
Nata

LumCAT: 2-1720-A
Luminaire: 92.70.150.00+92.70.152.00
Report No: NT2017072106
Test No: GC2017072106
LampCAT: CITIZEN LCN-C02B
Lamp flux(lm): 1991.8
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 23.5000
Current(A): 0.7000
Power (W): 16.4500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1739.05
Efficiency(%): 87.31%
Lumens(lm)/Power(W): 105.72
Central intensity(cd): 5154.868
Maximum intensity(cd): 5154.868
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=65.4
[C90/270]Total=65.4
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
Maximum s/h(1/4): C0_180=0.46 C90_270=0.46
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.31%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.349%

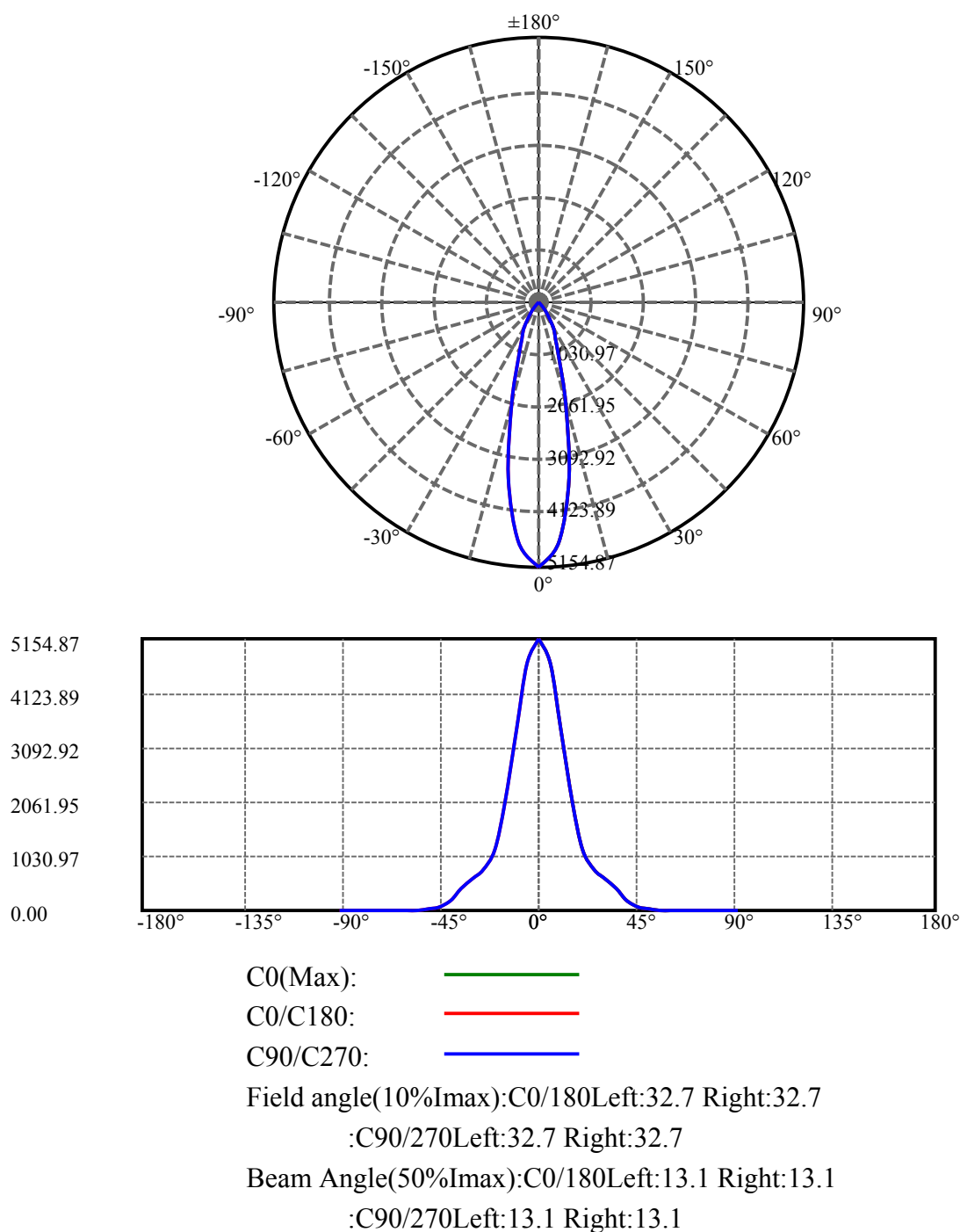
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5154.869	0.000	0	.000%	.000%
5.0	4679.966	117.573	117.573	5.903%	6.761%
10.0	3454.504	290.996	408.568	14.610%	23.494%
15.0	2039.589	325.906	734.474	16.362%	42.234%
20.0	1153.769	263.178	997.652	13.213%	57.368%
25.0	782.002	203.027	1200.678	10.193%	69.042%
30.0	622.950	177.798	1378.476	8.926%	79.266%
35.0	422.563	153.959	1532.435	7.730%	88.119%
40.0	205.452	104.779	1637.215	5.261%	94.144%
45.0	57.224	48.637	1685.851	2.442%	96.941%
50.0	16.167	14.830	1700.681	.745%	97.794%
55.0	9.127	5.500	1706.181	.276%	98.110%
60.0	8.849	4.155	1710.336	.209%	98.349%
65.0	8.765	4.282	1714.618	.215%	98.595%
70.0	8.793	4.446	1719.063	.223%	98.851%
75.0	9.169	4.695	1723.758	.236%	99.121%
80.0	9.419	4.974	1728.732	.250%	99.407%
85.0	10.838	5.504	1734.236	.276%	99.723%
90.0	6.734	4.811	1739.047	.242%	100.000%

