



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.cn
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 3-2729-L	
Luminaire: 99.70.131.00	
Report No: 220816-B011	Voltage(V): 35.5300
Test No: 220816-C011	Current(A): 0.4810
LampCAT: CITIZEN CLU038	Power (W): 17.0890
Lamp flux(lm): 2260.8	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1973.30
Efficiency(%): 87.28%
Lumens(lm)/Power(W): 115.47
Central intensity(cd): 4232.148
Maximum intensity(cd): 4232.148
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=37.3
 [C90/270]Total=37.3
Field angle(10%Imax): [C0/180]Total=66.1
 [C90/270]Total=66.1
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
Maximum s/h(1/4): C0_180=0.61 C90_270=0.61
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.28%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.043%

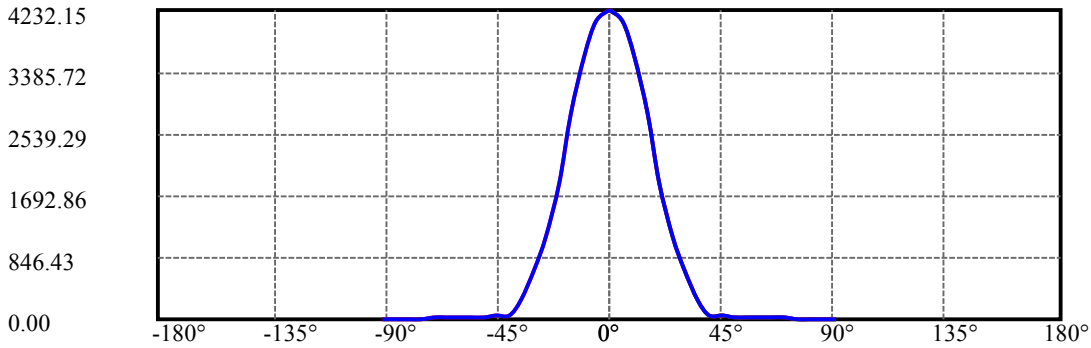
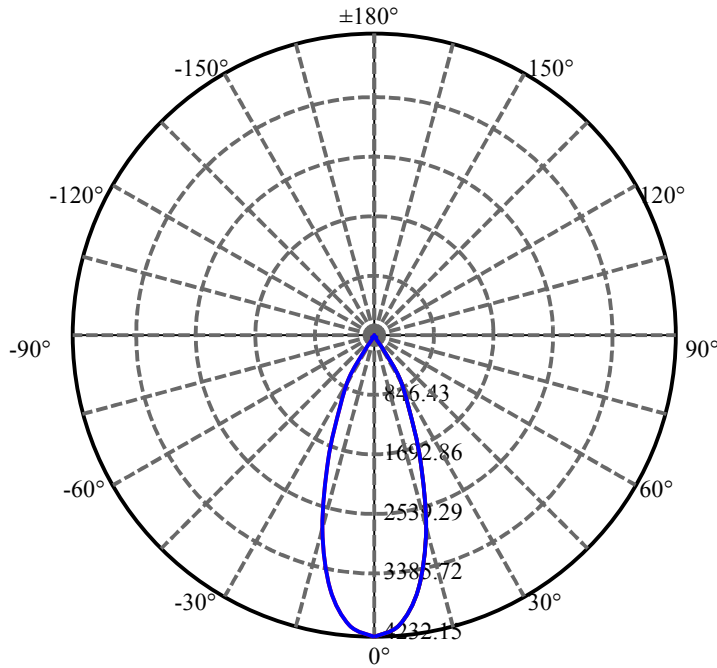
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4232.149	0.000	0	.000%	.000%
5.0	4079.555	99.364	99.364	4.395%	5.035%
10.0	3602.502	274.811	374.175	12.155%	18.962%
15.0	2805.025	380.090	754.266	16.812%	38.224%
20.0	1861.751	384.608	1138.874	17.012%	57.714%
25.0	1141.348	314.970	1453.843	13.932%	73.676%
30.0	684.858	231.108	1684.951	10.222%	85.387%
35.0	257.460	138.763	1823.714	6.138%	92.419%
40.0	57.803	52.599	1876.313	2.327%	95.085%
45.0	42.171	18.511	1894.824	.819%	96.023%
50.0	33.581	15.307	1910.131	.677%	96.799%
55.0	27.449	13.270	1923.401	.587%	97.471%
60.0	21.317	11.272	1934.673	.499%	98.043%
65.0	16.320	9.150	1943.823	.405%	98.506%
70.0	13.332	7.508	1951.331	.332%	98.887%
75.0	11.181	6.407	1957.738	.283%	99.211%
80.0	9.912	5.644	1963.382	.250%	99.497%
85.0	8.970	5.131	1968.513	.227%	99.757%
90.0	8.515	4.788	1973.3	.212%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1684.95	74.53%	85.39%
0-40	1876.31	82.99%	95.09%
0-60	1934.67	85.57%	98.04%
0-90	1968.51	87.07%	99.76%
0-120	1968.51	87.07%	99.76%
0-180	1973.30	87.28%	100.00%
60-90	45.11	2.00%	2.29%
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%
0-27.70	1578.64	69.83%	80.00%

