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## Nata

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LumCAT: 1426-N  
Luminaire: 92.70.046.00+92.70.147.00  
Report No: NT2018011802  
Test No: nata-0100  
LampCAT: CREE CXA1520  
Lamp flux(lm): 1457.0  
Number of Lamps: 1  
Length(mm): 46  
Phm Type: C

Voltage(V): 37.9000  
Current(A): 0.3500  
Power (W): 13.2650  
PF: 0.0000  
Ballast type: DC  
Width(mm): 46  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 1116.56  
Efficiency(%): 76.63%  
Lumens(lm)/Power(W): 84.17  
Central intensity(cd): 4021.388  
Maximum intensity(cd): 4021.388  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=23.8  
                                  [C90/270]Total=23.8  
Field angle(10%Imax): [C0/180]Total=50.1  
                                  [C90/270]Total=50.1  
Maximum s/h(1/2): C0\_180=0.40 C90\_270=0.40  
Maximum s/h(1/4): C0\_180=0.41 C90\_270=0.41  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 78.21%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 95.008%

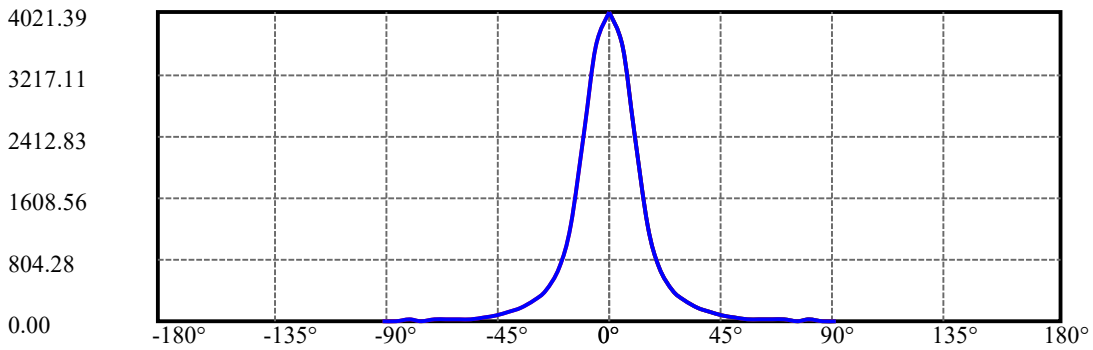
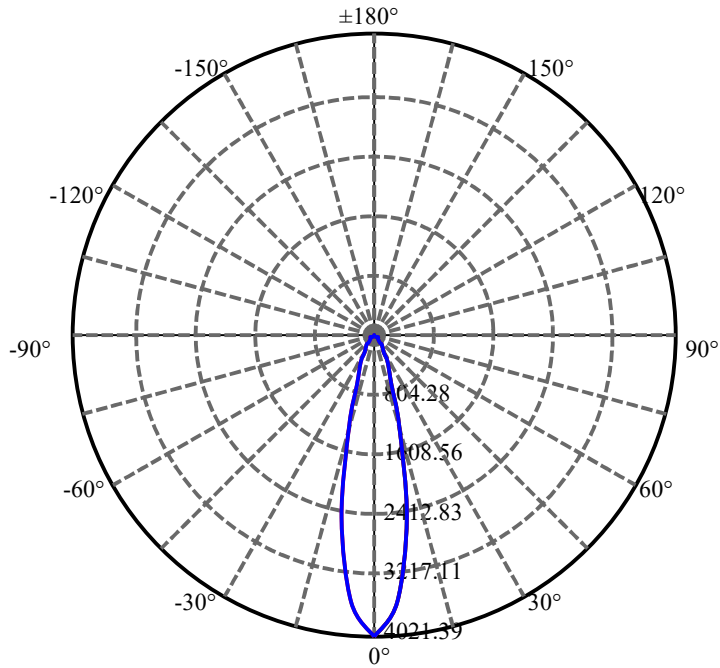
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4021.388	24.049	24.049	1.651%	2.154%
5.0	3573.917	170.738	194.787	11.718%	17.445%
10.0	2470.656	235.165	429.951	16.140%	38.507%
15.0	1247.206	176.939	606.89	12.144%	54.354%
20.0	704.990	132.167	739.058	9.071%	66.191%
25.0	403.921	93.570	832.627	6.422%	74.571%
30.0	267.237	73.241	905.869	5.027%	81.130%
35.0	168.142	52.864	958.732	3.628%	85.865%
40.0	117.800	41.505	1000.237	2.849%	89.582%
45.0	80.912	31.361	1031.598	2.152%	92.391%
50.0	57.224	24.028	1055.627	1.649%	94.543%
55.0	37.032	16.628	1072.254	1.141%	96.032%
60.0	21.906	10.399	1082.653	.714%	96.963%
65.0	14.280	7.094	1089.747	.487%	97.599%
70.0	12.649	6.515	1096.263	.447%	98.182%
75.0	12.030	6.369	1102.632	.437%	98.753%
80.0	12.794	6.906	1109.538	.474%	99.371%
85.0	10.337	5.644	1115.183	.387%	99.877%
90.0	5.017	1.375	1116.558	.094%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	905.87	62.17%	81.13%
0-40	1000.24	68.65%	89.58%
0-60	1082.65	74.31%	96.96%
0-90	1115.18	76.54%	99.88%
0-120	1115.18	76.54%	99.88%
0-180	1116.56	76.63%	100.00%
60-90	42.93	2.95%	3.84%
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%
0-29.14	893.25	61.31%	80.00%