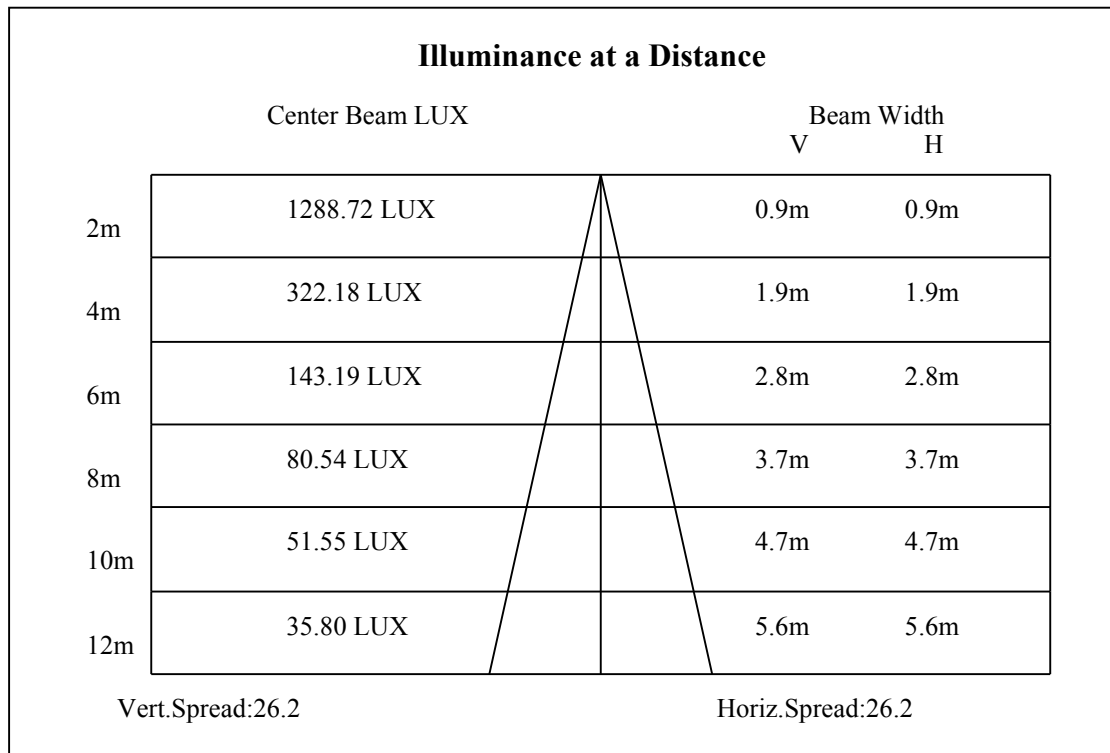
ZONAL LUMEN SUMMARY

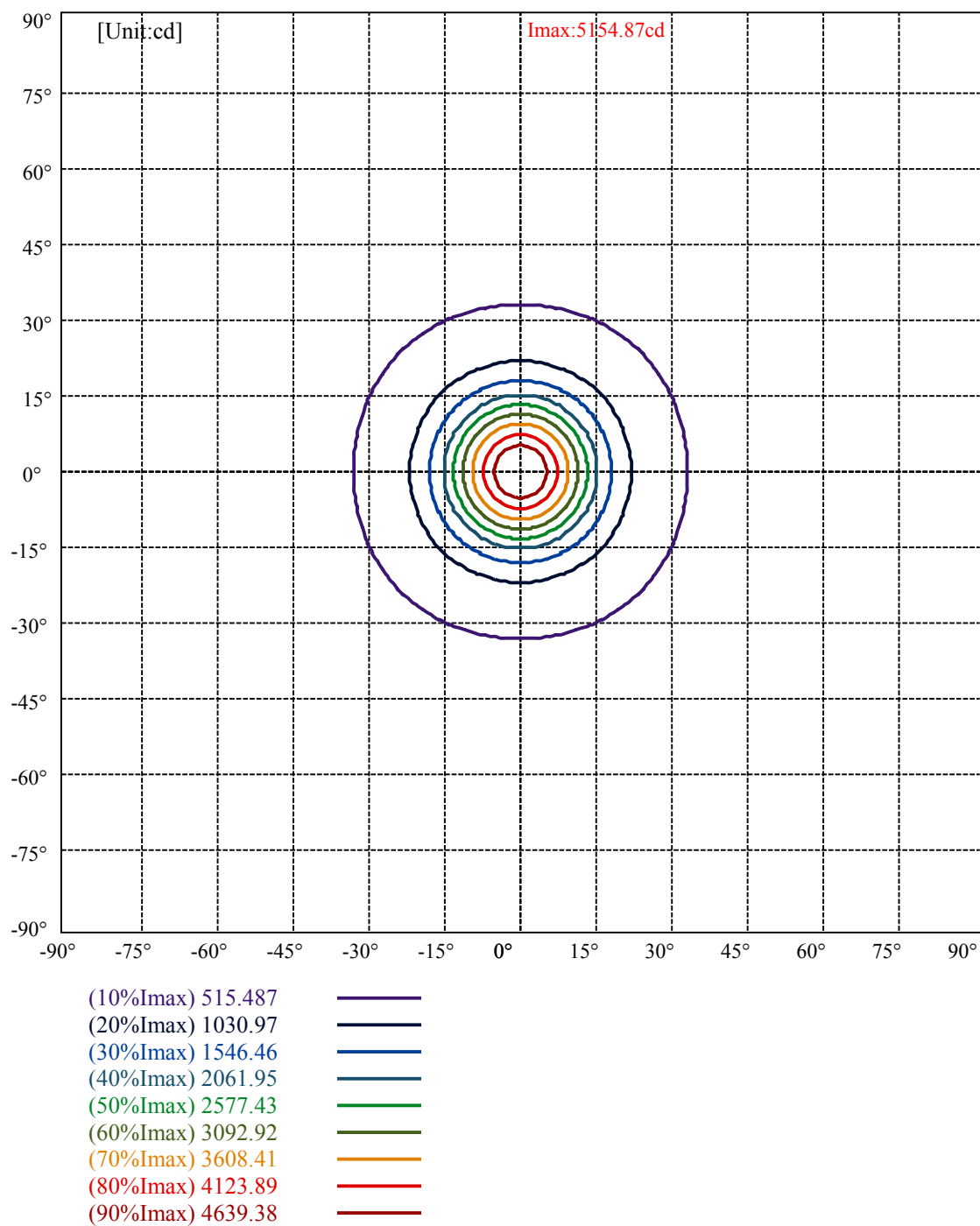
Zone	Lumens	%Lamp	%Fixt
0-30	1378.48	69.21%	79.27%
0-40	1637.21	82.20%	94.14%
0-60	1710.34	85.87%	98.35%
0-90	1734.24	87.07%	99.72%
0-120	1734.24	87.07%	99.72%
0-180	1739.05	87.31%	100.00%
60-90	28.06	1.41%	1.61%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-30.41	1391.24	69.85%	80.00%