ZONAL LUMEN SUMMARY

0-10	374.18
10-20	764.70
20-30	546.08
30-40	191.36
40-50	33.82
50-60	24.54
60-70	16.66
70-80	12.05
80-90	5.13
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: —————

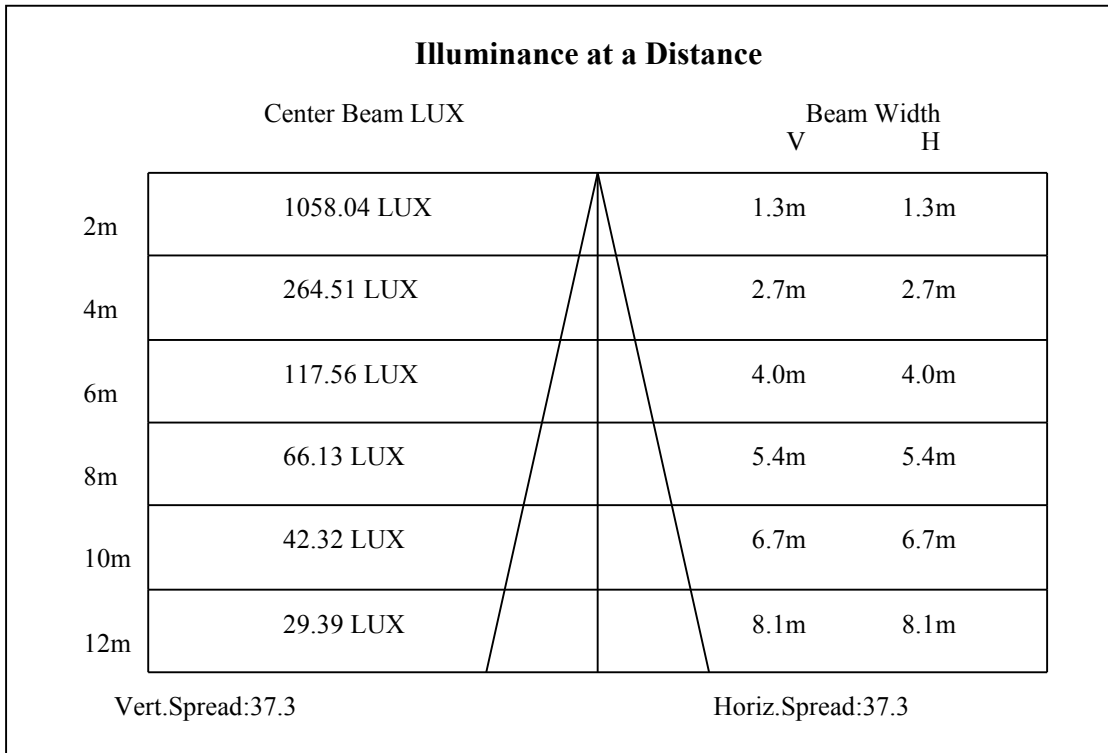