ZONAL LUMEN SUMMARY

0-10	429.95
10-20	309.11
20-30	166.81
30-40	94.37
40-50	55.39
50-60	27.03
60-70	13.61
70-80	13.28
80-90	5.64
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: —————

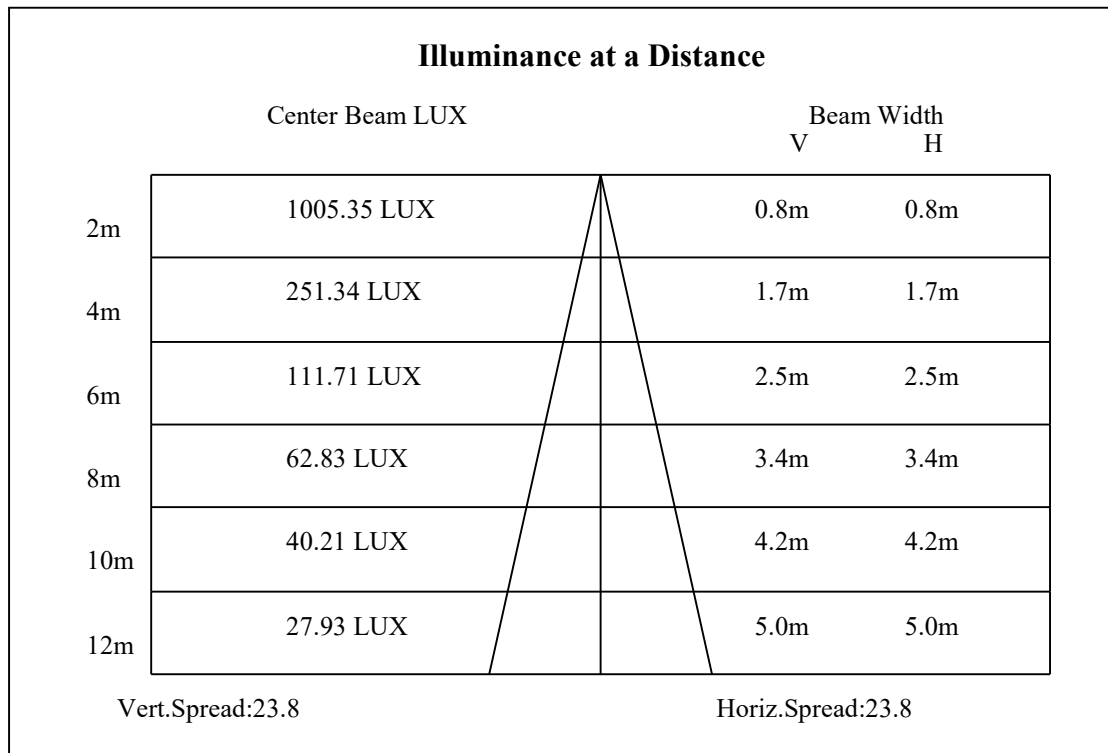
