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Nata

LumCAT: 1407-N	
Luminaire: 92.70.064.00	
Report No: NT2018032902	Voltage(V): 9.3000
Test No: nata-0100	Current(A): 0.3200
LampCAT: CITIZEN CLU700	Power (W): 2.9760
Lamp flux(lm): 309.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 39	Width(mm): 39
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 260.81
Efficiency(%): 84.41%
Lumens(lm)/Power(W): 87.64
Central intensity(cd): 330.944
Maximum intensity(cd): 330.944
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=43.7
 [C90/270]Total=43.7
Field angle(10%Imax): [C0/180]Total=92.1
 [C90/270]Total=92.1
Maximum s/h(1/2): C0_180=0.67 C90_270=0.67
Maximum s/h(1/4): C0_180=0.76 C90_270=0.76
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.97%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.832%

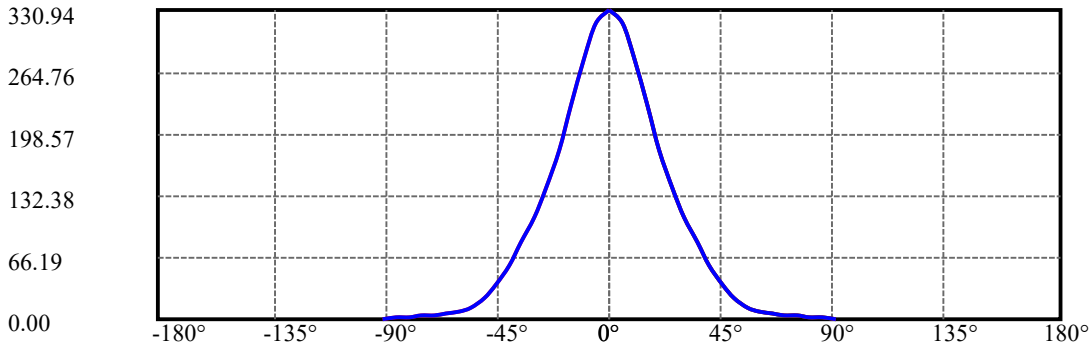
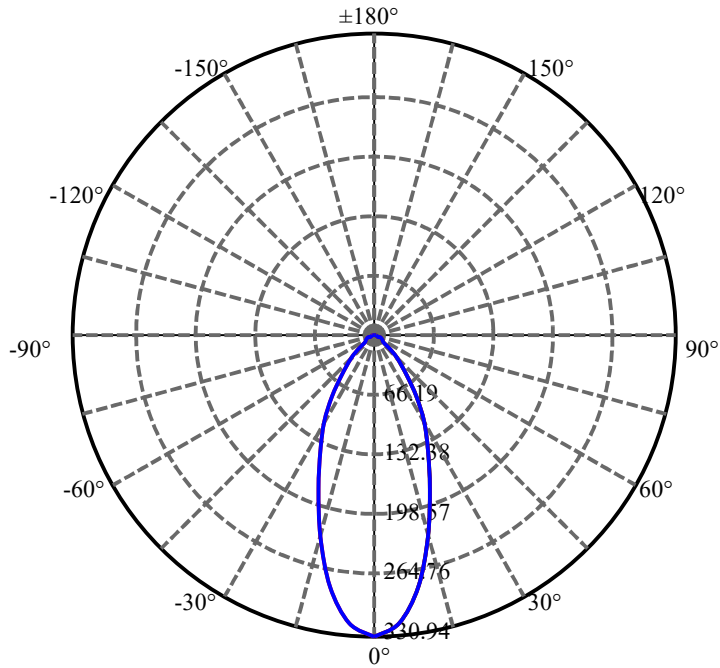
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	330.944	1.979	1.979	.640%	.759%
5.0	317.132	15.150	17.13	4.903%	6.568%
10.0	279.336	26.588	43.718	8.605%	16.762%
15.0	228.284	32.386	76.104	10.481%	29.179%
20.0	180.303	33.802	109.906	10.939%	42.140%
25.0	140.311	32.504	142.41	10.519%	54.602%
30.0	109.555	30.026	172.435	9.717%	66.114%
35.0	81.366	25.582	198.017	8.279%	75.923%
40.0	57.293	20.186	218.203	6.533%	83.662%
45.0	36.014	13.959	232.162	4.517%	89.014%
50.0	21.899	9.195	241.357	2.976%	92.540%
55.0	13.303	5.973	247.33	1.933%	94.830%
60.0	9.002	4.273	251.603	1.383%	96.468%
65.0	6.263	3.111	254.714	1.007%	97.661%
70.0	4.473	2.304	257.019	.746%	98.545%
75.0	3.104	1.643	258.662	.532%	99.175%
80.0	2.127	1.148	259.81	.371%	99.615%
85.0	1.356	0.740	260.55	.240%	99.899%
90.0	0.963	0.264	260.814	.085%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	172.44	55.80%	66.11%
0-40	218.20	70.62%	83.66%
0-60	251.60	81.42%	96.47%
0-90	260.55	84.32%	99.90%
0-120	260.55	84.32%	99.90%
0-180	260.81	84.41%	100.00%
60-90	13.22	4.28%	5.07%
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%
0-37.63	208.65	67.52%	80.00%