C90/C270: —————

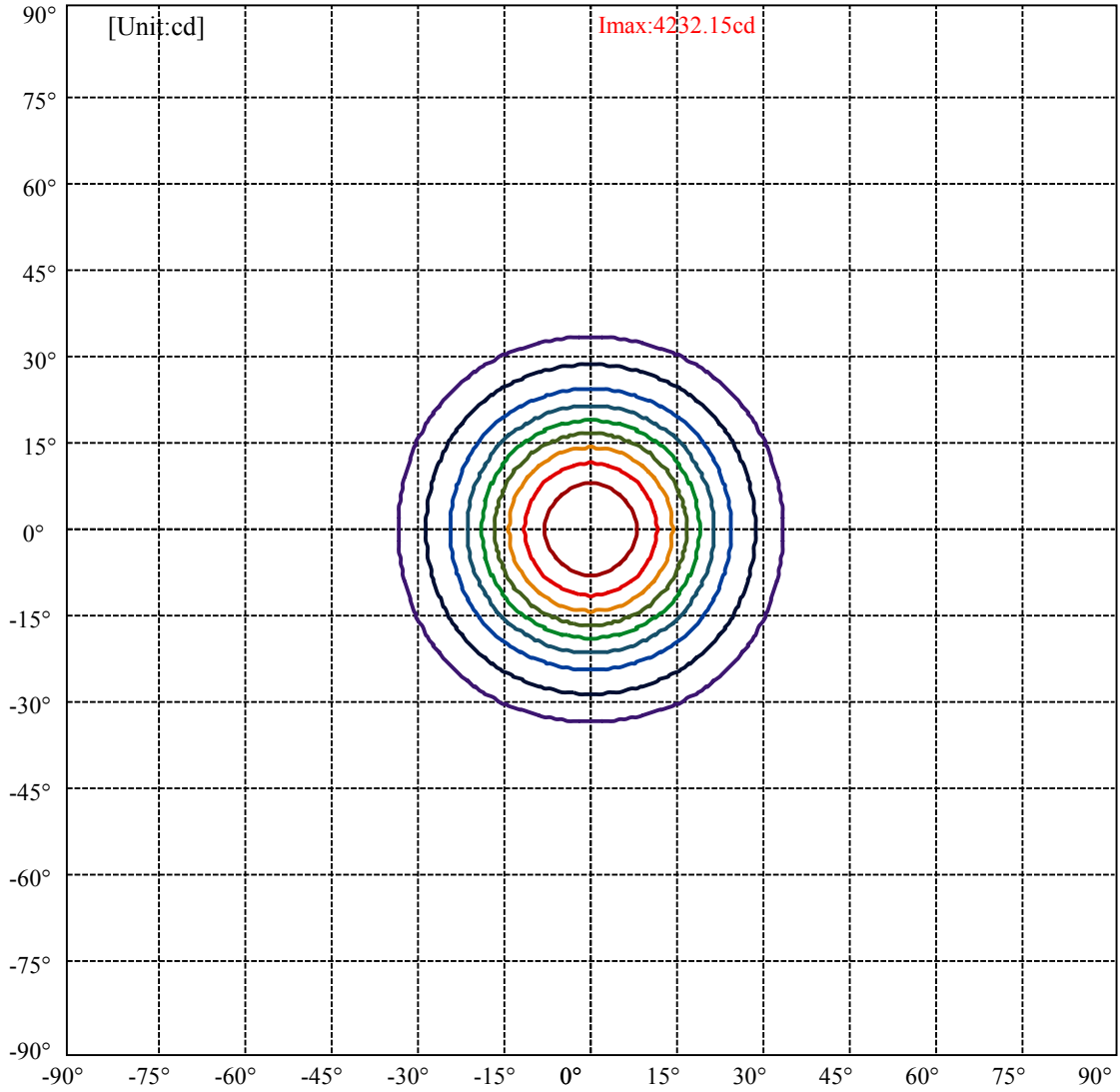
Field angle(10%Imax):C0/180Left:33.1 Right:33.1

:C90/270Left:33.1 Right:33.1

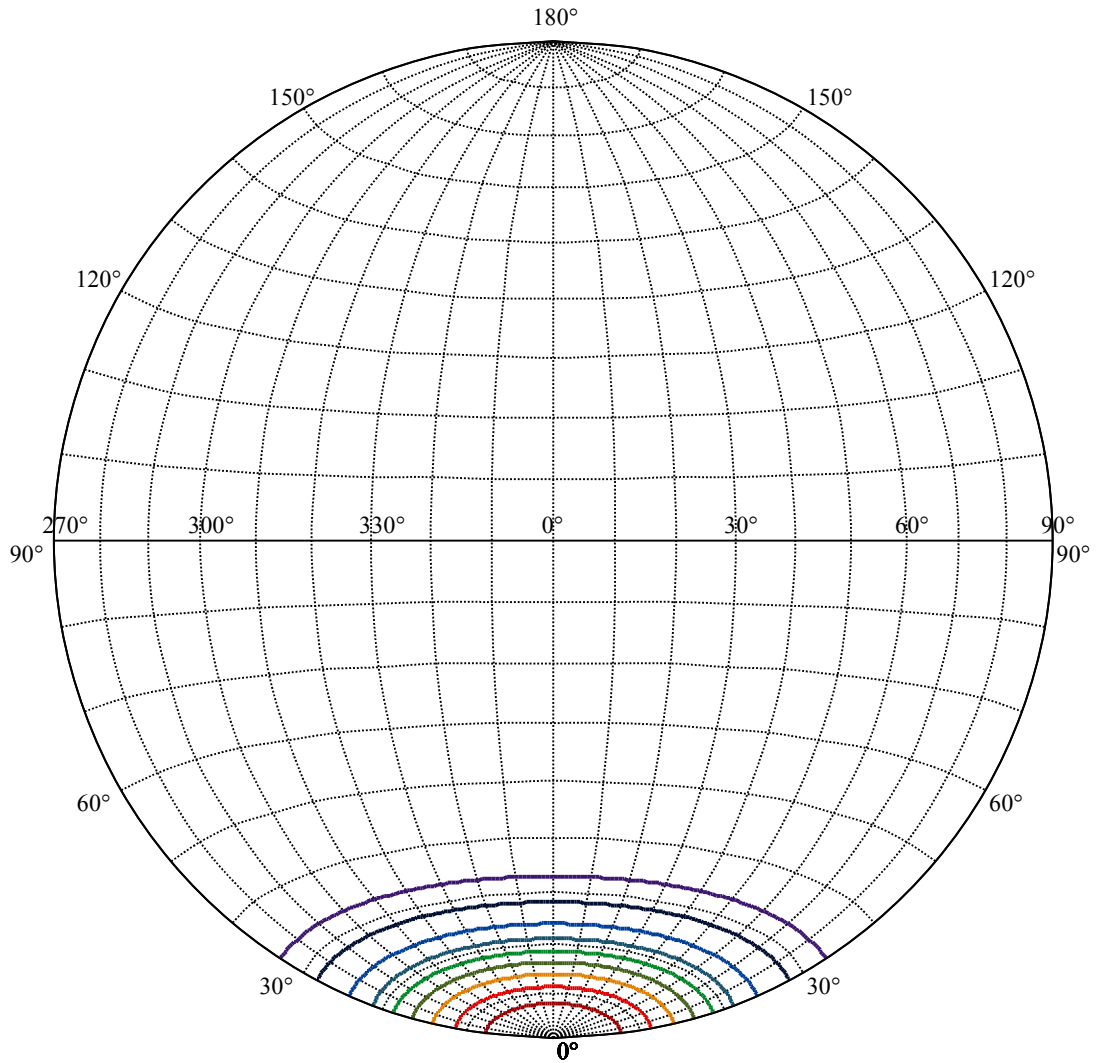
Beam Angle(50%Imax):C0/180Left:18.7 Right:18.7

