%
85.0	6.187	3.744	1222.004	.256%	99.766%
90.0	4.260	2.860	1224.864	.196%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	594.43	40.63%	48.53%
0-40	919.75	62.87%	75.09%
0-60	1191.47	81.44%	97.27%
0-90	1222.00	83.53%	99.77%
0-120	1222.00	83.53%	99.77%
0-180	1224.86	83.72%	100.00%
60-90	53.89	3.68%	4.40%
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%
0-42.47	979.89	66.98%	80.00%

ZONAL LUMEN SUMMARY

0-10	71.55
10-20	209.25
20-30	313.63
30-40	325.32
40-50	202.02
50-60	69.70
60-70	17.14
70-80	9.65
80-90	3.74
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:

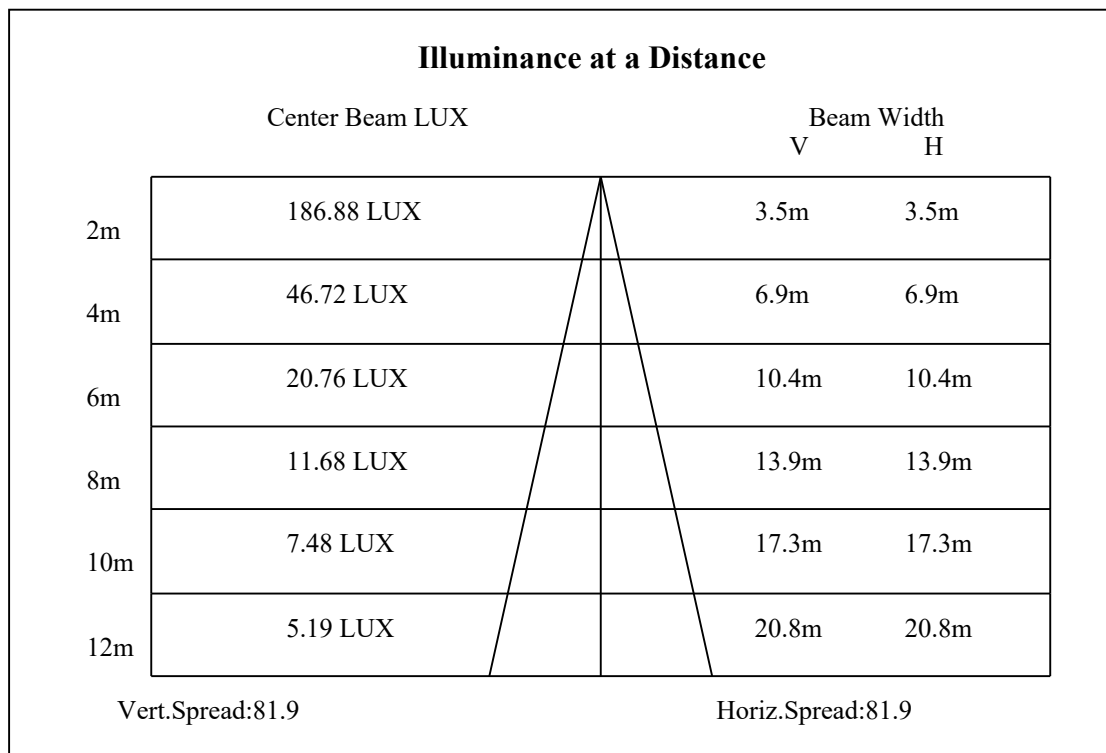
C90/C270:

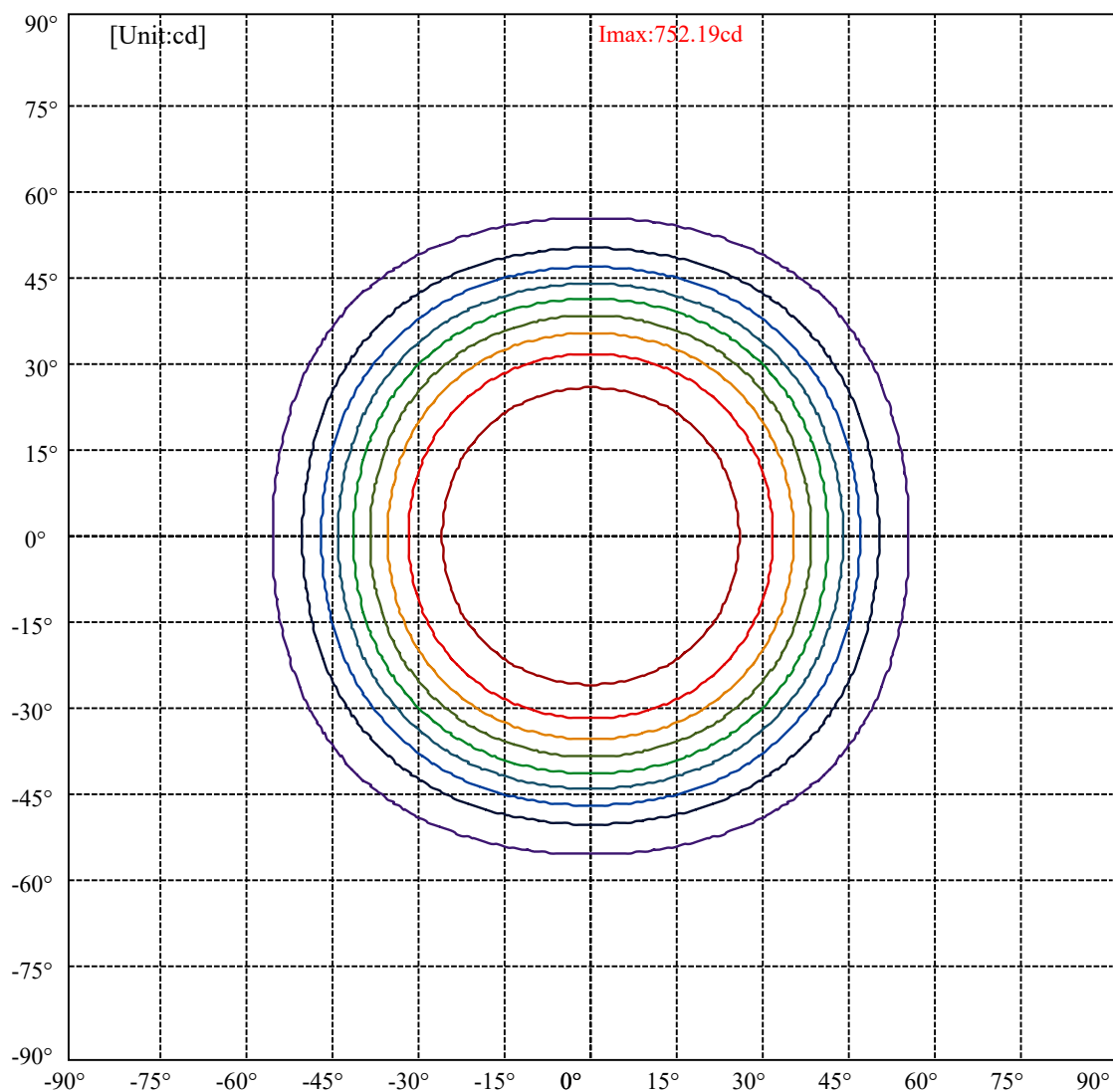
Field angle(10%Imax):C0/180Left:64.8 Right:44.8