ZONAL LUMEN SUMMARY

0-10	43.72
10-20	66.19
20-30	62.53
30-40	45.77
40-50	23.15
50-60	10.25
60-70	5.42
70-80	2.79
80-90	0.74
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: —————

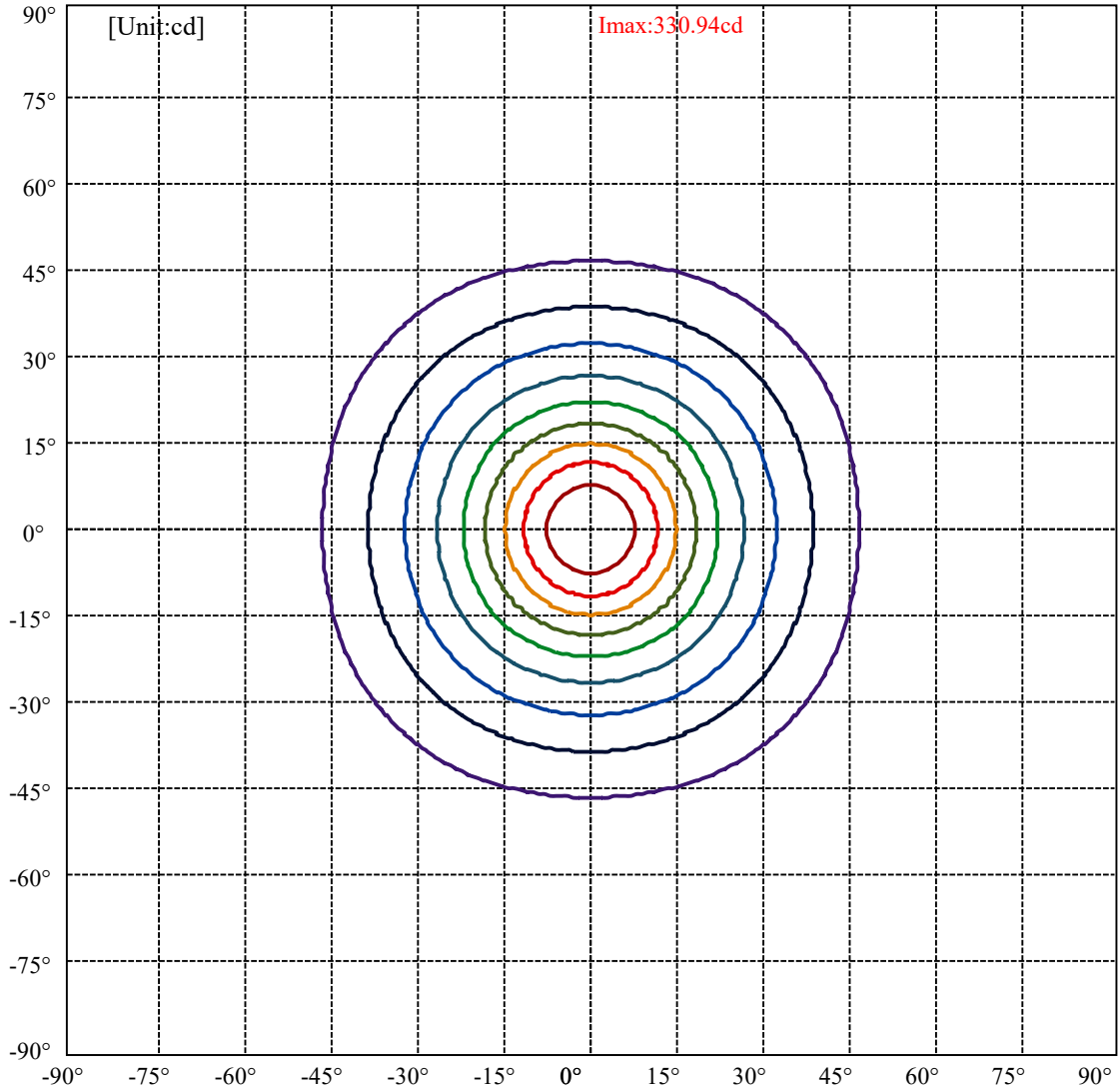
C90/C270: —————

Field angle(10%Imax):C0/180Left:46.0 Right:46.0