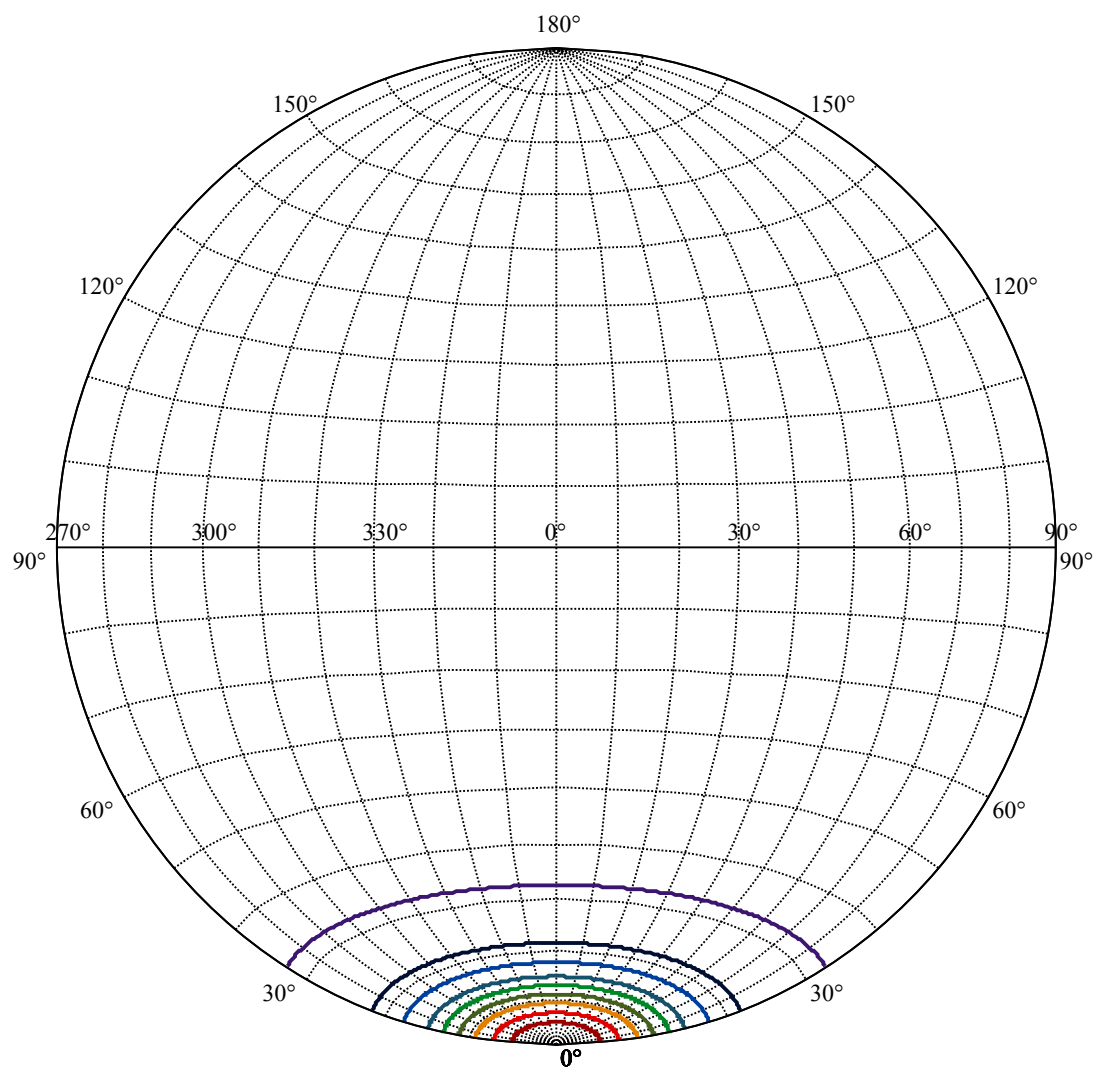
ZONAL LUMEN SUMMARY

0-10	408.57
10-20	589.08
20-30	380.82
30-40	258.74
40-50	63.47
50-60	9.65
60-70	8.73
70-80	9.67
80-90	5.50
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









House

[Unit:cd]