C90/C270: —————

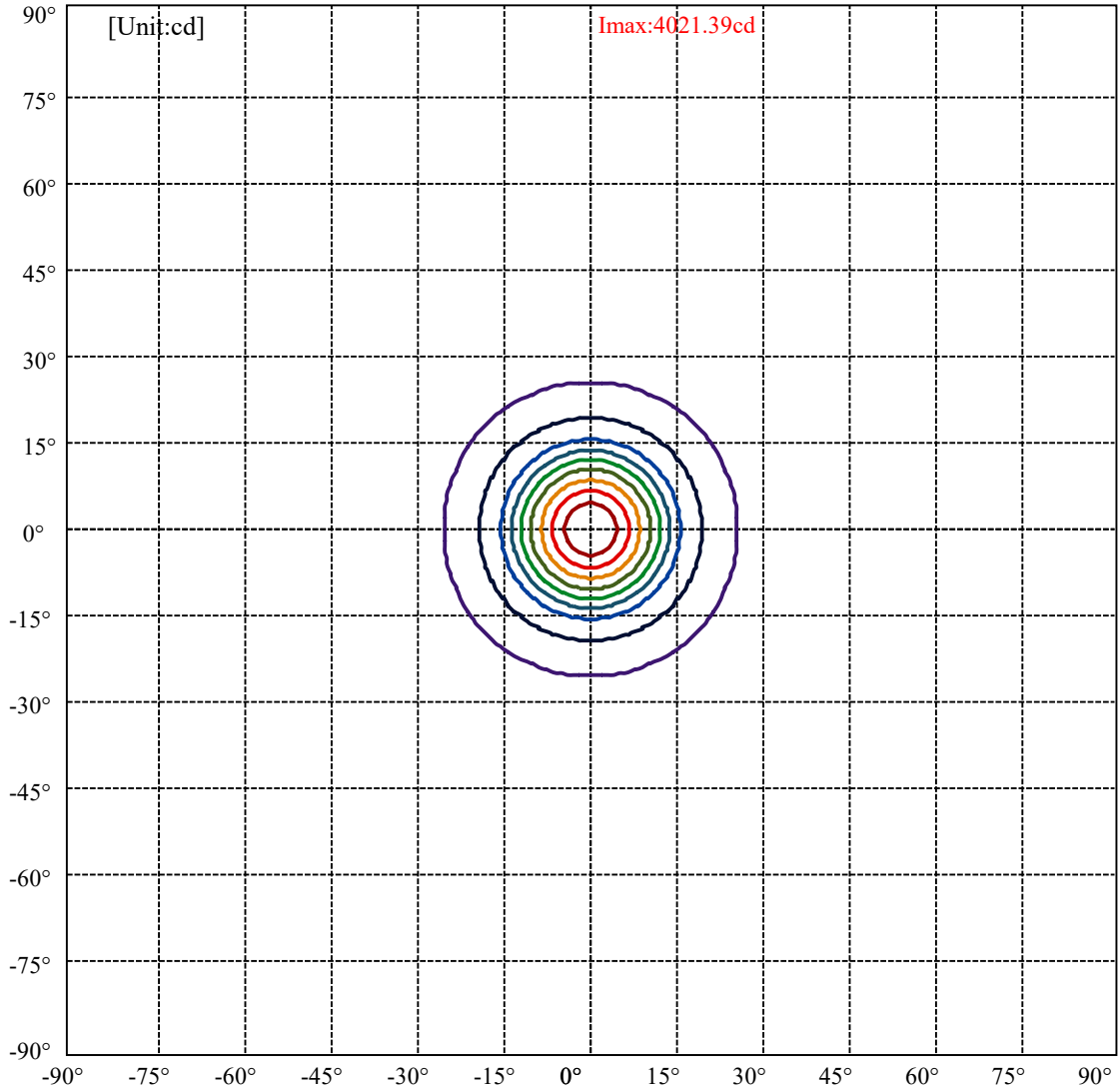
Field angle(10%Imax):C0/180Left:25.1 Right:25.1

:C90/270Left:25.1 Right:25.1

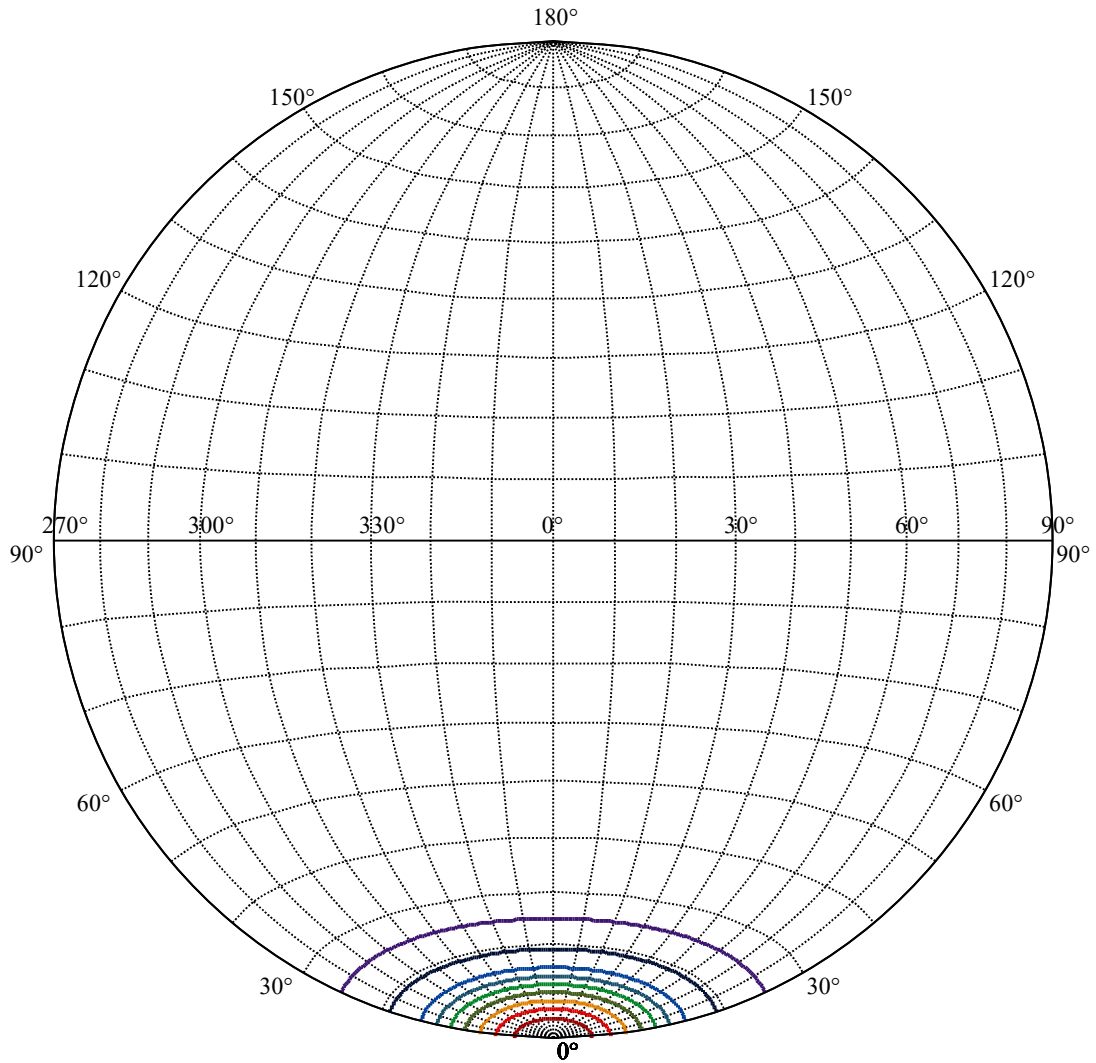
Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9