:C90/270Left:64.8 Right:44.8

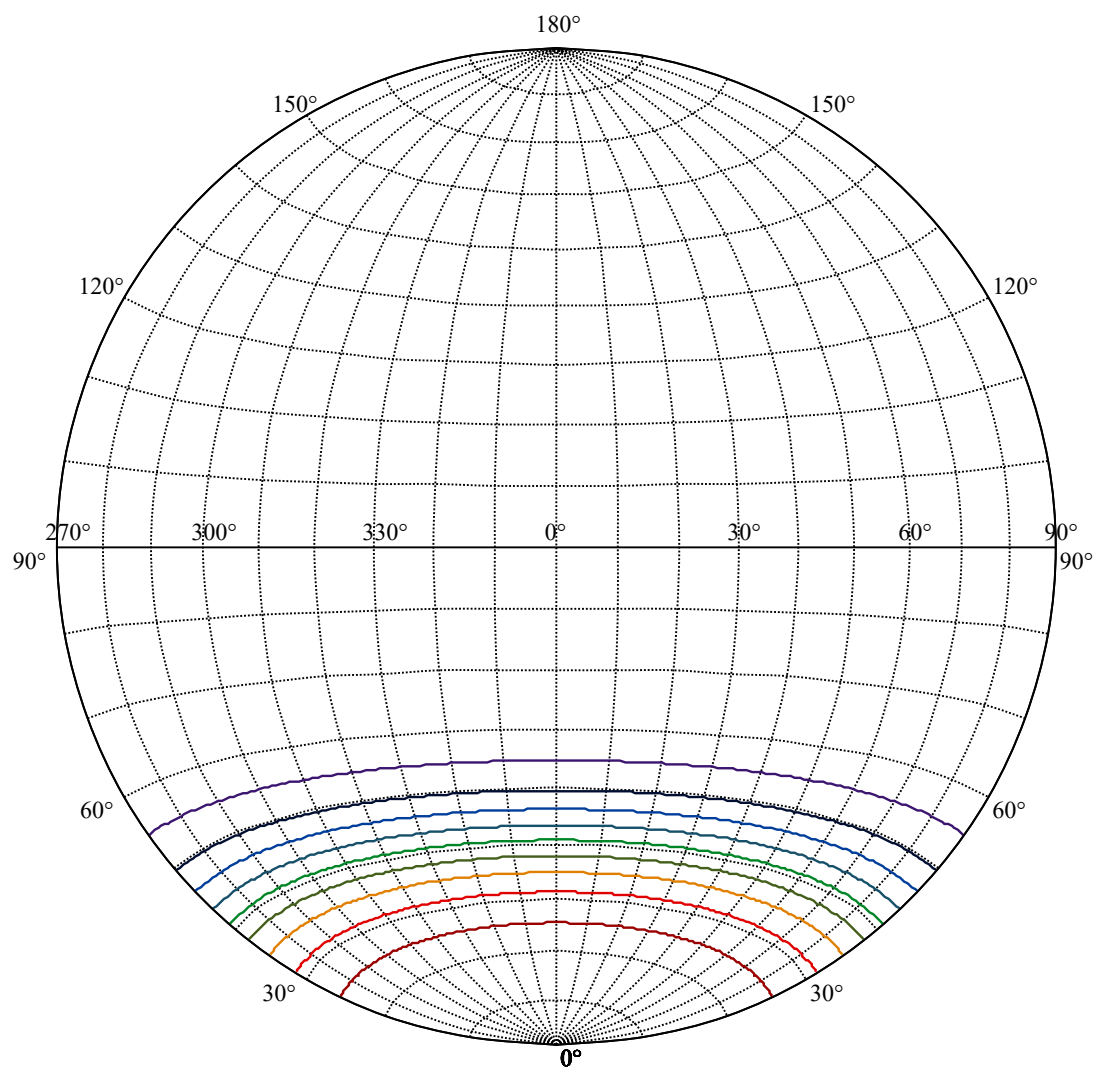
Beam Angle(50%Imax):C0/180Left:50.9 Right:30.9

:C90/270Left:50.9 Right:30.9





(10%Imax) 75.2187	—
(20%Imax) 150.437	—
(30%Imax) 225.656	—
(40%Imax) 300.875	—
(50%Imax) 376.094	—
(60%Imax) 451.312	—
(70%Imax) 526.531	—
(80%Imax) 601.75	—
(90%Imax) 676.969	—

