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Nata

LumCAT: 1-1010-M	
Luminaire: BJB 47.360.1020	
Report No: NATA0100	Voltage(V): 34.5600
Test No: GC2019102108	Current(A): 0.2970
LampCAT: CITIZEN CLU028	Power (W): 10.2600
Lamp flux(lm): 1571.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1080.43
Efficiency(%): 68.77%
Lumens(lm)/Power(W): 105.31
Central intensity(cd): 3550.922
Maximum intensity(cd): 3550.922
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=33.5
 [C90/270]Total=33.5
Field angle(10%Imax): [C0/180]Total=48.6
 [C90/270]Total=48.6
Maximum s/h(1/2): C0_180=0.56 C90_270=0.56
Maximum s/h(1/4): C0_180=0.52 C90_270=0.52
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 68.77%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.505%

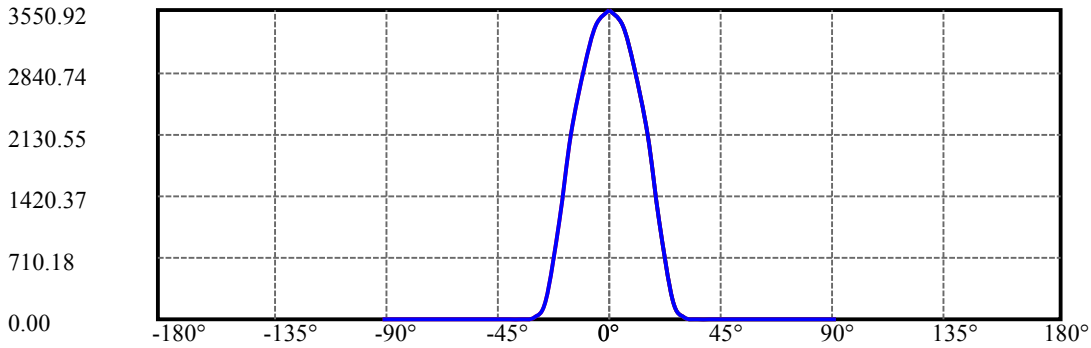
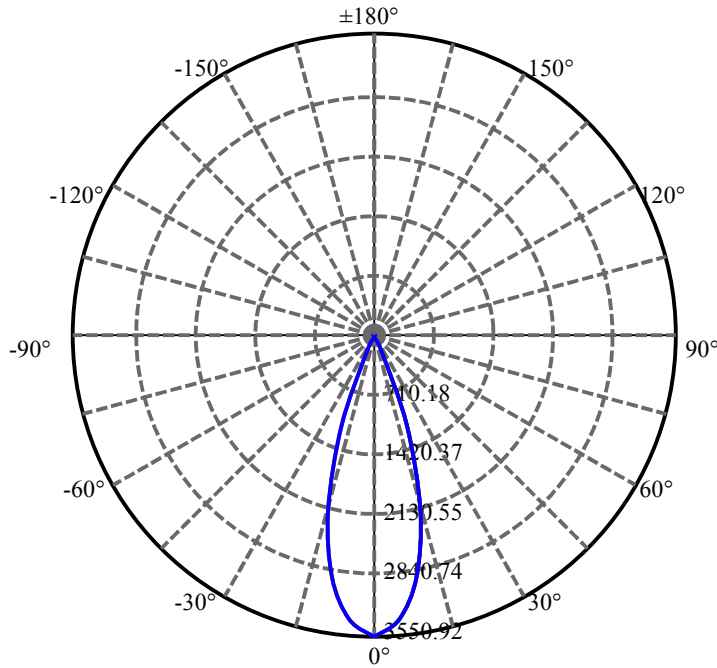
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3550.922	0.000	0	.000%	.000%
5.0	3368.813	82.723	82.723	5.266%	7.657%
10.0	2890.969	223.932	306.656	14.254%	28.383%
15.0	2121.047	297.309	603.965	18.925%	55.900%
20.0	1131.926	268.091	872.056	17.065%	80.713%
25.0	230.119	142.853	1014.909	9.093%	93.935%
30.0	21.220	31.807	1046.716	2.025%	96.879%
35.0	9.942	4.589	1051.305	.292%	97.304%
40.0	7.460	2.903	1054.208	.185%	97.573%
45.0	6.370	2.561	1056.769	.163%	97.810%
50.0	5.871	2.474	1059.243	.157%	98.039%
55.0	5.583	2.490	1061.733	.159%	98.269%
60.0	5.421	2.544	1064.277	.162%	98.505%
65.0	5.337	2.615	1066.892	.166%	98.747%
70.0	5.252	2.681	1069.573	.171%	98.995%
75.0	5.231	2.740	1072.314	.174%	99.248%
80.0	5.098	2.764	1075.077	.176%	99.504%
85.0	4.880	2.711	1077.788	.173%	99.755%
90.0	4.781	2.645	1080.434	.168%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1046.72	66.63%	96.88%
0-40	1054.21	67.10%	97.57%
0-60	1064.28	67.75%	98.50%
0-90	1077.79	68.61%	99.76%
0-120	1077.79	68.61%	99.76%
0-180	1080.43	68.77%	100.00%
60-90	16.06	1.02%	1.49%
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%
0-19.86	864.35	55.02%	80.00%