:C90/270Left:18.7 Right:18.7





(10%Imax) 423.215	—
(20%Imax) 846.43	—
(30%Imax) 1269.64	—
(40%Imax) 1692.86	—
(50%Imax) 2116.07	—
(60%Imax) 2539.29	—
(70%Imax) 2962.5	—
(80%Imax) 3385.72	—
(90%Imax) 3808.93	—



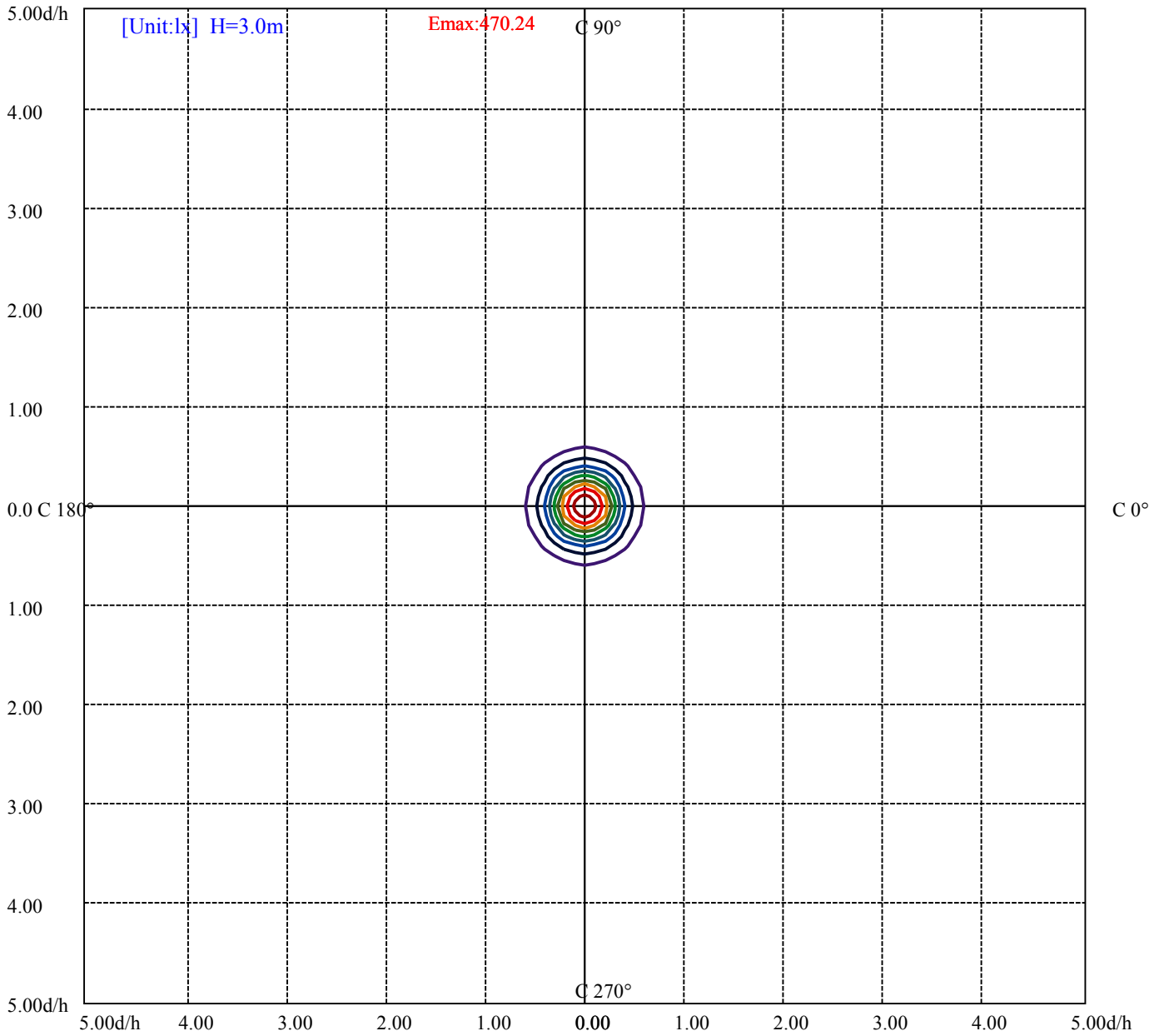
House

[Unit:cd]