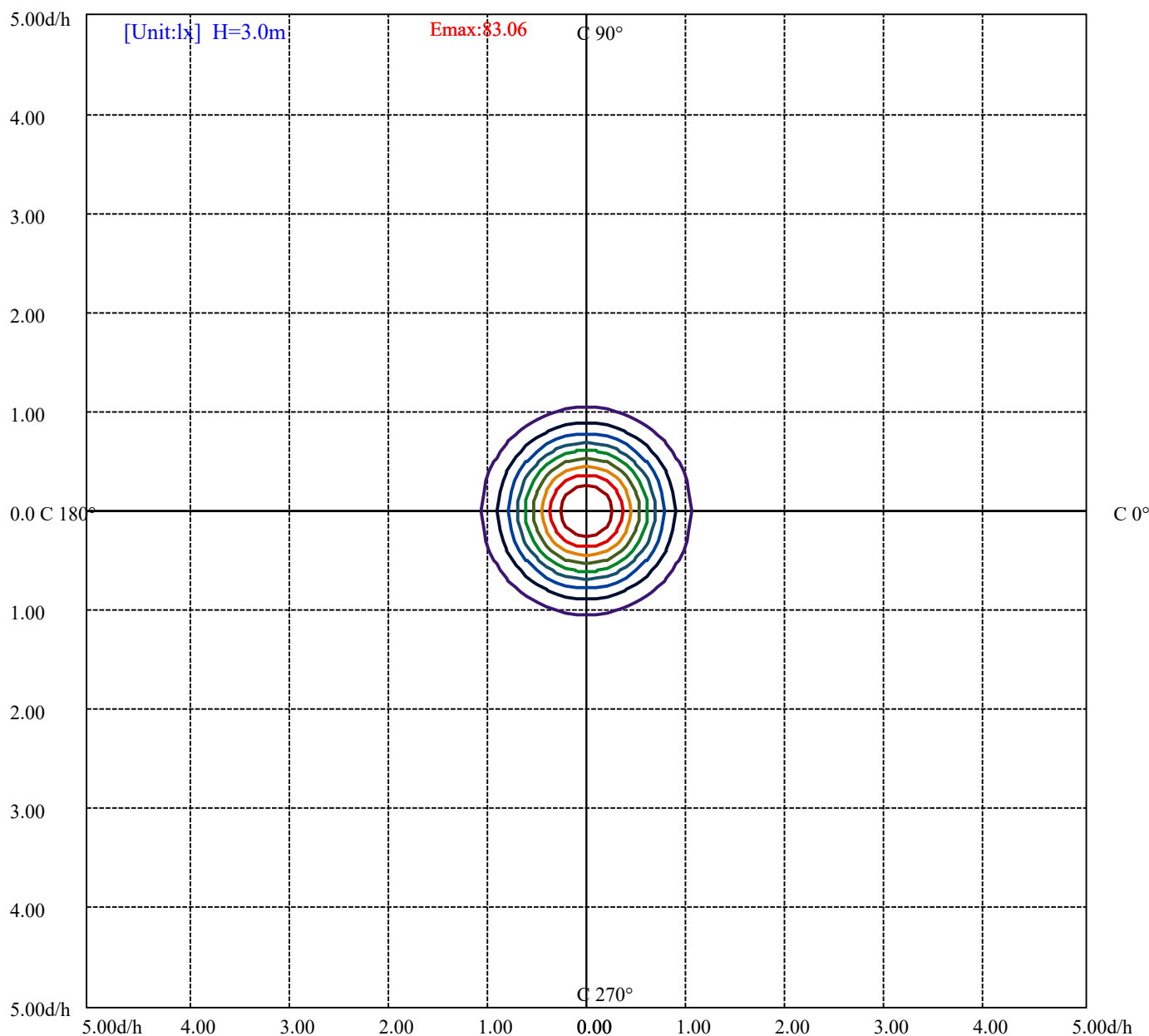


House

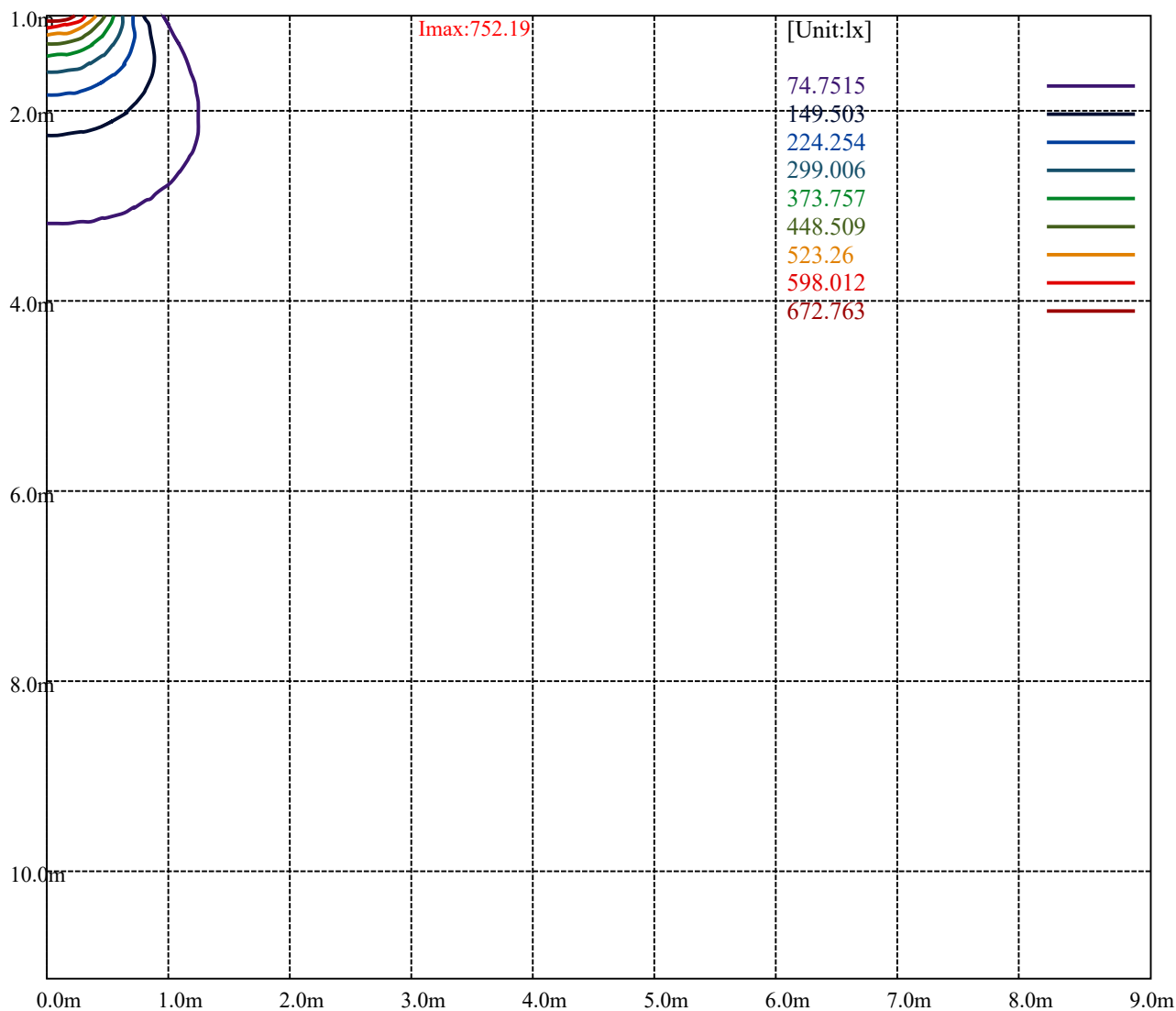
[Unit:cd]

Road

I_{max}:752.19(10%I_{max}) 75.2187(20%I_{max}) 150.437(30%I_{max}) 225.656(40%I_{max}) 300.875(50%I_{max}) 376.094(60%I_{max}) 451.312(70%I_{max}) 526.531(80%I_{max}) 601.75(90%I_{max}) 676.969



(10%Emax) 8.305722	—
(20%Emax) 16.61144	—
(30%Emax) 24.91711	—
(40%Emax) 33.22289	—