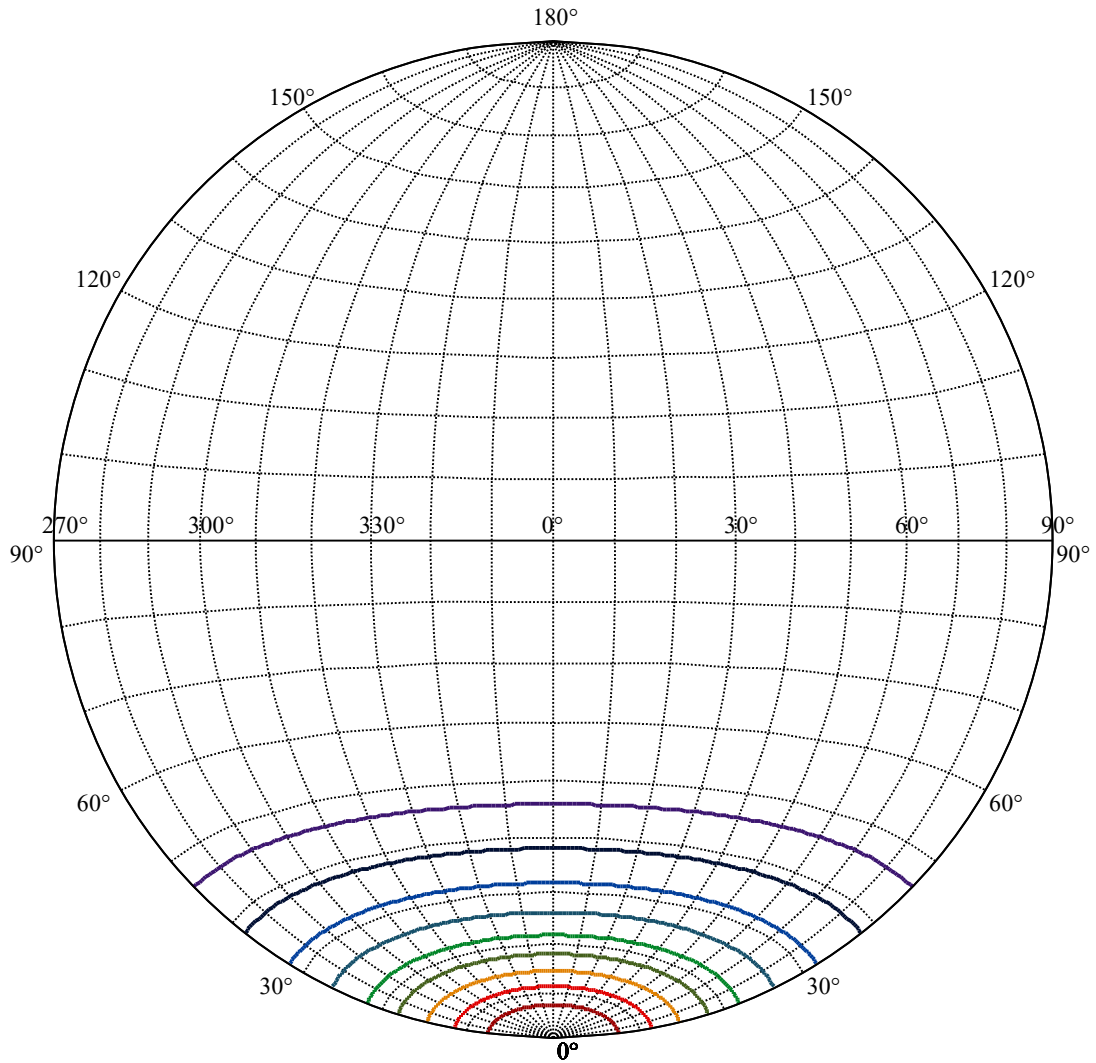
:C90/270Left:46.0 Right:46.0

Beam Angle(50%Imax):C0/180Left:21.9 Right:21.9

:C90/270Left:21.9 Right:21.9



(10%Imax) 33.0944	—
(20%Imax) 66.1888	—
(30%Imax) 99.2832	—
(40%Imax) 132.378	—
(50%Imax) 165.472	—
(60%Imax) 198.566	—
(70%Imax) 231.661	—
(80%Imax) 264.755	—
(90%Imax) 297.85	—