:C90/270Left:11.9 Right:11.9





(10%Imax) 402.139	—
(20%Imax) 804.278	—
(30%Imax) 1206.42	—
(40%Imax) 1608.56	—
(50%Imax) 2010.69	—
(60%Imax) 2412.83	—
(70%Imax) 2814.97	—
(80%Imax) 3217.11	—
(90%Imax) 3619.25	—



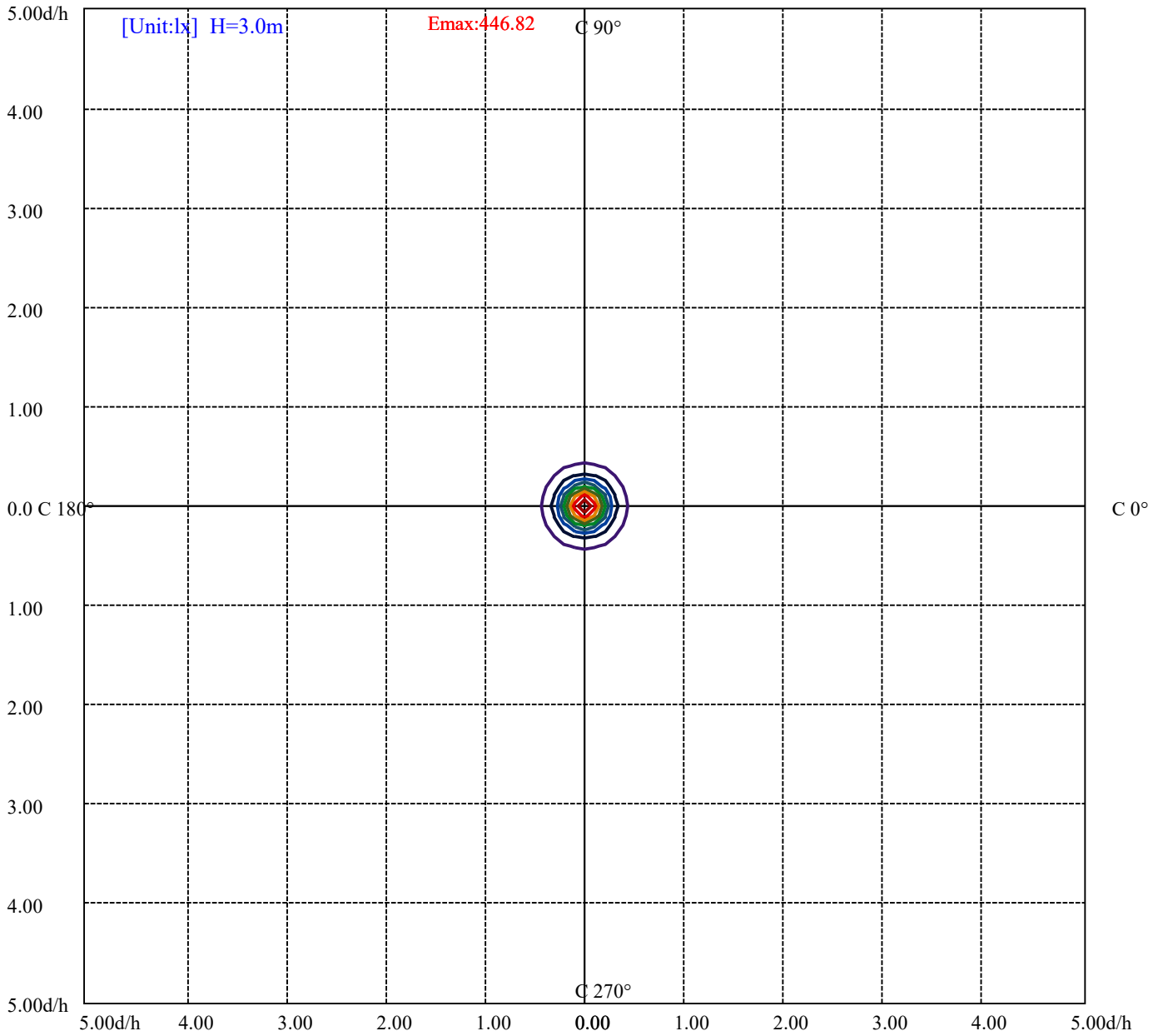
House