(50%Emax) 41.52855	—
(60%Emax) 49.83434	—
(70%Emax) 58.14	—
(80%Emax) 66.44578	—
(90%Emax) 74.75144	—



Luminance Table

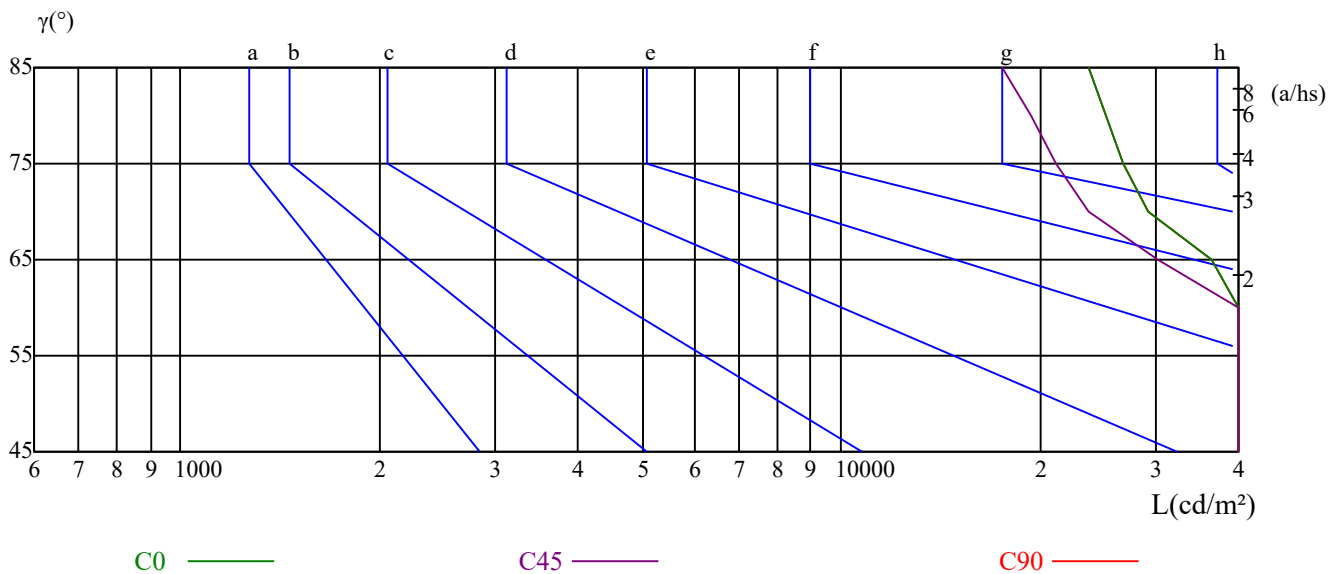
γ	45	50	55	60	65	70	75	80	85
C0	514685	294573	156905	67528	36307	29264	26711	25244	23673
C45	455699	257147	134908	57108	30144	23792	21190	19442	17570
C90	514685	294573	156905	67528	36307	29264	26711	25244	23673