House

[Unit:cd]

Road

Imax:330.94

(10%Imax) 33.0944

(20%Imax) 66.1888

(30%Imax) 99.2832

(40%Imax) 132.378

(50%Imax) 165.472

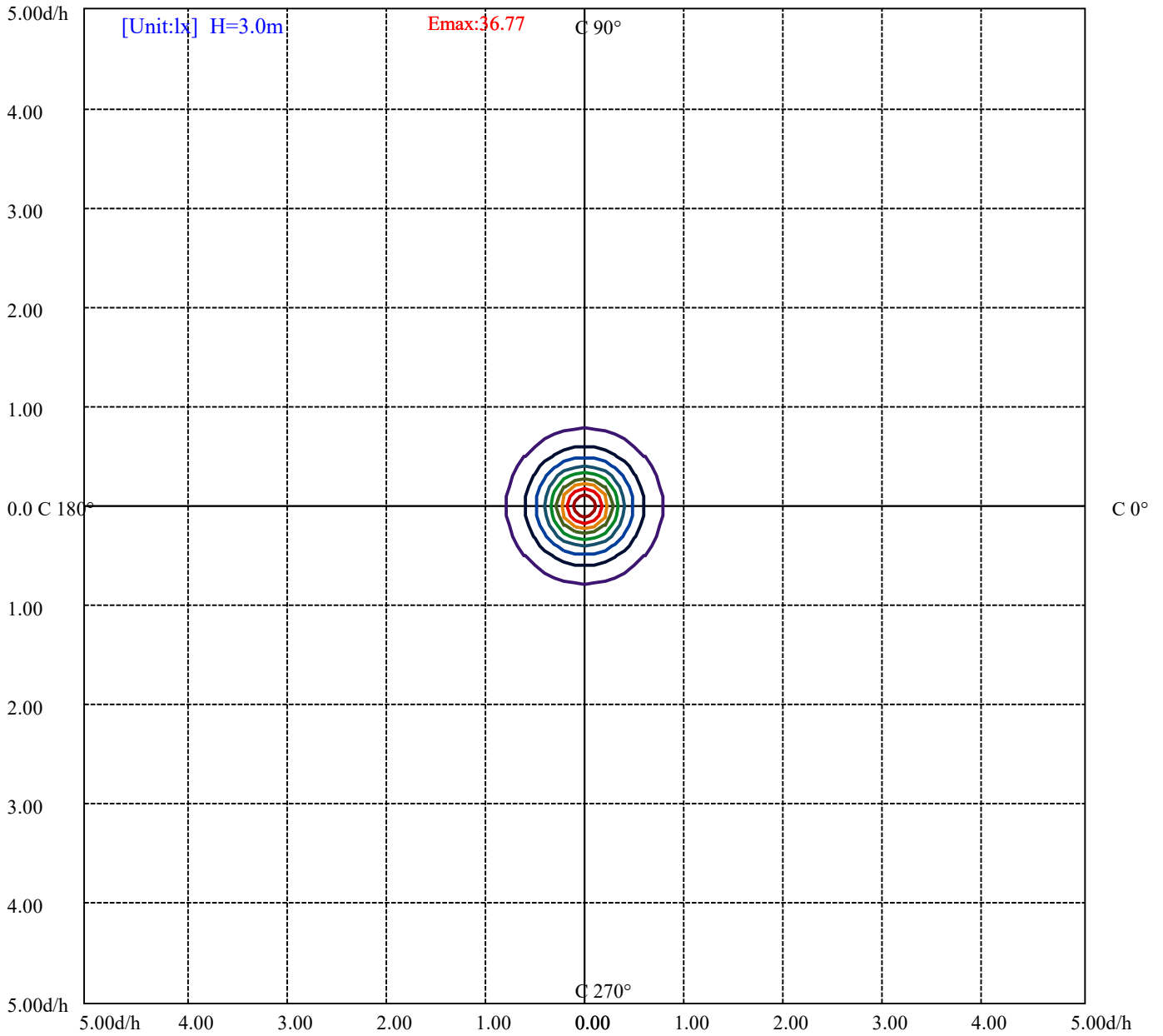
(60%Imax) 198.566

(70%Imax) 231.661

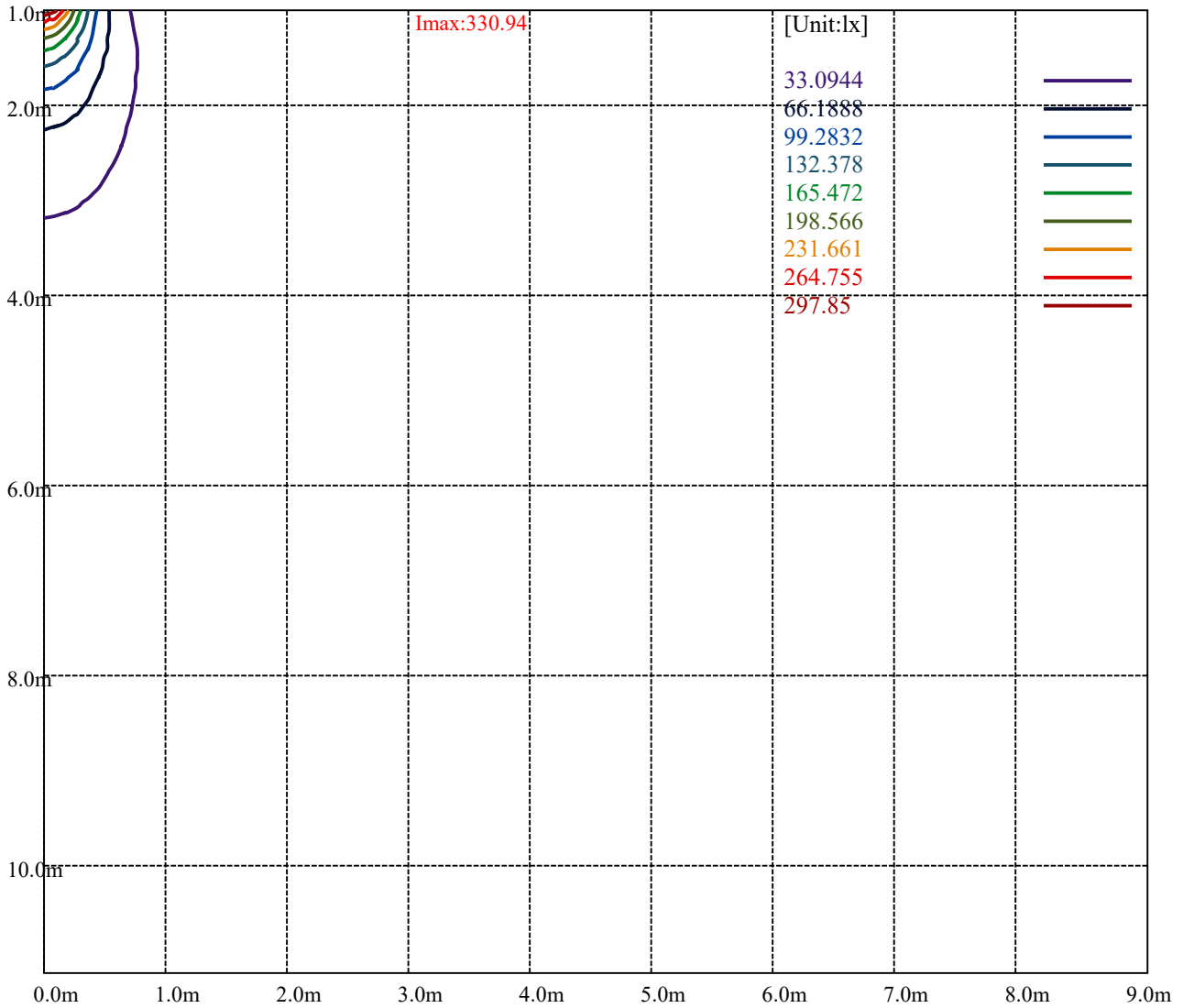
(80%Imax) 264.755

(90%Imax) 297.85





- (10%Emax) 3.677155
- (20%Emax) 7.3543
- (30%Emax) 11.03146
- (40%Emax) 14.70856
- (50%Emax) 18.38578
- (60%Emax) 22.06289
- (70%Emax) 25.74011
- (80%Emax) 29.41722
- (90%Emax) 33.09433