ZONAL LUMEN SUMMARY

0-10	306.66
10-20	565.40
20-30	174.66
30-40	7.49
40-50	5.03
50-60	5.03
60-70	5.30
70-80	5.50
80-90	2.71
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: —————

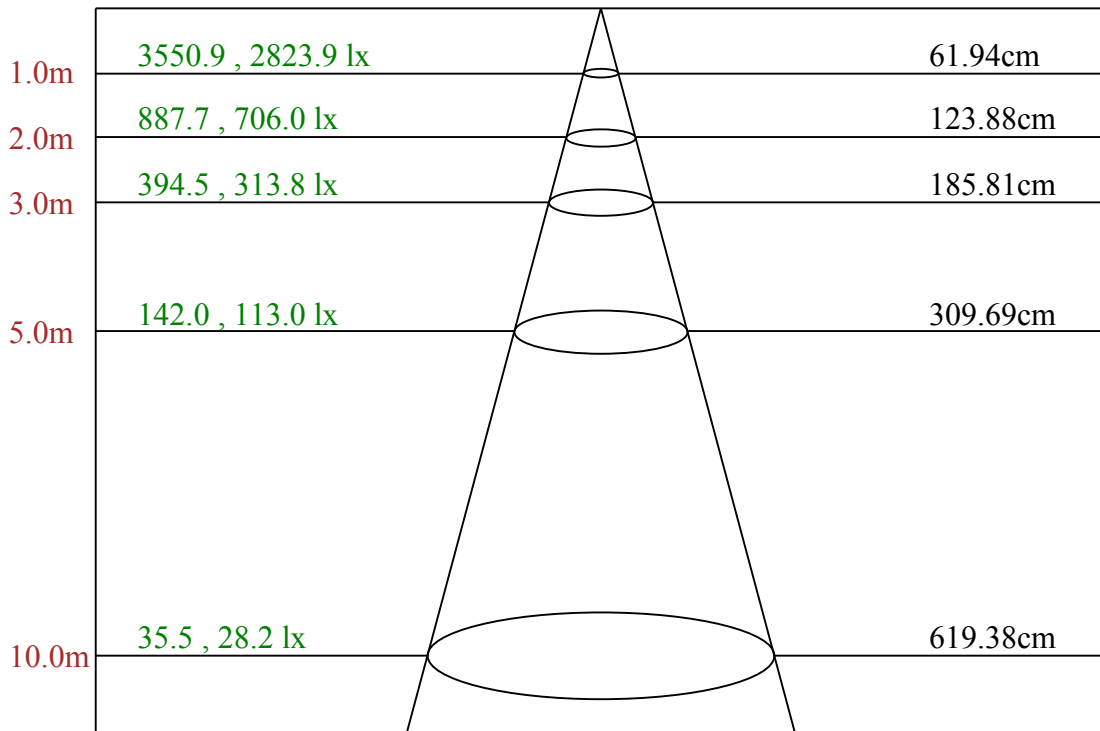
C90/C270: —————

Field angle(10%Imax):C0/180Left:24.3 Right:24.3

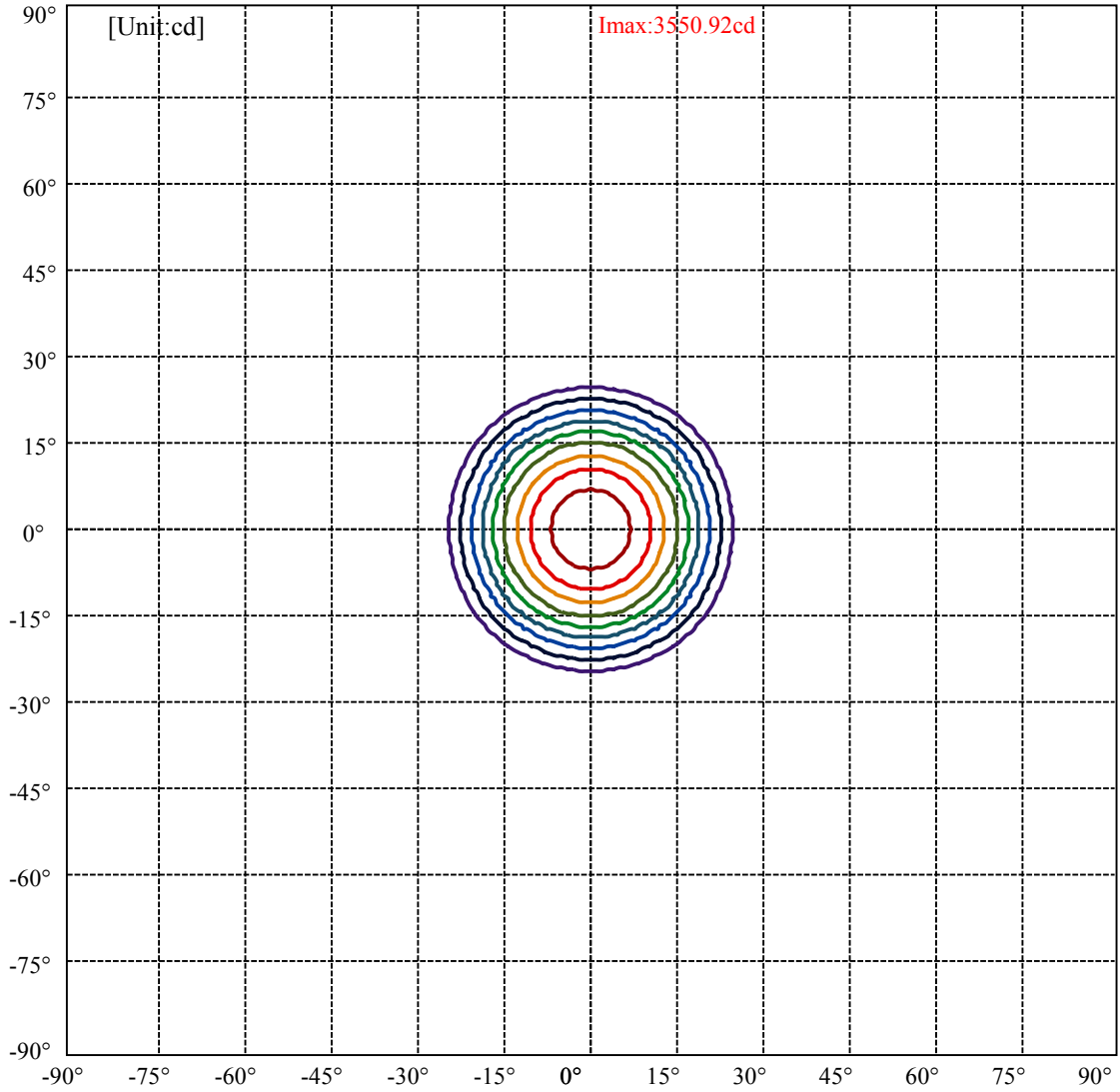
:C90/270Left:24.3 Right:24.3

