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Nata

LumCAT: 1407-N
Luminaire:92.70.064.00
Report No: NATA0100
Test No: GC20190901
LampCAT: XICATO XOB LES 9.8MM
Lamp flux(lm): 1025.0
Number of Lamps: 1
Length(mm): 39
Phm Type: C

Voltage(V): 33.7200
Current(A): 0.2970
Power (W): 10.0000
PF: 0.0000
Ballast type: DC
Width(mm): 39
Height(mm): 0

Photometric Results

Lumens(lm): 849.40
Efficiency(%): 82.87%
Lumens(lm)/Power(W): 84.94
Central intensity(cd): 912.614
Maximum intensity(cd): 912.614
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=49.0
[C90/270]Total=49.0
Field angle(10%Imax): [C0/180]Total=98.4
[C90/270]Total=98.4
Maximum s/h(1/2): C0_180=0.74 C90_270=0.74
Maximum s/h(1/4): C0_180=0.82 C90_270=0.82
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.87%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.118%

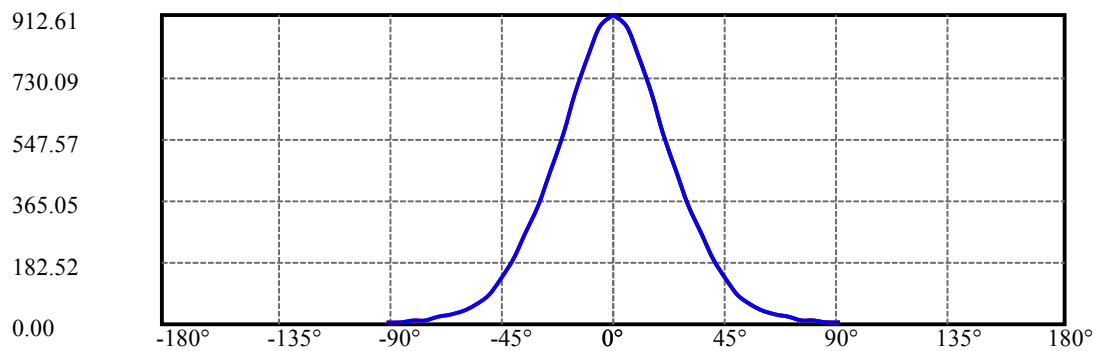
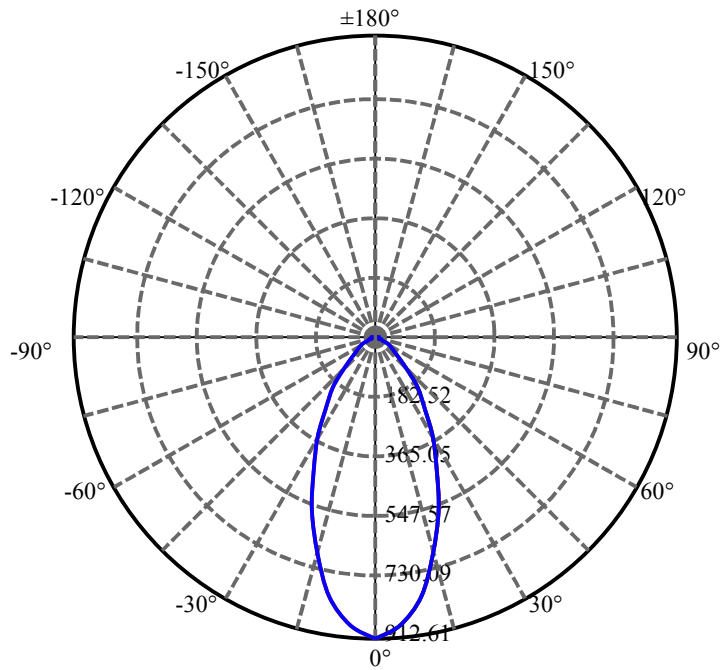
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	912.614	0.000	0	.000%	.000%
5.0	877.999	21.406	21.406	2.088%	2.520%
10.0	795.488	59.866	81.272	5.841%	9.568%
15.0	678.234	87.420	168.692	8.529%	19.860%
20.0	558.345	101.911	270.604	9.943%	31.858%
25.0	445.226	105.256	375.86	10.269%	44.250%
30.0	351.541	100.832	476.691	9.837%	56.121%
35.0	267.005	91.085	567.777	8.886%	66.845%
40.0	195.342	77.139	644.916	7.526%	75.926%
45.0	129.220	60.095	705.011	5.863%	83.001%
50.0	83.777	43.039	748.05	4.199%	88.068%
55.0	54.225	30.006	778.057	2.927%	91.601%
60.0	38.257	21.377	799.434	2.086%	94.118%
65.0	27.464	15.977	815.411	1.559%	95.999%
70.0	20.180	12.064	827.474	1.177%	97.419%
75.0	14.027	8.941	836.415	.872%	98.472%
80.0	9.415	6.272	842.688	.612%	99.210%
85.0	5.745	4.119	846.807	.402%	99.695%
90.0	3.713	2.589	849.397	.253%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	476.69	46.51%	56.12%
0-40	644.92	62.92%	75.93%
0-60	799.43	77.99%	94.12%
0-90	846.81	82.62%	99.70%
0-120	846.81	82.62%	99.70%
0-180	849.40	82.87%	100.00%
60-90	68.75	6.71%	8.09%
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%
0-42.88	679.52	66.29%	80.00%