Luminance Table

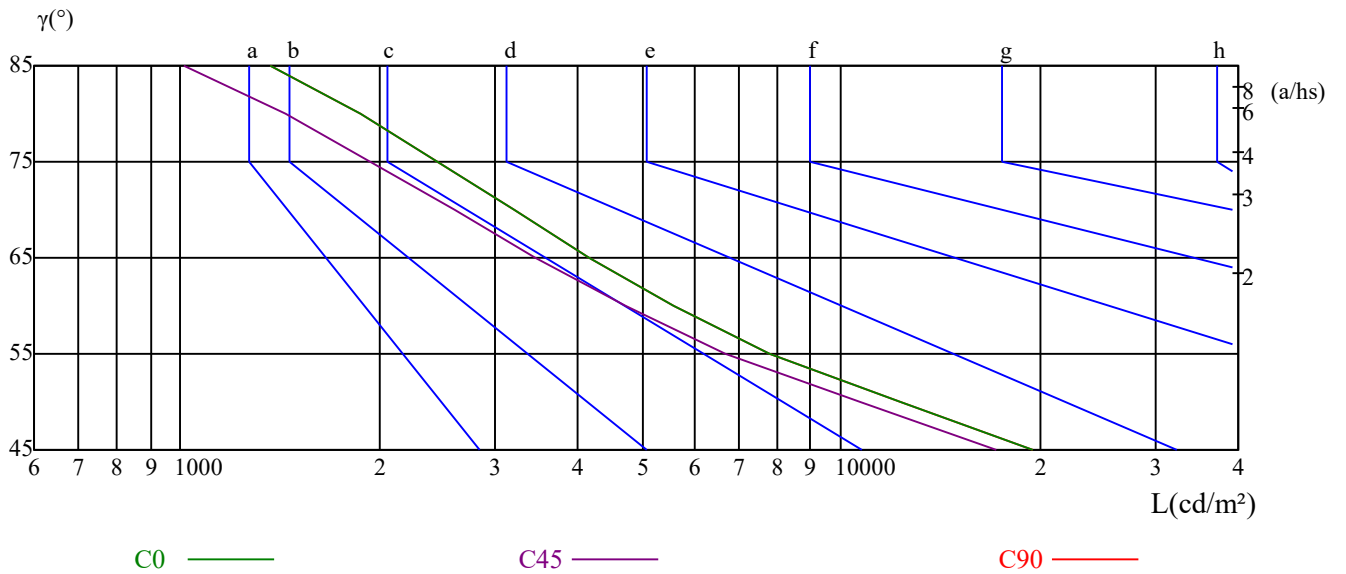
γ	45	50	55	60	65	70	75	80	85
C0	19559	12321	7826	5593	4156	3212	2448	1876	1369
C45	17253	10714	6702	4711	3437	2601	1935	1441	1014
C90	19559	12321	7826	5593	4156	3212	2448	1876	1369