Beam Angle(50%Imax):C0/180Left:16.7 Right:16.7

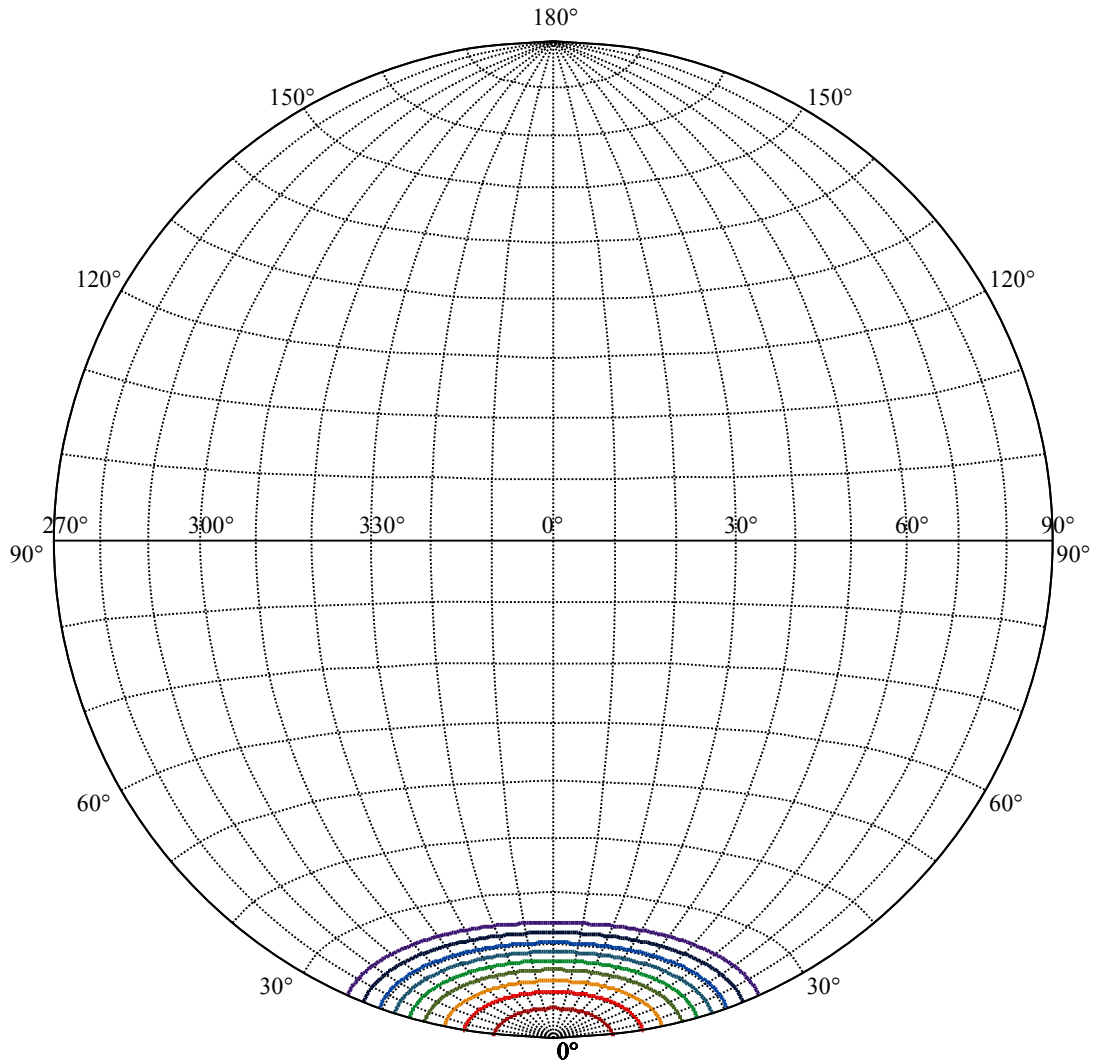
:C90/270Left:16.7 Right:16.7



Max , Ave Beam angle of C0 plane 34.41



(10%Imax) 355.092	—
(20%Imax) 710.184	—
(30%Imax) 1065.28	—
(40%Imax) 1420.37	—
(50%Imax) 1775.46	—
(60%Imax) 2130.55	—
(70%Imax) 2485.65	—
(80%Imax) 2840.74	—
(90%Imax) 3195.83	—