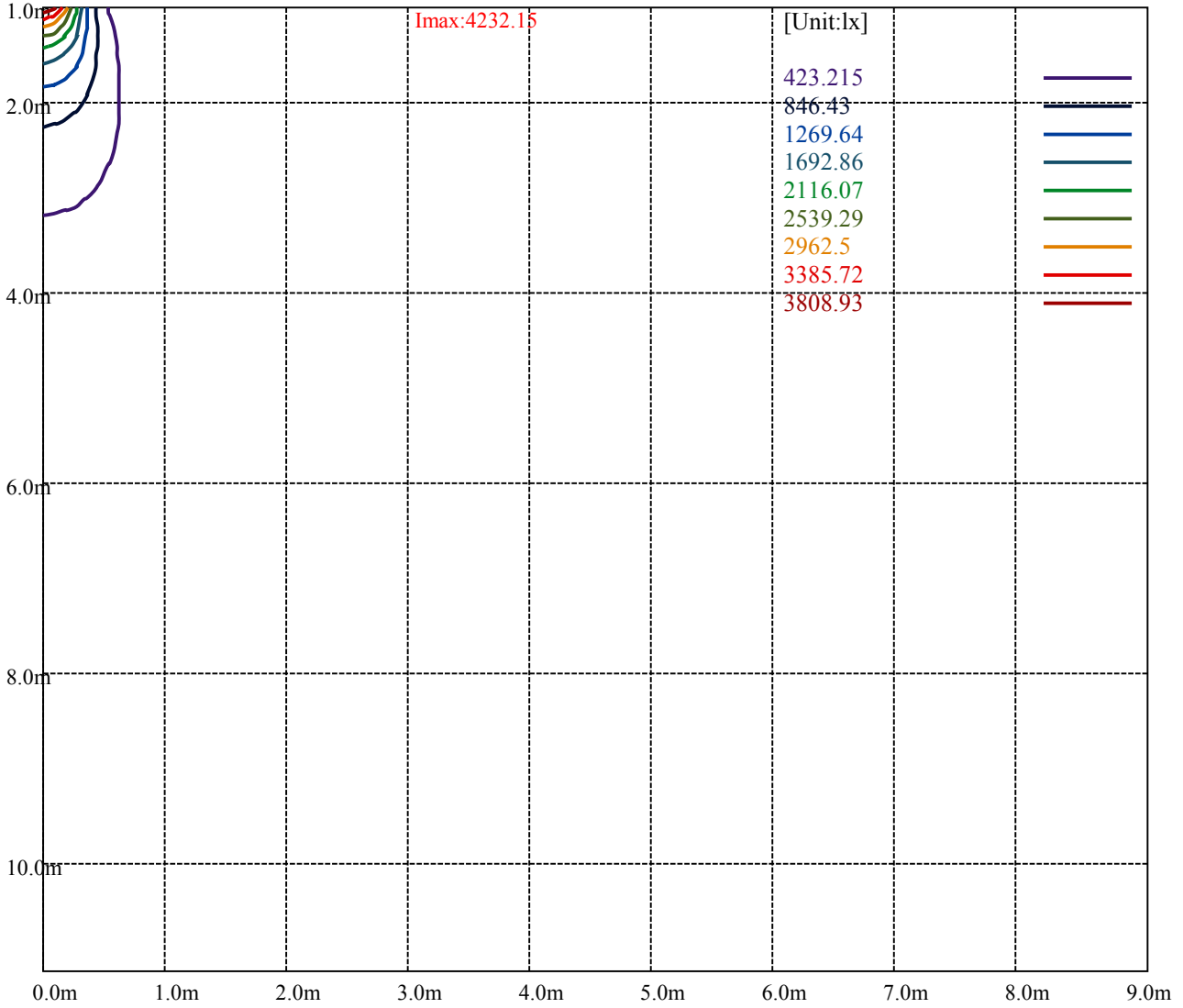
Road

Imax:4232.15

(10%Imax)	423.215	—
(20%Imax)	846.43	—
(30%Imax)	1269.64	—
(40%Imax)	1692.86	—
(50%Imax)	2116.07	—
(60%Imax)	2539.29	—
(70%Imax)	2962.5	—
(80%Imax)	3385.72	—
(90%Imax)	3808.93	—



- (10%Emax) 47.02378
- (20%Emax) 94.04767
- (30%Emax) 141.0711
- (40%Emax) 188.0956
- (50%Emax) 235.1189