[Unit:cd]

Road

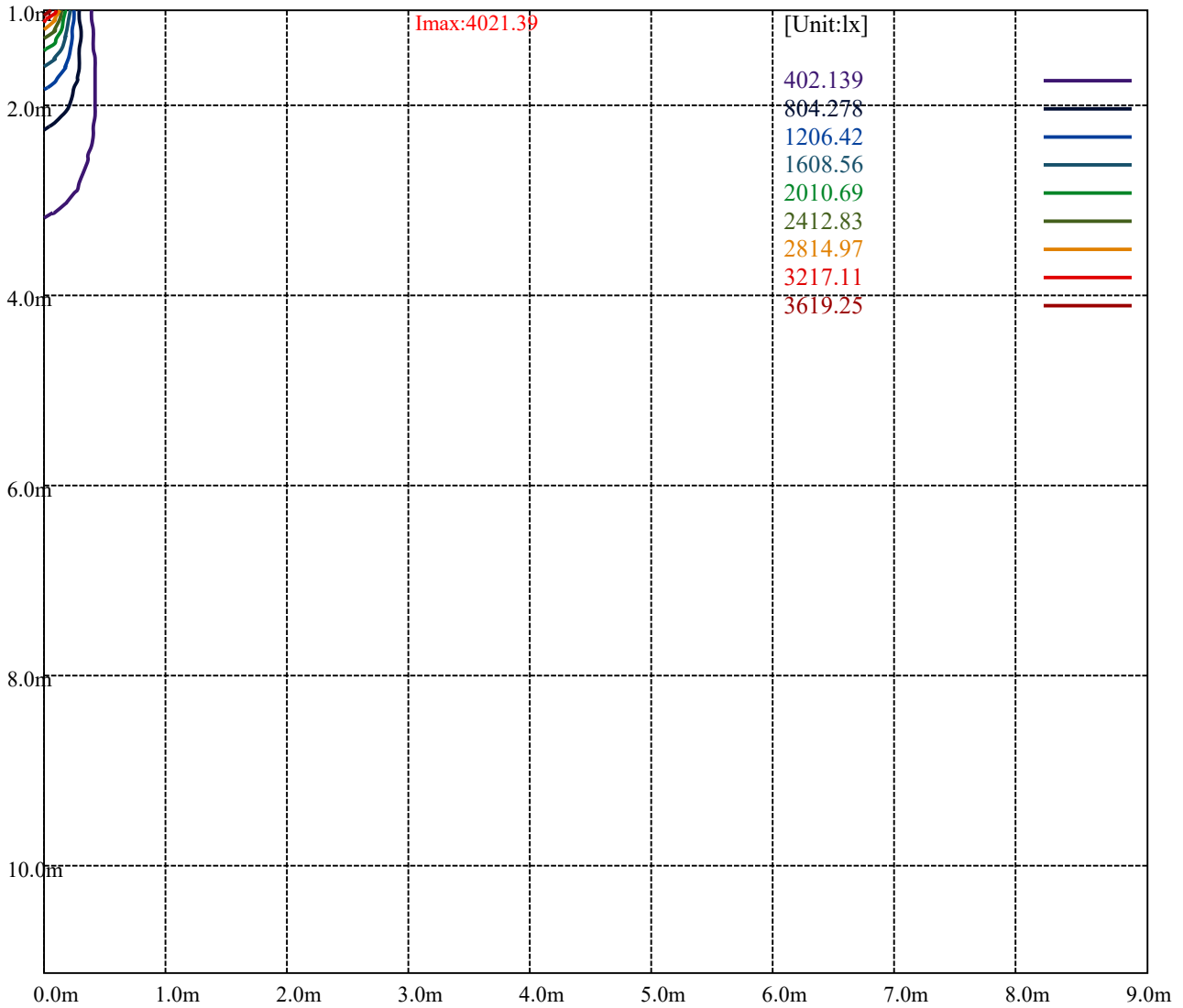
**Imax:4021.39**

(10%Imax) 402.139	—
(20%Imax) 804.278	—
(30%Imax) 1206.42	—
(40%Imax) 1608.56	—
(50%Imax) 2010.69	—
(60%Imax) 2412.83	—
(70%Imax) 2814.97	—
(80%Imax) 3217.11	—
(90%Imax) 3619.25	—