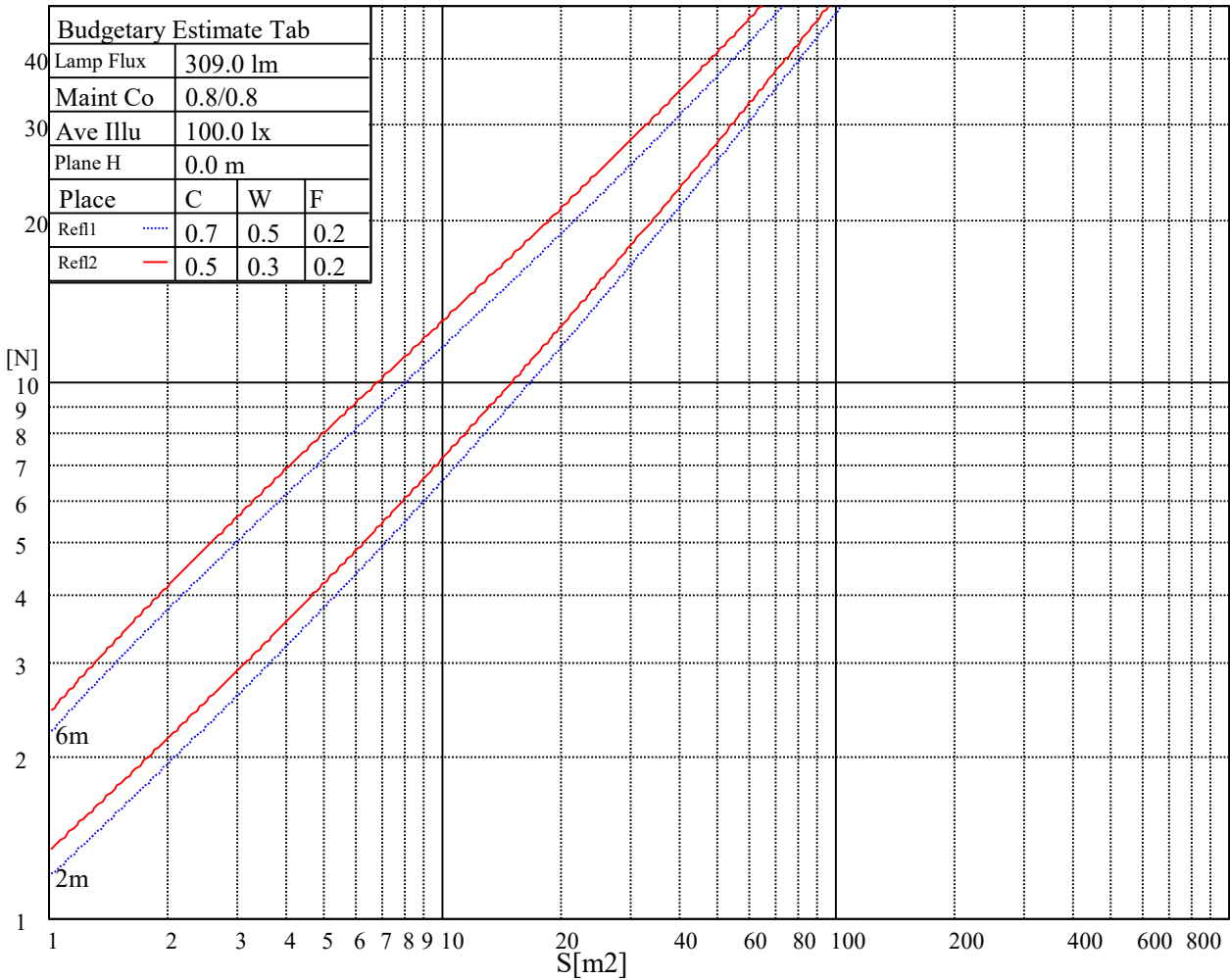
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8401	8401	8401	6798	6798	6798	8818	8818	8818