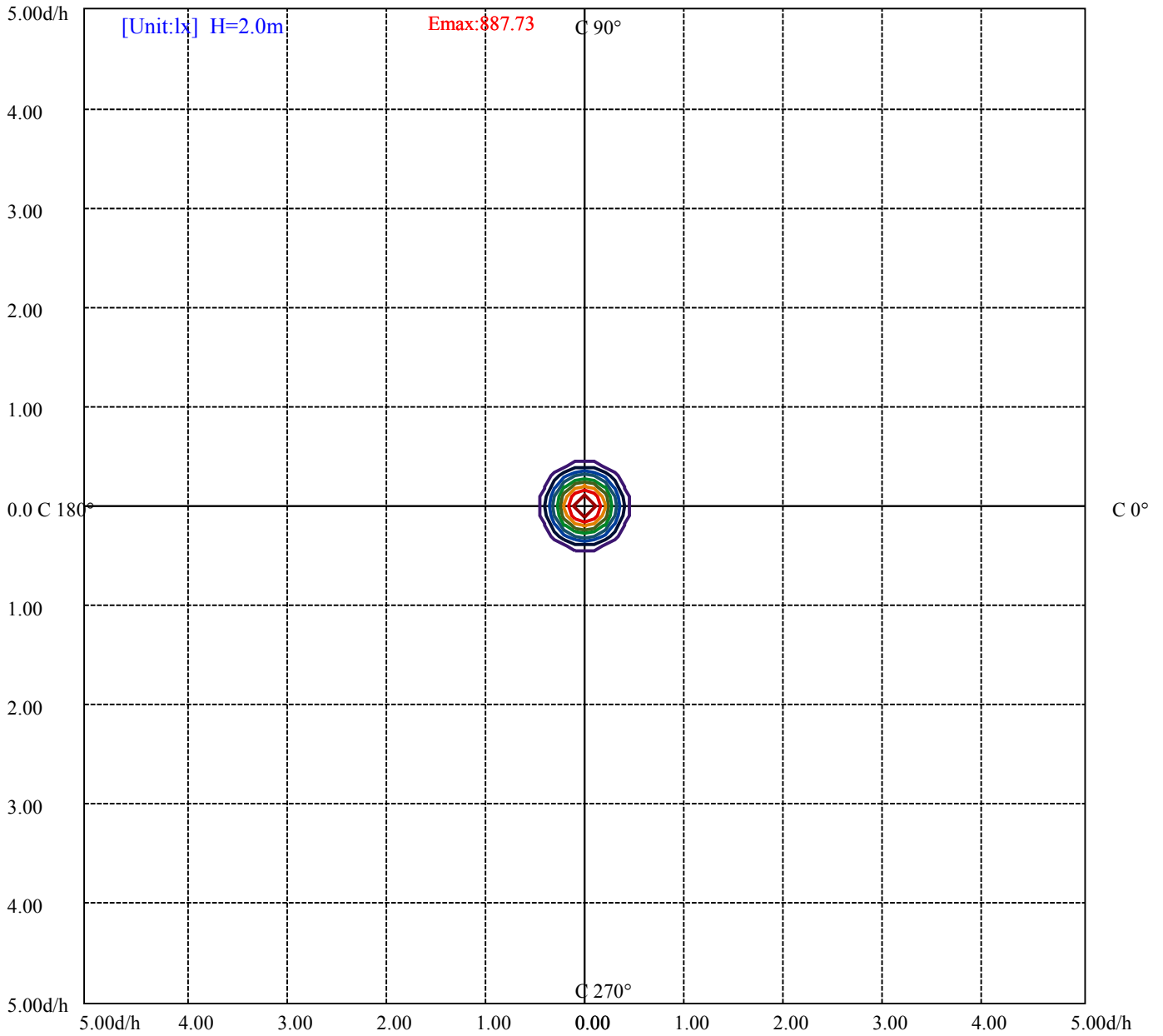
House

[Unit:cd]

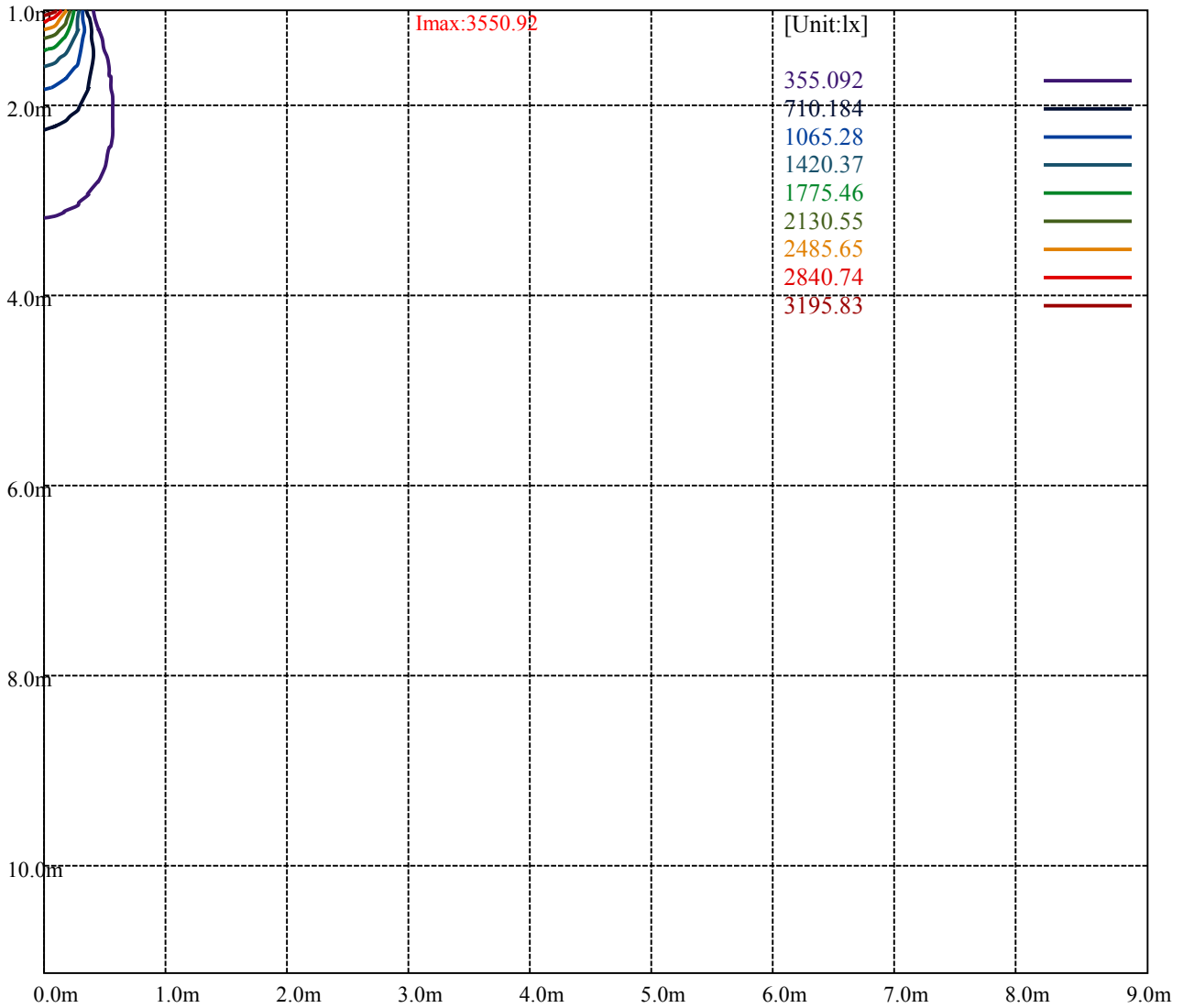
Road

Imax:3550.92

(10%Imax) 355.092	—
(20%Imax) 710.184	—
(30%Imax) 1065.28	—
(40%Imax) 1420.37	—
(50%Imax) 1775.46	—
(60%Imax) 2130.55	—
(70%Imax) 2485.65	—
(80%Imax) 2840.74	—
(90%Imax) 3195.83	—