- (60%Emax) 282.1433
- (70%Emax) 329.1667
- (80%Emax) 376.1911
- (90%Emax) 423.2144



Luminance Table

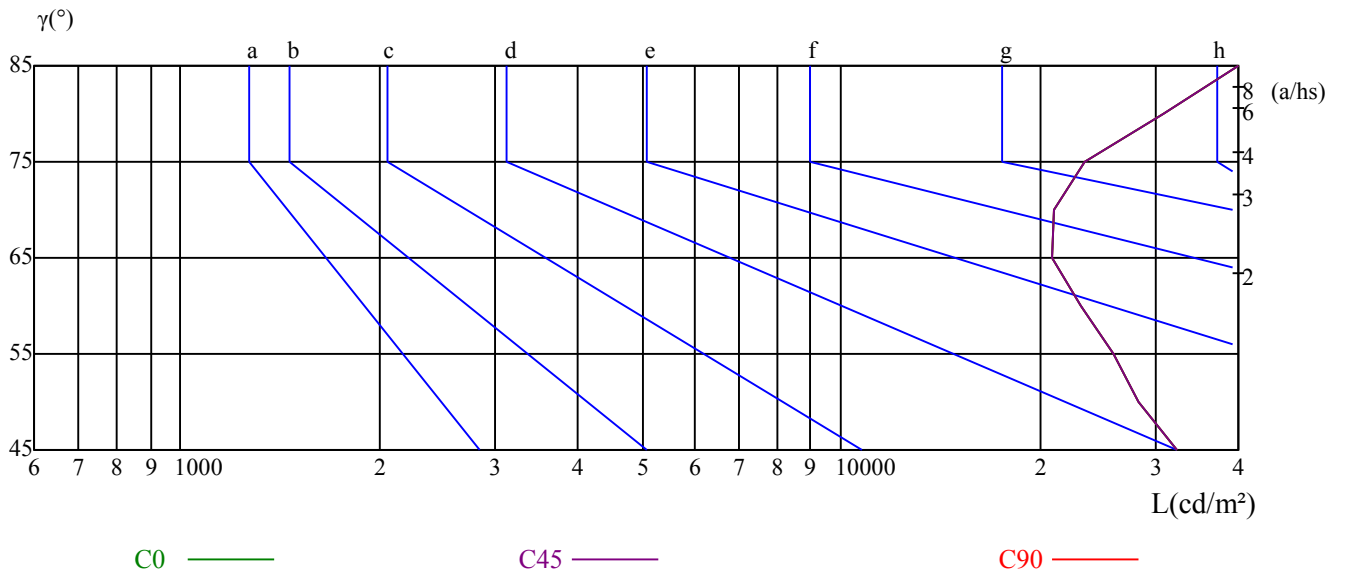
γ	45	50	55	60	65	70	75	80	85
C0	32254	28255	25882	23058	20885	21082	23365	30870	55665
C45	32254	28255	25882	23058	20885	21082	23365	30870	55665
C90	32254	28255	25882	23058	20885	21082	23365	30870	55665