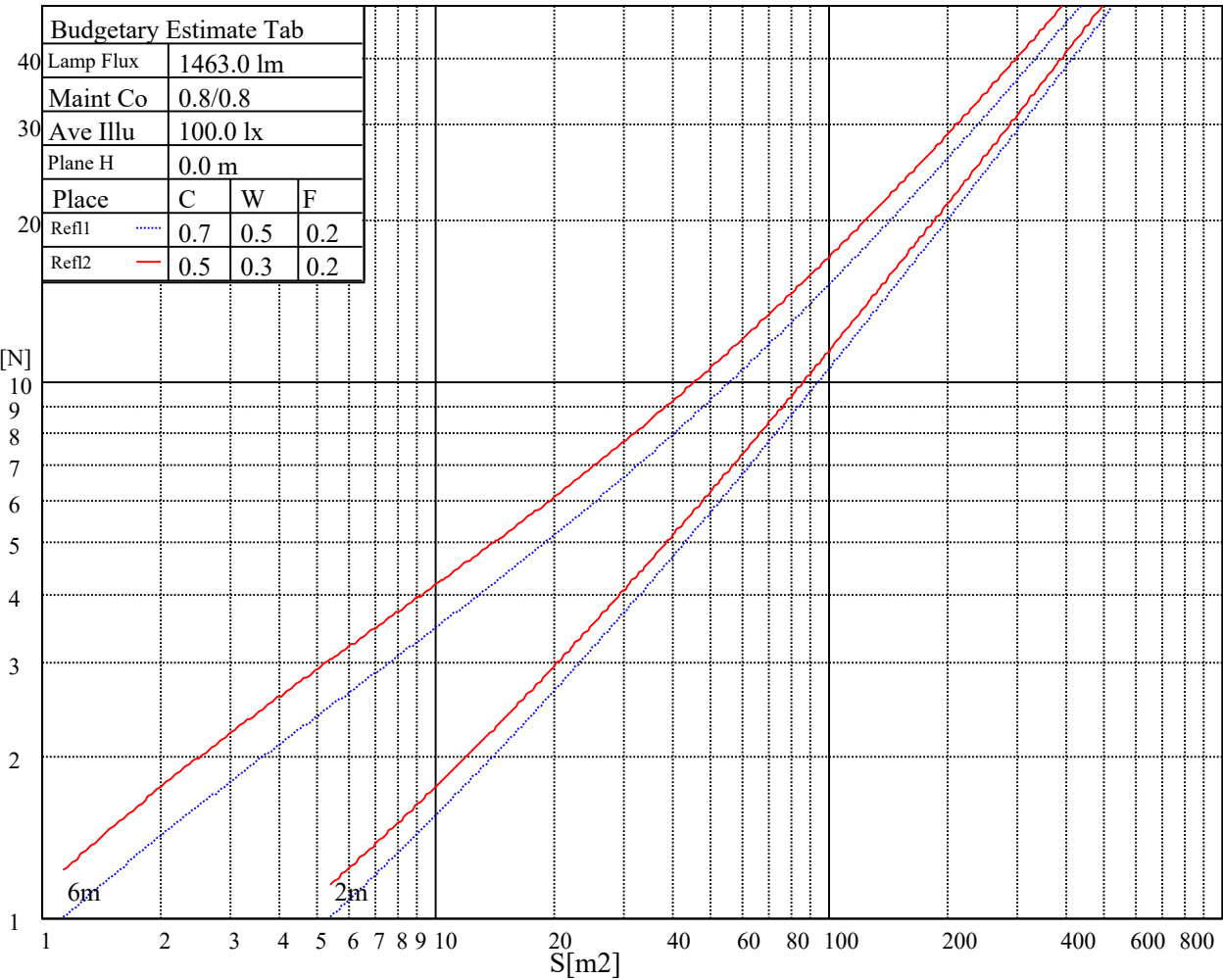
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
71698	71698	71698	72024	72024	72024	146668	146668	146668