- (10%Emax) 88.773
- (20%Emax) 177.5457
- (30%Emax) 266.3175
- (40%Emax) 355.0925
- (50%Emax) 443.865
- (60%Emax) 532.6375
- (70%Emax) 621.41
- (80%Emax) 710.1825
- (90%Emax) 798.955



Luminance Table

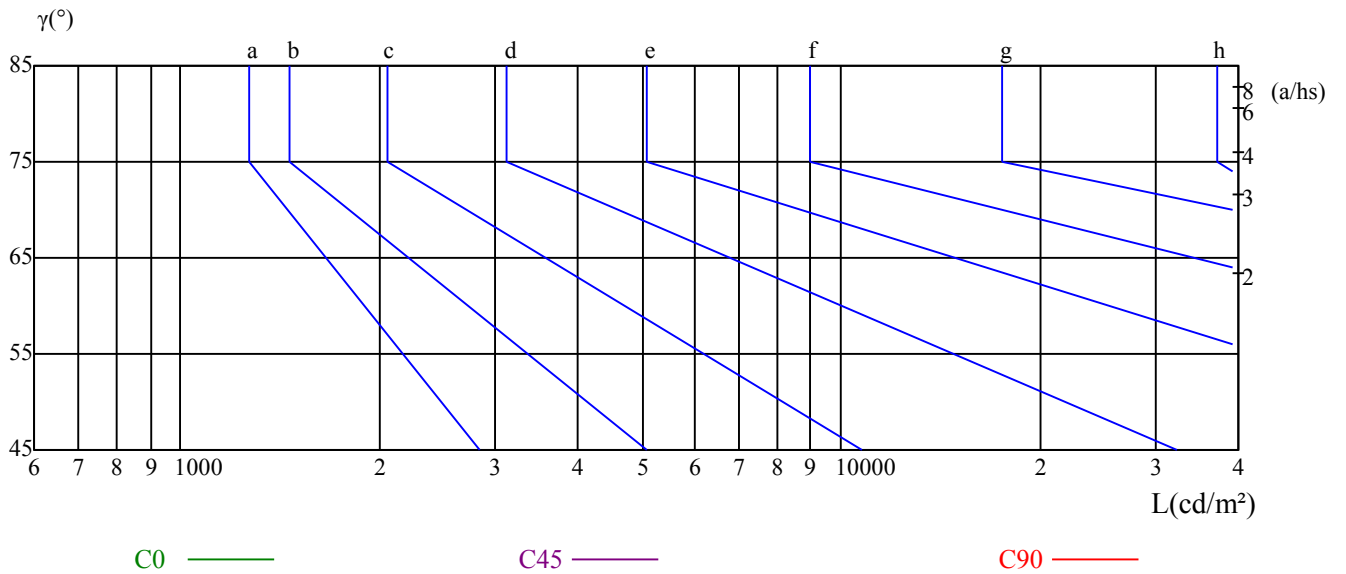
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