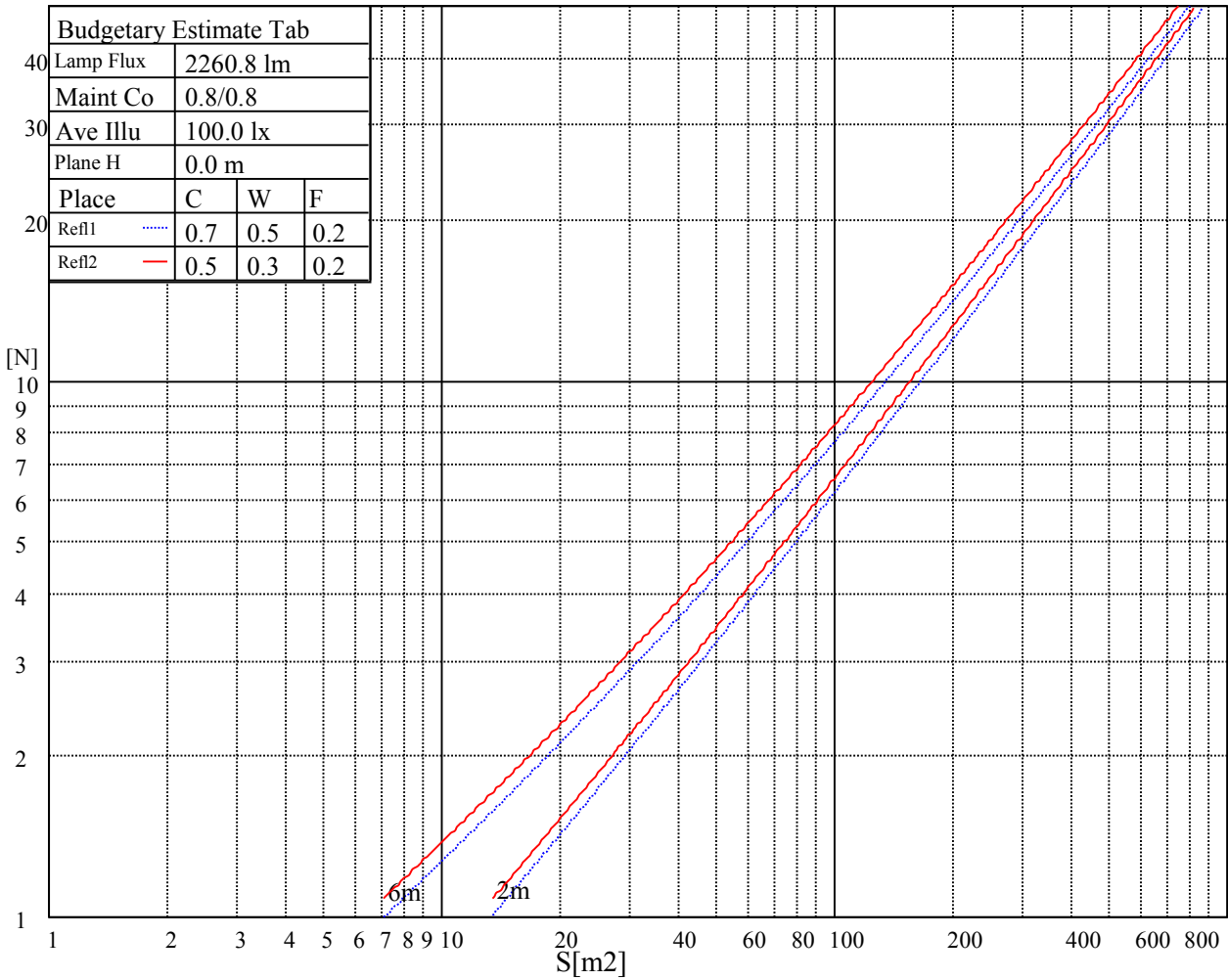
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20885	20885	20885	23365	23365	23365	55665	55665	55665