Road

Imax:5154.87

(10%Imax) 515.487

(20%Imax) 1030.97

(30%Imax) 1546.46

(40%Imax) 2061.95

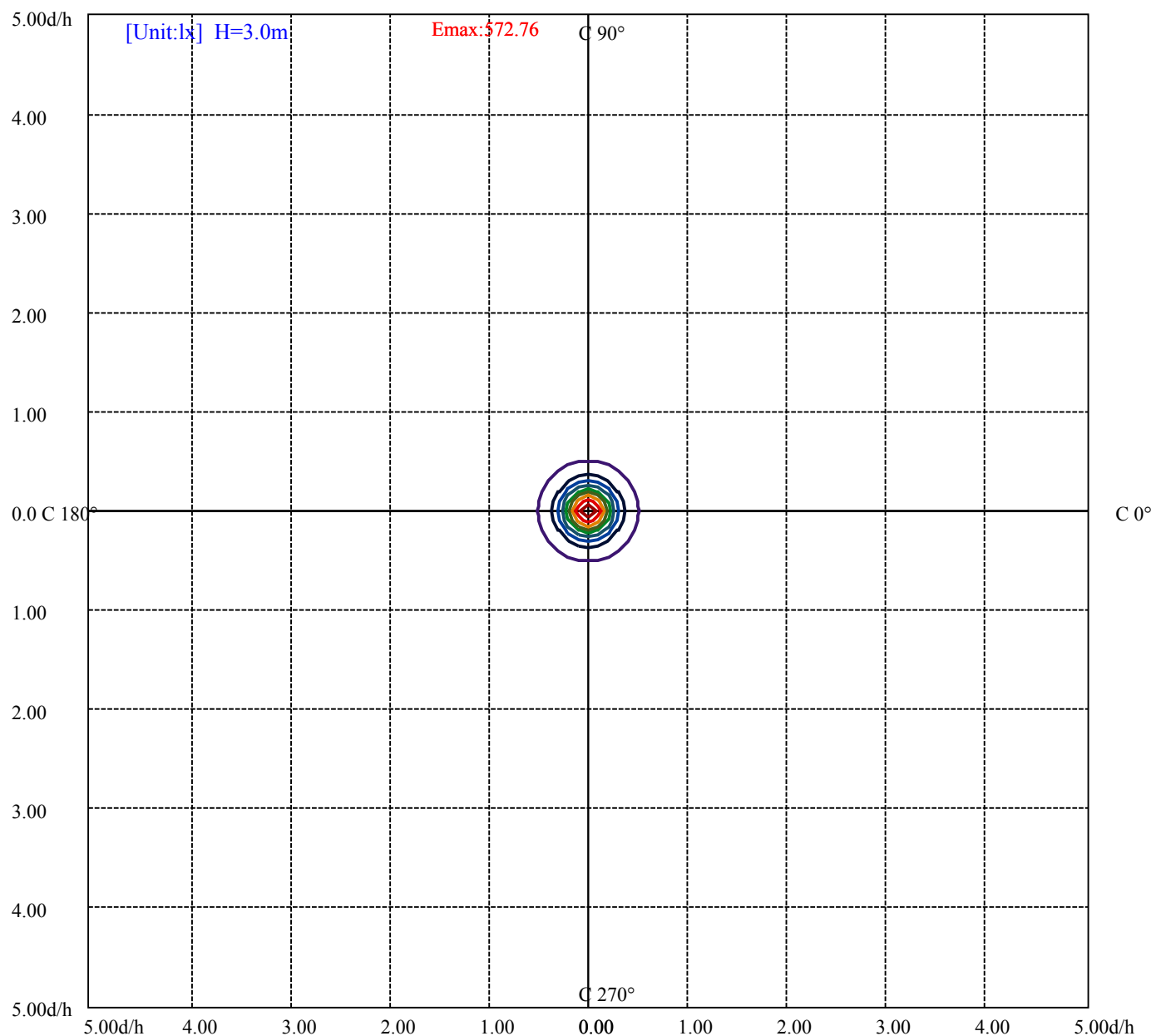
(50%Imax) 2577.43

(60%Imax) 3092.92

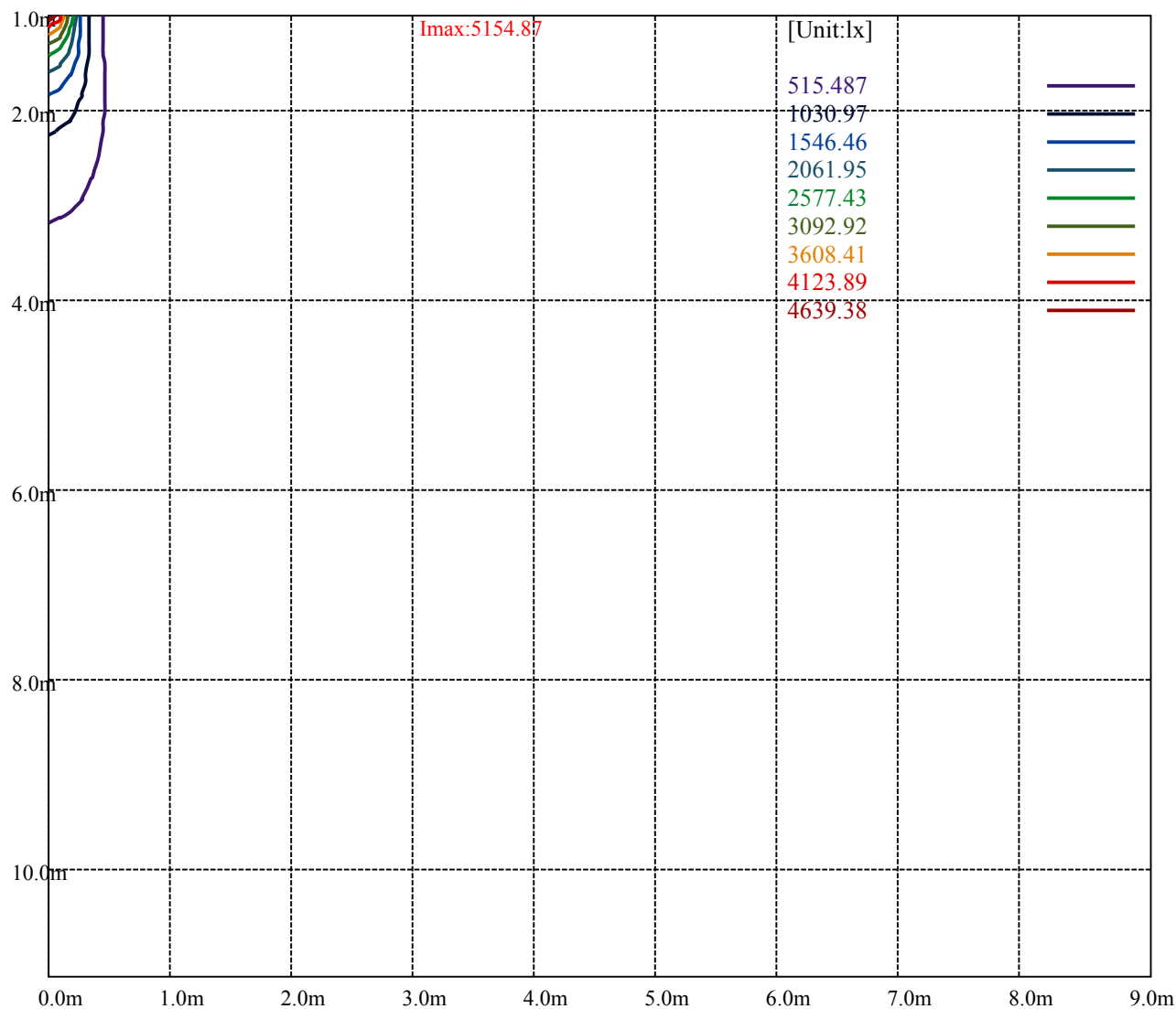
(70%Imax) 3608.41

(80%Imax) 4123.89

(90%Imax) 4639.38



(10%Emax)	57.27611	
(20%Emax)	114.5522	
(30%Emax)	171.8289	
(40%Emax)	229.1044	
(50%Emax)	286.3811	
(60%Emax)	343.6566	
(70%Emax)	400.9333	
(80%Emax)	458.2089	
(90%Emax)	515.4856	