(10%Emax) 44.682	—
(20%Emax) 89.36389	—
(30%Emax) 134.0456	—
(40%Emax) 178.7278	—
(50%Emax) 223.41	—
(60%Emax) 268.0911	—
(70%Emax) 312.7733	—
(80%Emax) 357.4556	—
(90%Emax) 402.1378	—





Luminance Table

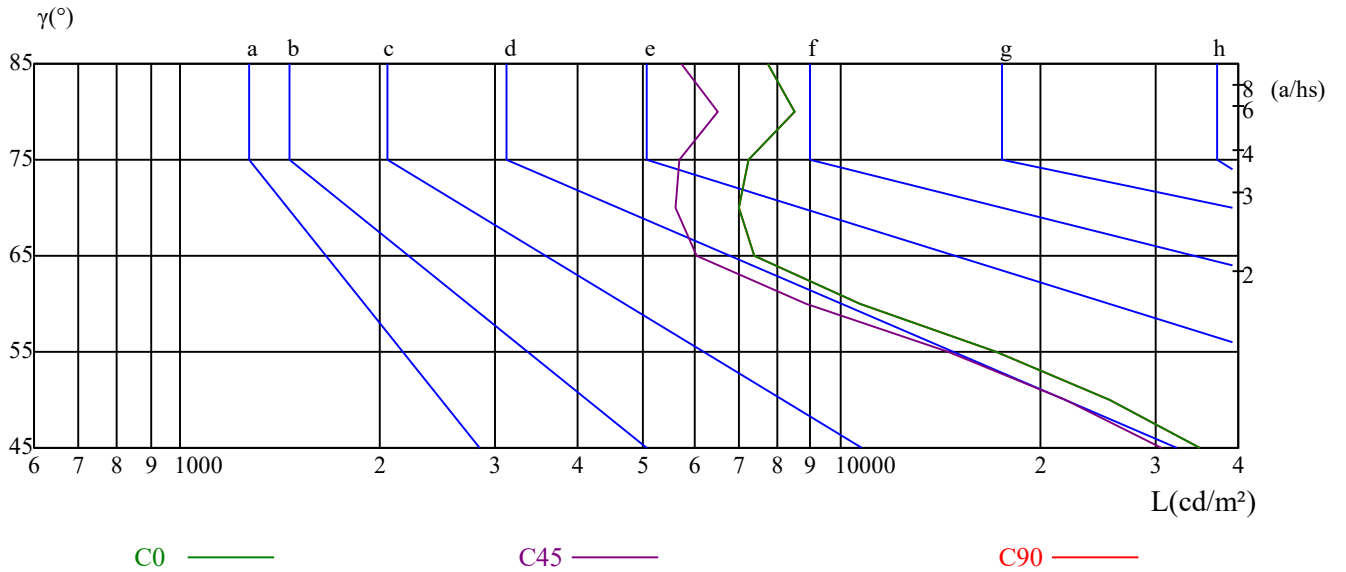
$\gamma$	45	50	55	60	65	70	75	80	85
C0	35036	25534	17179	10665	7374	7010	7254	8529	7772
C45	30576	21959	14546	8881	6030	5617	5678	6497	5728
C90	35036	25534	17179	10665	7374	7010	7254	8529	7772