Glare Table

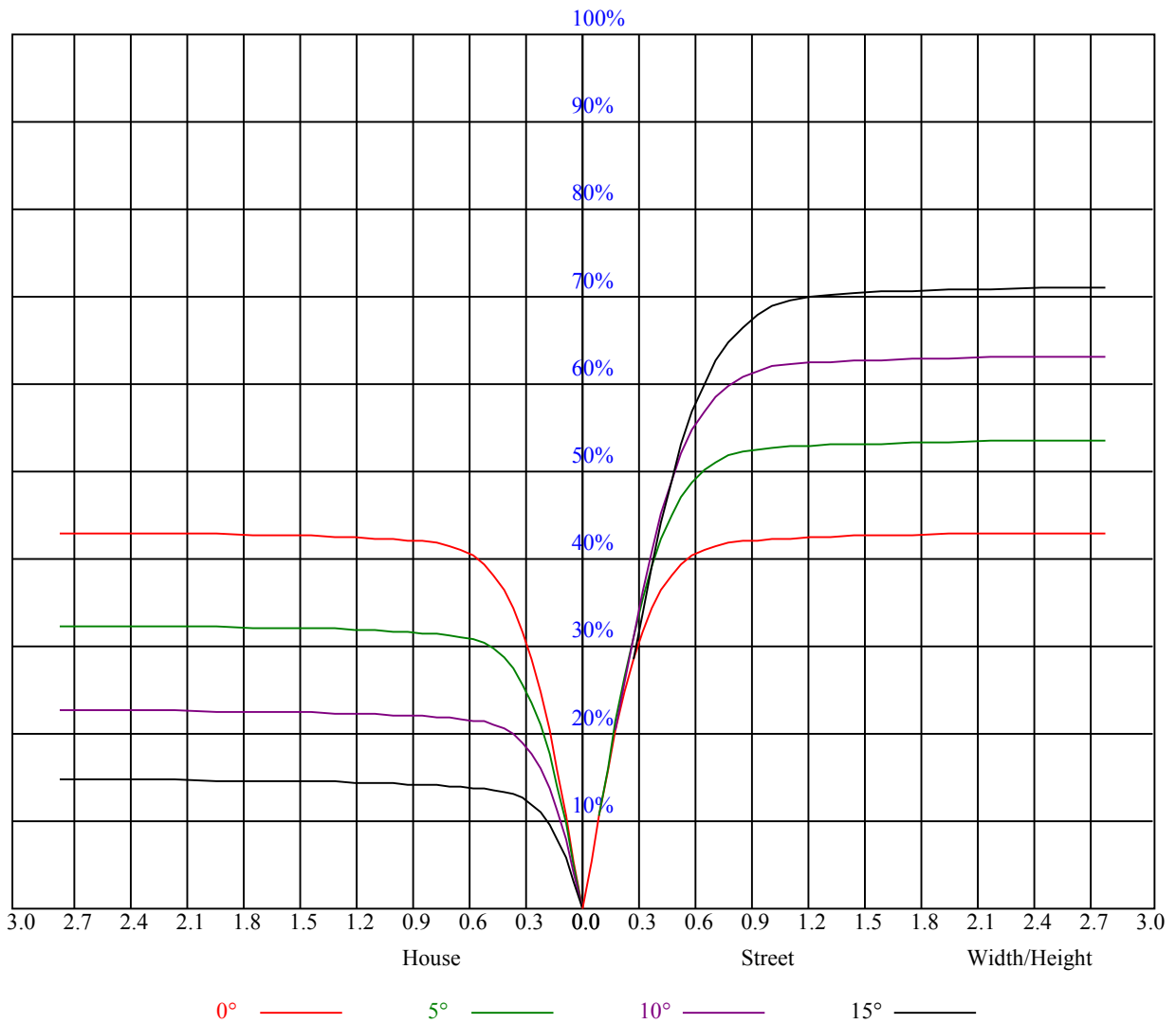
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.01	1.01	1.01	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	0.88	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	0.82	0.81	0.82	0.80	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	0.71	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	0.62	0.59	0.66	0.62	0.59	0.65	0.61	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	0.62	0.59	0.56	0.62	0.59	0.56	0.55
10	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.59	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	4215.57	4174.94	3778.18	3134.04	2099.12	1320.54	830.57	357.92	66.50
45.0	4249.03	4048.86	3552.31	2690.08	1726.86	1110.81	605.30	319.68	54.61
90.0	4223.93	3944.89	3374.25	2446.28	1557.76	945.23	505.27	91.54	50.37
135.0	4240.07	4049.45	3527.21	2639.88	1725.66	1042.69	605.89	205.43	51.75
180.0	4215.57	3991.49	3410.70	2489.31	1590.02	967.94	539.33	105.22	50.55
225.0	4249.03	4124.74	3674.80	2954.18	1971.25	1190.70	757.19	288.55	59.99
270.0	4223.93	4182.70	3840.32	3141.81	2209.06	1360.57	856.86	393.77	67.34
315.0	4240.07	4119.36	3662.26	2944.62	2014.27	1192.31	778.46	297.57	61.31
360.0	4215.57	4174.94	3778.18	3134.04	2099.12	1320.54	830.57	357.92	66.50
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	46.91	36.69	29.70	23.30	17.57	14.22	11.71	10.28	9.14
45.0	40.87	33.16	26.77	20.50	15.89	12.85	10.82	9.74	8.84
90.0	38.12	31.07	24.92	19.36	15.00	12.49	10.76	9.68	8.78
135.0	39.02	31.67	26.41	20.02	15.42	12.79	10.76	9.62	8.78
180.0	38.90	30.89	25.51	19.36	14.94	12.61	10.58	9.50	8.78
225.0	43.50	34.48	28.44	22.11	16.91	13.56	11.41	10.04	9.08
270.0	45.77	35.79	29.34	23.72	17.87	14.34	11.95	10.34	9.26
315.0	44.28	34.90	28.50	22.17	16.97	13.80	11.47	10.10	9.08
360.0	46.91	36.69	29.70	23.30	17.57	14.22	11.71	10.28	9.14
C/γ(°)	90.0								
0.0	8.54								
45.0	8.48								
90.0	8.48								
135.0	8.43								
180.0	8.48								
225.0	8.60								
270.0	8.54								
315.0	8.54								
360.0	8.54								