Luminance Table

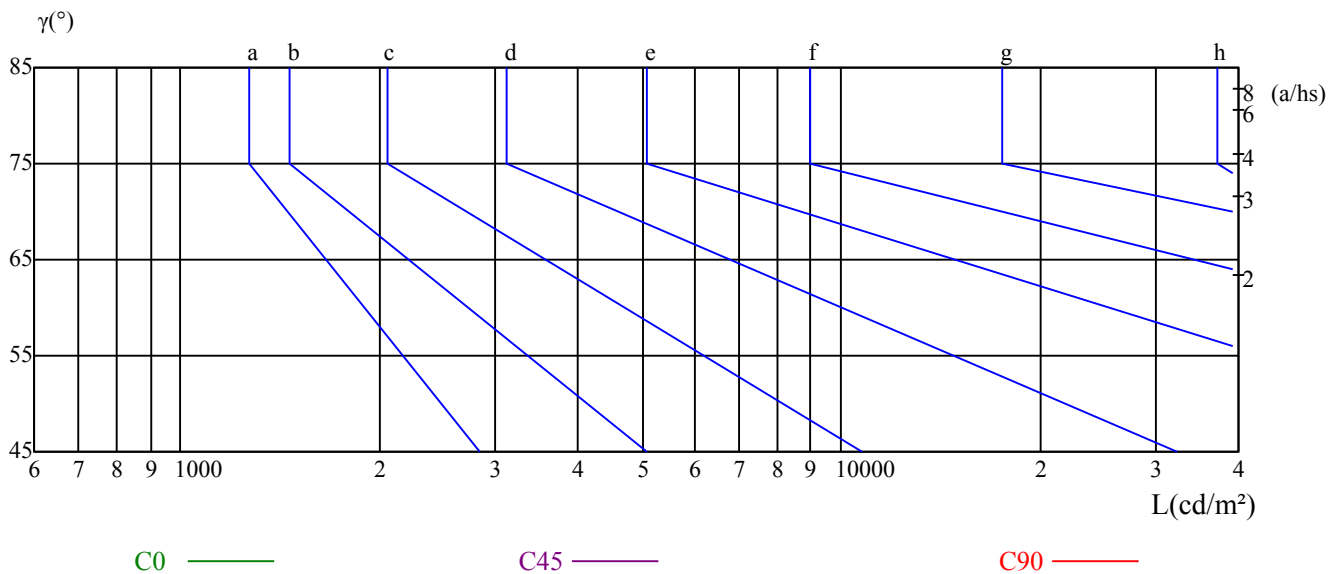
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

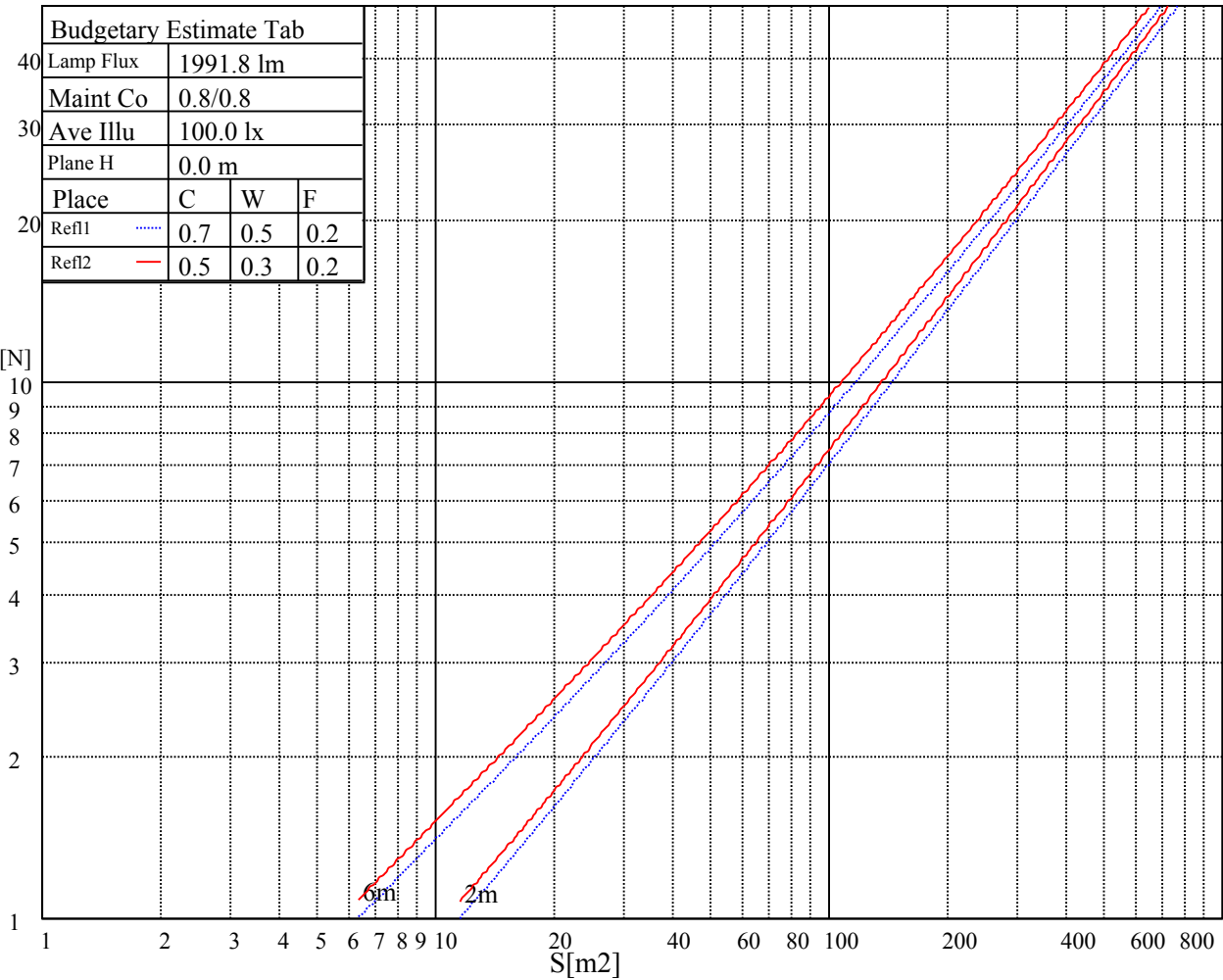
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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