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	1.00	1.00	1.00	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.91	0.89	0.86	0.89	0.87	0.85	0.86	0.84	0.82	0.83	0.81	0.80	0.80	0.79	0.78	0.76
2	0.83	0.79	0.76	0.82	0.78	0.75	0.79	0.76	0.73	0.76	0.74	0.71	0.74	0.72	0.70	0.68
3	0.76	0.71	0.67	0.75	0.70	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.68	0.66	0.63	0.62
4	0.70	0.64	0.60	0.68	0.63	0.59	0.67	0.62	0.59	0.65	0.61	0.58	0.63	0.60	0.57	0.56
5	0.64	0.58	0.54	0.63	0.57	0.53	0.61	0.57	0.53	0.60	0.56	0.52	0.58	0.55	0.52	0.50
6	0.59	0.53	0.48	0.58	0.52	0.48	0.57	0.52	0.48	0.55	0.51	0.48	0.54	0.50	0.47	0.46
7	0.54	0.48	0.44	0.54	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.43	0.50	0.46	0.43	0.42
8	0.50	0.44	0.40	0.50	0.44	0.40	0.49	0.44	0.40	0.48	0.43	0.40	0.47	0.43	0.40	0.38
9	0.47	0.41	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.45	0.40	0.37	0.44	0.40	0.36	0.35
10	0.43	0.38	0.34	0.43	0.38	0.34	0.42	0.37	0.34	0.42	0.37	0.34	0.41	0.37	0.34	0.32

Nata 1567-E

Intensity data(cd)										Appendix Page: 13 Total:13	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	752.02	746.56	748.27	742.44	723.22	681.65	626.65	530.63	407.25		
45.0	748.38	742.27	747.45	738.25	717.94	676.75	625.33	526.34	401.36		
90.0	745.19	744.09	748.93	739.35	715.18	678.79	627.53	526.83	401.64		
135.0	744.47	746.29	752.40	744.47	722.73	687.27	646.03	543.63	413.91		
180.0	752.02	761.43	768.15	751.35	728.40	686.94	627.31	507.68	382.81		
225.0	748.38	757.19	760.93	746.29	724.27	685.56	632.71	523.31	395.58		
270.0	745.19	744.09	749.10	741.77	727.24	692.61	646.80	546.88	419.81		
315.0	744.47	743.76	742.27	731.15	714.91	673.23	618.50	508.23	386.17		
360.0	752.02	746.56	748.27	742.44	723.22	681.65	626.65	530.63	407.25		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	274.24	158.56	81.98	37.11	17.45	11.95	9.91	8.53	7.05		
45.0	260.97	147.44	72.12	31.60	15.47	11.78	9.91	8.53	7.16		
90.0	248.36	126.08	67.61	24.61	13.05	10.46	8.81	7.49	5.95		
135.0	262.89	146.84	67.83	28.30	14.87	10.46	8.48	7.05	5.62		
180.0	238.83	123.77	63.87	25.49	13.32	9.91	8.20	6.61	5.23		
225.0	249.79	136.37	68.44	25.88	13.65	10.46	8.48	7.05	5.73		
270.0	271.87	160.93	81.70	31.49	15.03	10.96	9.03	7.65	6.17		
315.0	242.74	130.32	71.13	29.18	14.48	11.18	9.36	7.82	6.61		
360.0	274.24	158.56	81.98	37.11	17.45	11.95	9.91	8.53	7.05		
C/γ(°)	90.0										
0.0	4.24										
45.0	4.18										
90.0	4.18										
135.0	4.13										
180.0	4.18										
225.0	4.29										
270.0	4.46										
315.0	4.40										
360.0	4.24										