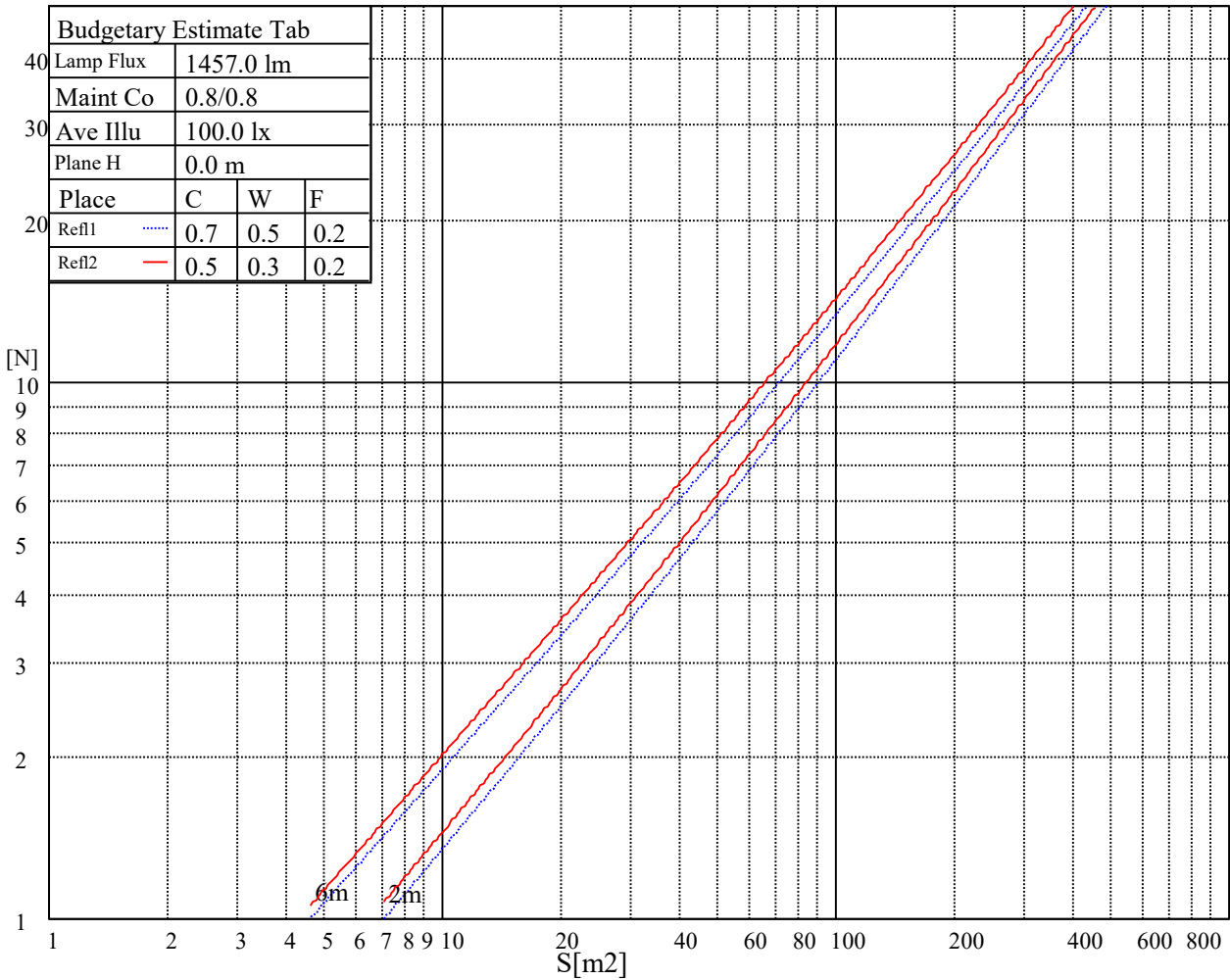
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15969	15969	15969	21966	21966	21966	56050	56050	56050