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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.82
2	0.91	0.88	0.85	0.90	0.87	0.84	0.87	0.85	0.83	0.84	0.83	0.81	0.82	0.81	0.79	0.78
3	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.77	0.74	0.81	0.77	0.74	0.79	0.75	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.70	0.77	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.72	0.70	0.68	0.66
6	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
7	0.70	0.66	0.63	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55
10	0.62	0.58	0.55	0.62	0.57	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53

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	5168.92	4675.29	3416.45	1948.64	1100.62	771.11	637.10	432.25	202.02
45.0	5186.73	4716.36	3464.03	2009.19	1084.76	772.39	623.63	427.68	192.28
90.0	5055.39	4611.85	3473.49	2191.34	1344.93	812.12	607.44	402.64	235.24
135.0	5208.43	4716.36	3464.03	2009.19	1084.76	772.39	623.63	427.68	192.28
180.0	5168.92	4675.29	3416.45	1948.64	1100.62	771.11	637.10	432.25	202.02
225.0	5186.73	4716.36	3464.03	2009.19	1084.76	772.39	623.63	427.68	192.28
270.0	5055.39	4611.85	3473.49	2191.34	1344.93	812.12	607.44	402.64	235.24
315.0	5208.43	4716.36	3464.03	2009.19	1084.76	772.39	623.63	427.68	192.28
360.0	5168.92	4675.29	3416.45	1948.64	1100.62	771.11	637.10	432.25	202.02

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	46.19	11.91	8.79	8.51	8.46	8.40	8.51	8.57	9.29
45.0	52.48	14.53	9.02	8.79	8.68	8.74	8.85	9.24	11.07
90.0	77.75	23.71	9.68	9.29	9.24	9.29	10.46	10.63	11.91
135.0	52.48	14.53	9.02	8.79	8.68	8.74	8.85	9.24	11.07
180.0	46.19	11.91	8.79	8.51	8.46	8.40	8.51	8.57	9.29
225.0	52.48	14.53	9.02	8.79	8.68	8.74	8.85	9.24	11.07
270.0	77.75	23.71	9.68	9.29	9.24	9.29	10.46	10.63	11.91
315.0	52.48	14.53	9.02	8.79	8.68	8.74	8.85	9.24	11.07
360.0	46.19	11.91	8.79	8.51	8.46	8.40	8.51	8.57	9.29

C/ γ (°)	90.0
0.0	6.90
45.0	6.68
90.0	6.68
135.0	6.68
180.0	6.90
225.0	6.68
270.0	6.68
315.0	6.68
360.0	6.90