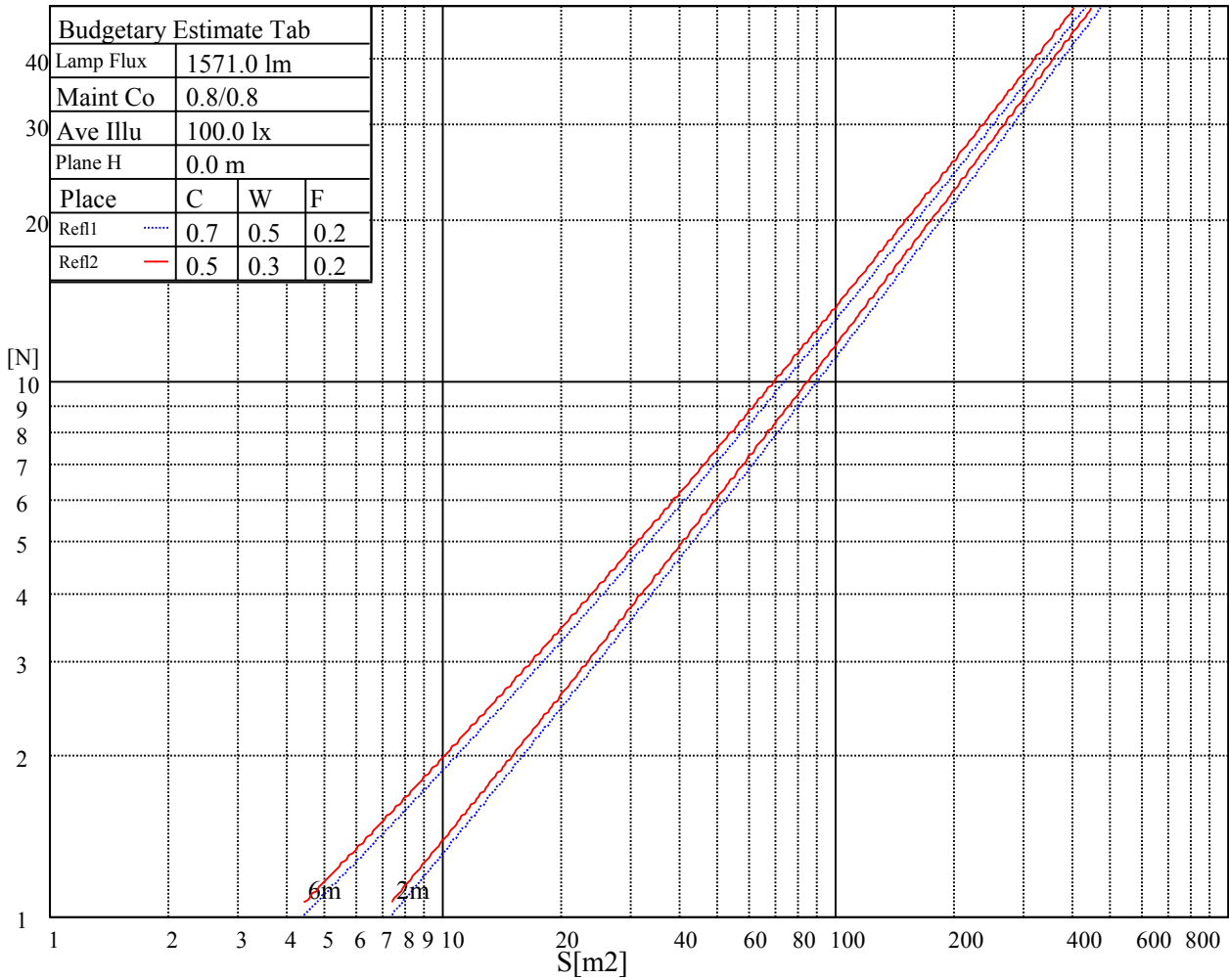
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

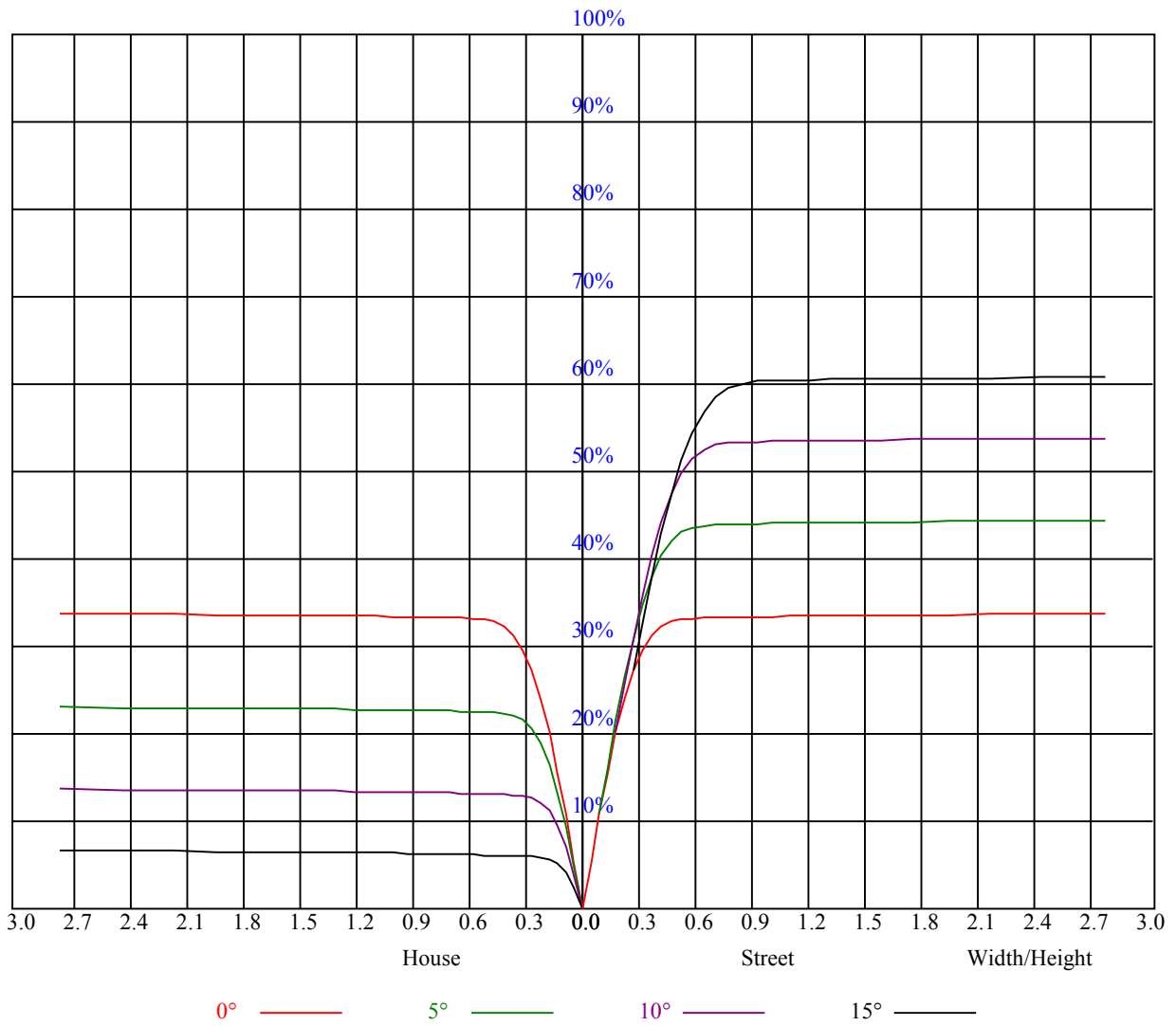
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.82	0.82	0.82	0.80	0.80	0.80	0.76	0.76	0.76	0.73	0.73	0.73	0.70	0.70	0.70	0.69
1	0.77	0.76	0.75	0.76	0.75	0.73	0.73	0.72	0.71	0.71	0.70	0.69	0.68	0.68	0.67	0.66
2	0.73	0.71	0.69	0.72	0.70	0.69	0.70	0.69	0.67	0.68	0.67	0.66	0.66	0.65	0.64	0.63
3	0.70	0.68	0.66	0.69	0.67	0.65	0.68	0.66	0.64	0.66	0.64	0.63	0.65	0.63	0.62	0.61
4	0.67	0.64	0.62	0.67	0.64	0.62	0.65	0.63	0.61	0.64	0.62	0.61	0.63	0.61	0.60	0.59
5	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.62	0.60	0.58	0.61	0.59	0.58	0.57
6	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.60	0.58	0.56	0.59	0.58	0.56	0.55
7	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.58	0.56	0.55	0.58	0.56	0.54	0.54
8	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.57	0.55	0.53	0.56	0.54	0.53	0.52
9	0.57	0.54	0.52	0.56	0.54	0.52	0.56	0.53	0.51	0.55	0.53	0.51	0.55	0.53	0.51	0.51
10	0.55	0.52	0.50	0.55	0.52	0.50	0.54	0.52	0.50	0.54	0.51	0.50	0.53	0.51	0.50	0.49