Glare Table

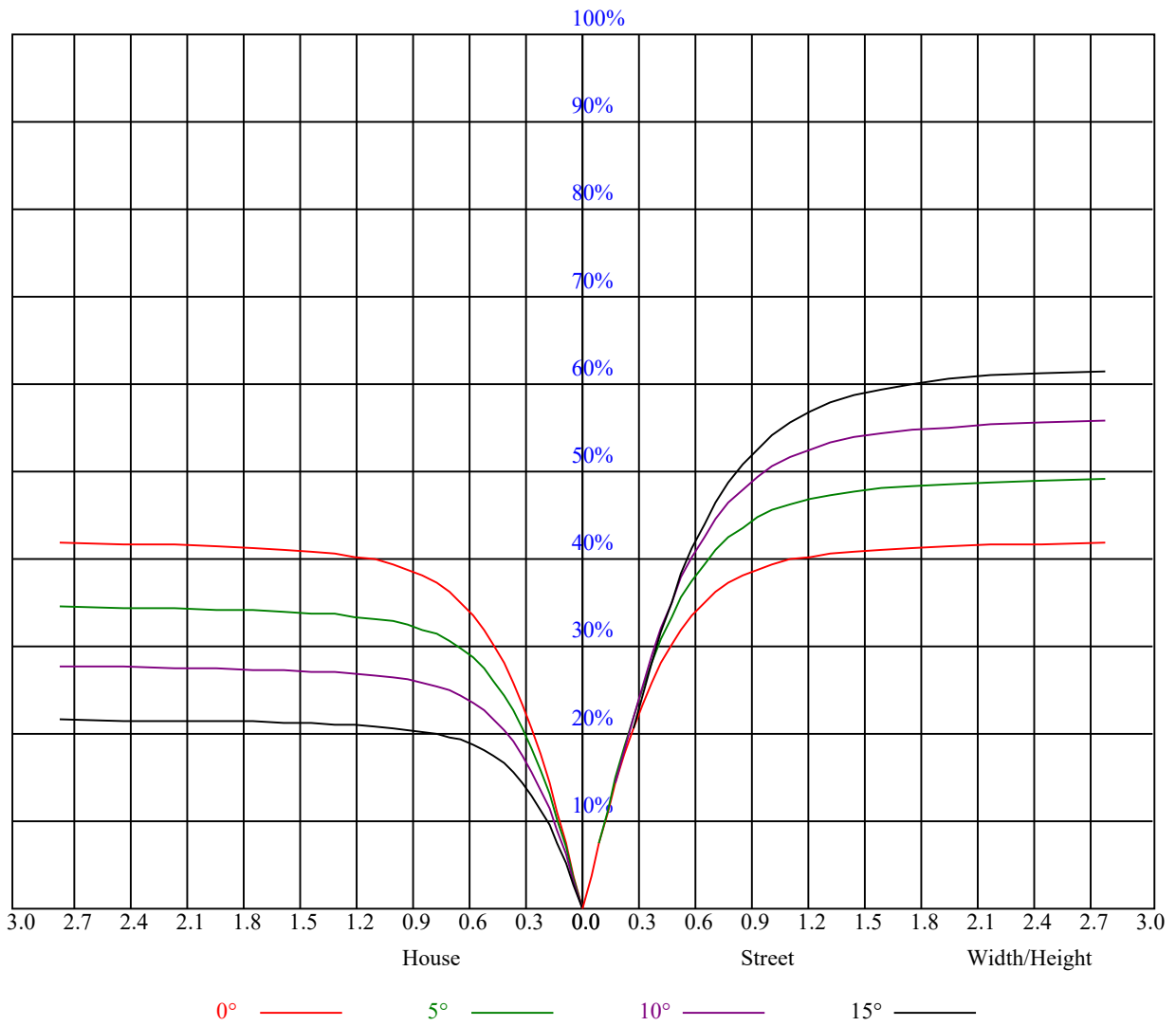
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.93	0.90	0.88	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.81	0.81	0.80	0.79	0.77
2	0.86	0.82	0.79	0.84	0.81	0.78	0.81	0.79	0.76	0.79	0.76	0.74	0.76	0.75	0.73	0.71
3	0.80	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.68	0.72	0.70	0.67	0.66
4	0.74	0.69	0.65	0.73	0.69	0.65	0.71	0.67	0.64	0.70	0.66	0.63	0.68	0.65	0.63	0.61
5	0.69	0.64	0.60	0.69	0.64	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.64	0.61	0.58	0.57
6	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.53
7	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
8	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.47
9	0.55	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.49	0.46	0.45
10	0.52	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.44	0.50	0.46	0.43	0.42



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	330.56	309.97	266.31	213.45	171.45	134.39	105.16	76.58	52.36
45.0	331.94	309.97	265.54	211.03	167.21	132.30	102.29	73.67	49.28
90.0	331.00	311.62	263.67	209.60	162.09	123.82	96.35	69.87	47.68
135.0	330.28	326.32	294.17	243.13	193.80	152.73	120.57	89.36	63.31
180.0	330.56	326.92	295.32	251.44	197.87	152.01	117.44	89.91	65.96
225.0	331.94	325.82	298.30	250.34	200.24	154.32	121.67	91.78	66.51
270.0	331.00	320.26	288.33	236.74	186.42	147.66	114.13	86.93	62.71
315.0	330.28	306.17	263.06	210.54	163.35	125.25	98.83	72.84	50.54
360.0	330.56	309.97	266.31	213.45	171.45	134.39	105.16	76.58	52.36
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.16	18.55	12.28	8.26	5.67	4.02	2.75	1.82	1.10
45.0	29.23	17.45	11.07	7.82	5.40	3.85	2.59	1.76	1.16
90.0	29.84	18.28	11.29	7.98	5.56	3.96	2.70	1.82	1.16
135.0	39.31	23.73	13.87	9.36	6.50	4.68	3.36	2.31	1.43
180.0	42.34	26.15	14.98	9.58	6.72	4.79	3.36	2.37	1.60
225.0	43.88	26.65	15.69	10.35	7.10	5.07	3.52	2.53	1.65
270.0	41.51	25.27	15.25	10.41	7.27	5.23	3.74	2.53	1.54
315.0	30.83	19.10	12.00	8.26	5.89	4.18	2.81	1.87	1.21
360.0	31.16	18.55	12.28	8.26	5.67	4.02	2.75	1.82	1.10
C/γ(°)	90.0								
0.0	0.88								
45.0	0.94								
90.0	0.94								
135.0	0.94								
180.0	1.05								
225.0	1.10								
270.0	0.99								
315.0	0.88								
360.0	0.88								