Glare Table

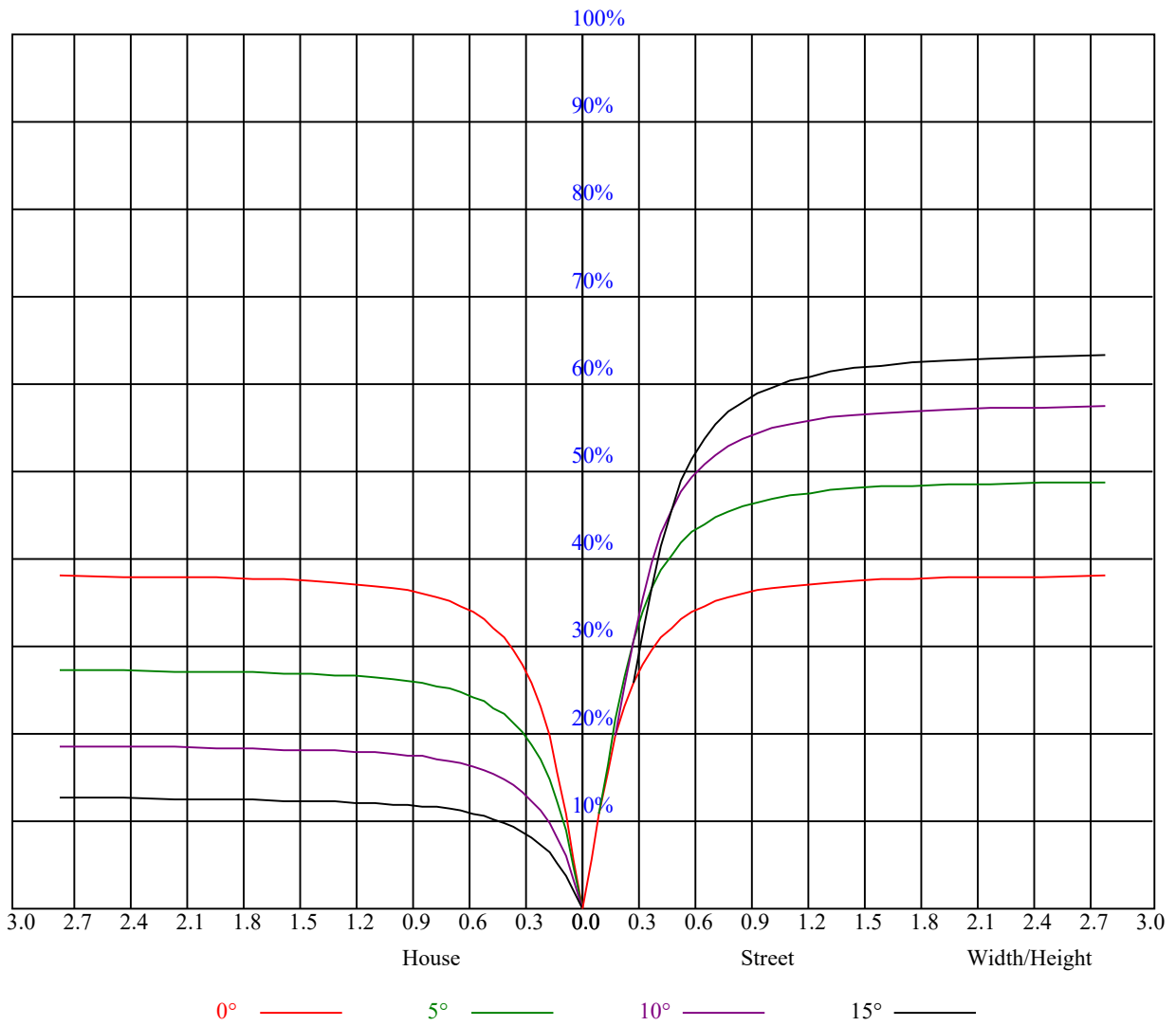
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.78	0.77	0.77	0.76	0.74	0.74	0.73	0.72	0.71
2	0.80	0.77	0.74	0.79	0.76	0.73	0.76	0.74	0.71	0.74	0.72	0.70	0.72	0.70	0.68	0.67
3	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.64
4	0.72	0.68	0.65	0.71	0.67	0.65	0.69	0.66	0.64	0.68	0.65	0.63	0.67	0.64	0.62	0.61
5	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.65	0.63	0.60	0.64	0.62	0.60	0.59
6	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
7	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.55
8	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.53
9	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.57	0.54	0.52	0.57	0.54	0.52	0.51
10	0.57	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.55	0.53	0.51	0.50



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	4027.93	3561.05	2425.23	1321.90	678.29	400.81	282.44	163.57	116.06
45.0	4027.38	3582.52	2523.79	1385.22	730.60	415.68	279.14	170.56	116.28
90.0	4036.74	3666.76	2545.26	1082.46	738.58	409.67	258.38	168.09	122.23
135.0	3994.34	3841.84	2926.25	1689.13	861.63	472.38	294.00	186.97	134.94
180.0	4027.93	3643.08	2493.50	1048.82	712.76	400.59	260.75	166.44	116.77
225.0	4025.72	3576.46	2427.44	1077.78	687.43	395.86	253.20	167.43	111.82
270.0	4036.74	3479.56	2348.16	1308.69	671.69	389.80	282.99	169.30	117.88
315.0	3994.34	3240.07	2075.63	1063.63	558.93	346.58	227.00	152.78	106.42
360.0	4027.93	3561.05	2425.23	1321.90	678.29	400.81	282.44	163.57	116.06

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	78.01	54.84	36.28	20.92	13.49	12.06	11.29	12.88	9.91
45.0	76.31	54.62	35.84	21.36	13.98	12.11	11.29	11.18	9.91
90.0	85.78	61.44	40.63	23.84	14.87	13.10	12.00	12.72	10.35
135.0	94.26	68.16	45.59	28.13	16.52	13.76	13.38	13.93	11.62
180.0	79.23	56.76	37.16	21.64	13.93	12.22	11.34	12.44	10.90
225.0	74.49	52.58	33.86	20.10	13.54	12.22	11.56	13.16	10.35
270.0	83.96	57.75	35.90	20.70	14.26	12.88	12.39	13.16	10.13
315.0	75.26	51.64	31.00	18.55	13.65	12.83	12.99	12.88	9.52
360.0	78.01	54.84	36.28	20.92	13.49	12.06	11.29	12.88	9.91

C/γ(°)	90.0
0.0	4.90
45.0	5.01
90.0	5.01
135.0	5.23
180.0	4.96
225.0	5.12
270.0	5.01
315.0	4.90
360.0	4.90