Nata 1-1010-M

Intensity data(cd)

C/\u03b3(\u00b0)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3547.69	3383.44	2939.06	2265.75	1242.00	312.19	24.64	10.13	7.43
45.0	3555.00	3412.13	2971.13	2206.69	1220.63	303.19	23.85	9.96	7.37
90.0	3553.88	3365.44	2800.69	2070.00	1059.86	164.81	21.26	9.73	7.31
135.0	3547.13	3436.31	2987.44	2268.56	1299.94	317.81	26.04	10.97	7.65
180.0	3547.69	3360.38	2836.13	2008.13	1046.93	159.41	18.62	9.45	7.31
225.0	3555.00	3319.88	2851.31	2021.63	1007.89	152.94	18.17	9.68	7.48
270.0	3553.88	3368.81	2944.69	2172.94	1181.81	310.50	20.81	10.24	7.82
315.0	3547.13	3304.13	2797.31	1954.69	996.36	120.09	16.37	9.39	7.31
360.0	3547.69	3383.44	2939.06	2265.75	1242.00	312.19	24.64	10.13	7.43

C/\u03b3(\u00b0)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.24	5.74	5.40	5.23	5.12	5.01	4.95	4.95	4.84
45.0	6.30	5.85	5.51	5.40	5.29	5.23	5.23	5.18	4.95
90.0	6.36	5.85	5.57	5.46	5.40	5.40	5.40	4.95	4.84
135.0	6.36	5.85	5.46	5.29	5.18	5.06	5.06	5.01	4.84
180.0	6.24	5.68	5.46	5.23	5.12	5.01	4.95	4.89	4.84
225.0	6.47	6.02	5.74	5.57	5.51	5.40	5.34	5.23	5.01
270.0	6.69	6.13	5.91	5.79	5.74	5.68	5.74	5.46	4.89
315.0	6.30	5.85	5.63	5.40	5.34	5.23	5.18	5.12	4.84
360.0	6.24	5.74	5.40	5.23	5.12	5.01	4.95	4.95	4.84

C/\u03b3(\u00b0)	90.0
0.0	4.73
45.0	4.84
90.0	4.78
135.0	4.78
180.0	4.73
225.0	4.84
270.0	4.78
315.0	4.78
360.0	4.73