ZONAL LUMEN SUMMARY

0-10	81.27
10-20	189.33
20-30	206.09
30-40	168.22
40-50	103.13
50-60	51.38
60-70	28.04
70-80	15.21
80-90	4.12
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:

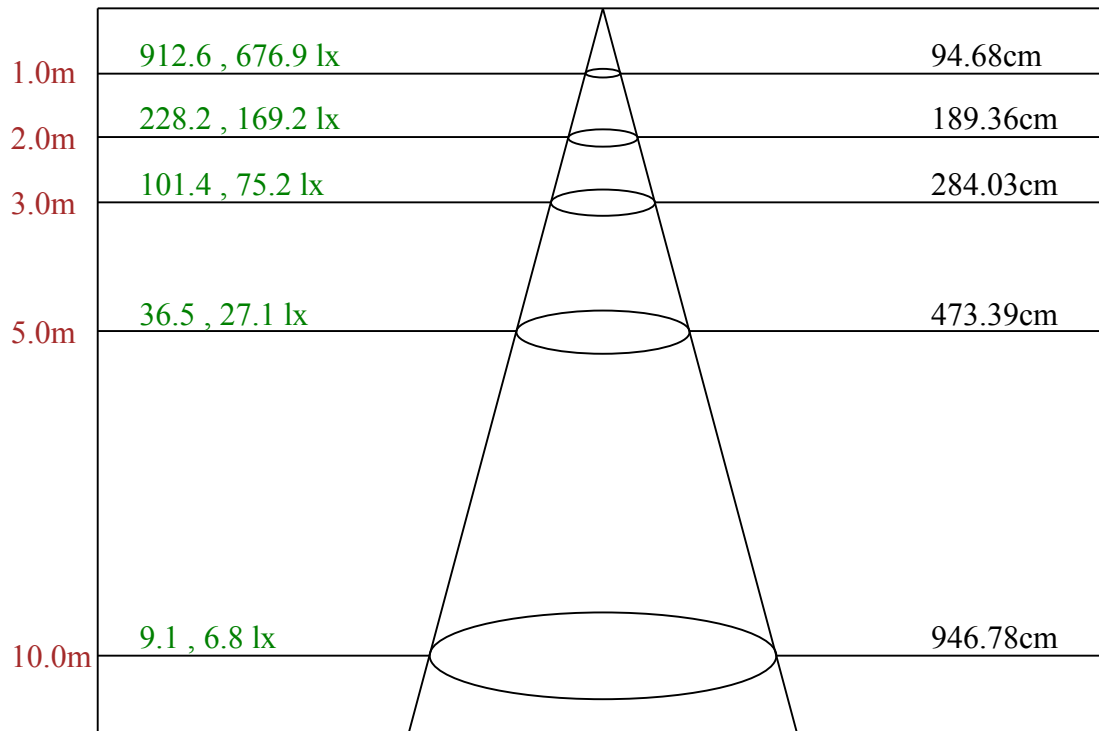
C90/C270:

Field angle(10%Imax):C0/180Left:49.2 Right:49.2

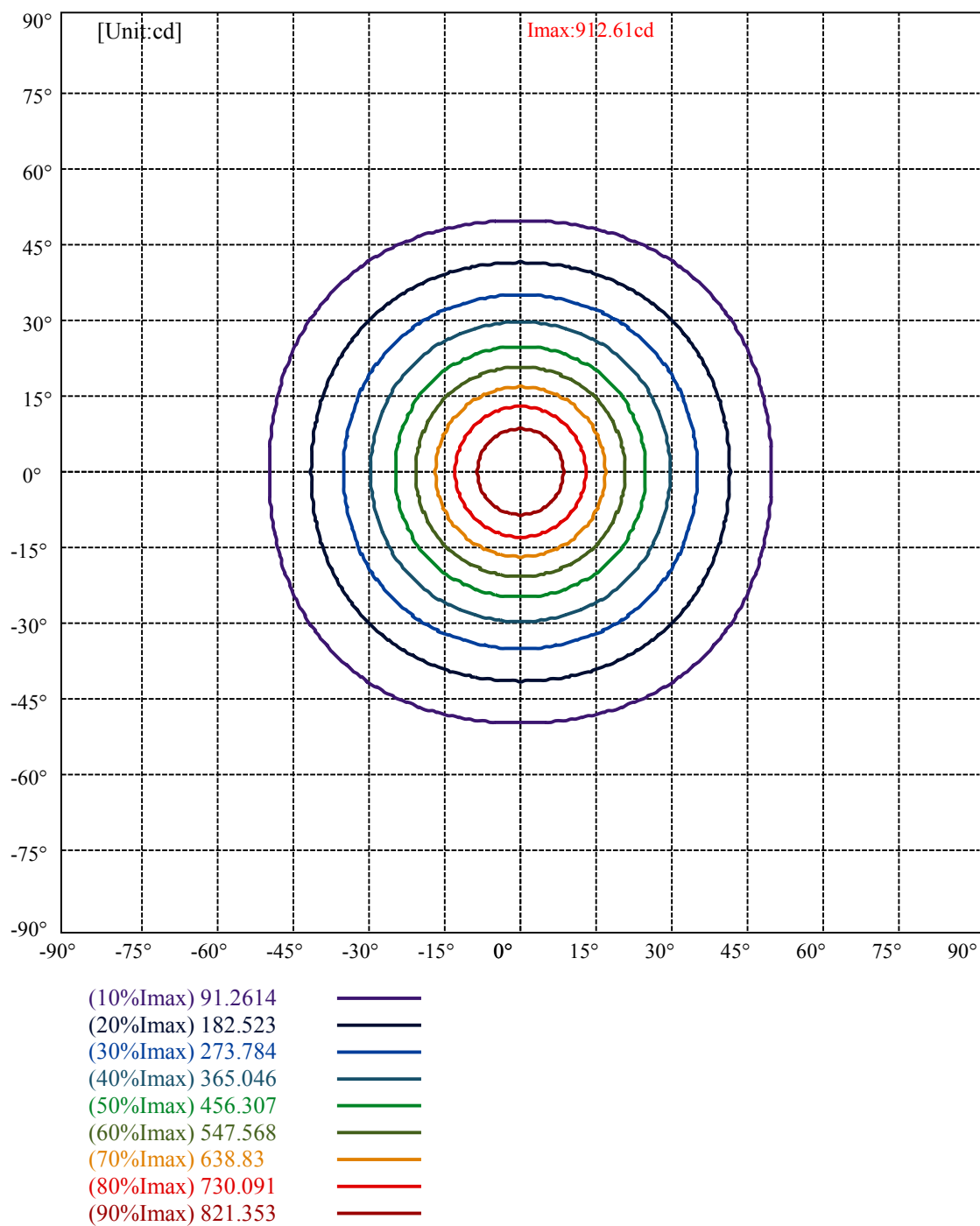
:C90/270Left:49.2 Right:49.2

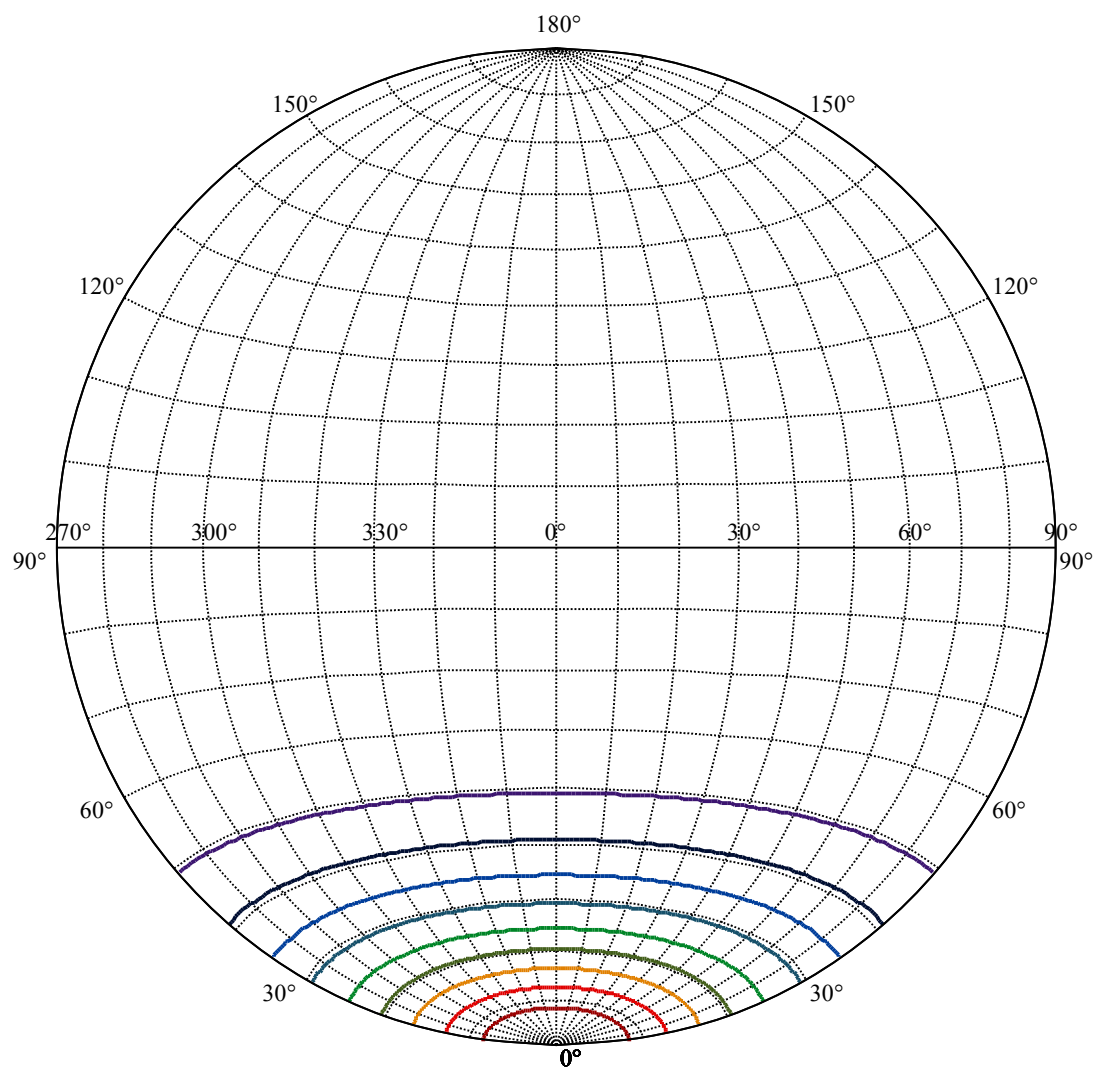
Beam Angle(50%Imax):C0/180Left:24.5 Right:24.5

:C90/270Left:24.5 Right:24.5



Max , Ave Beam angle of C0 plane 50.66





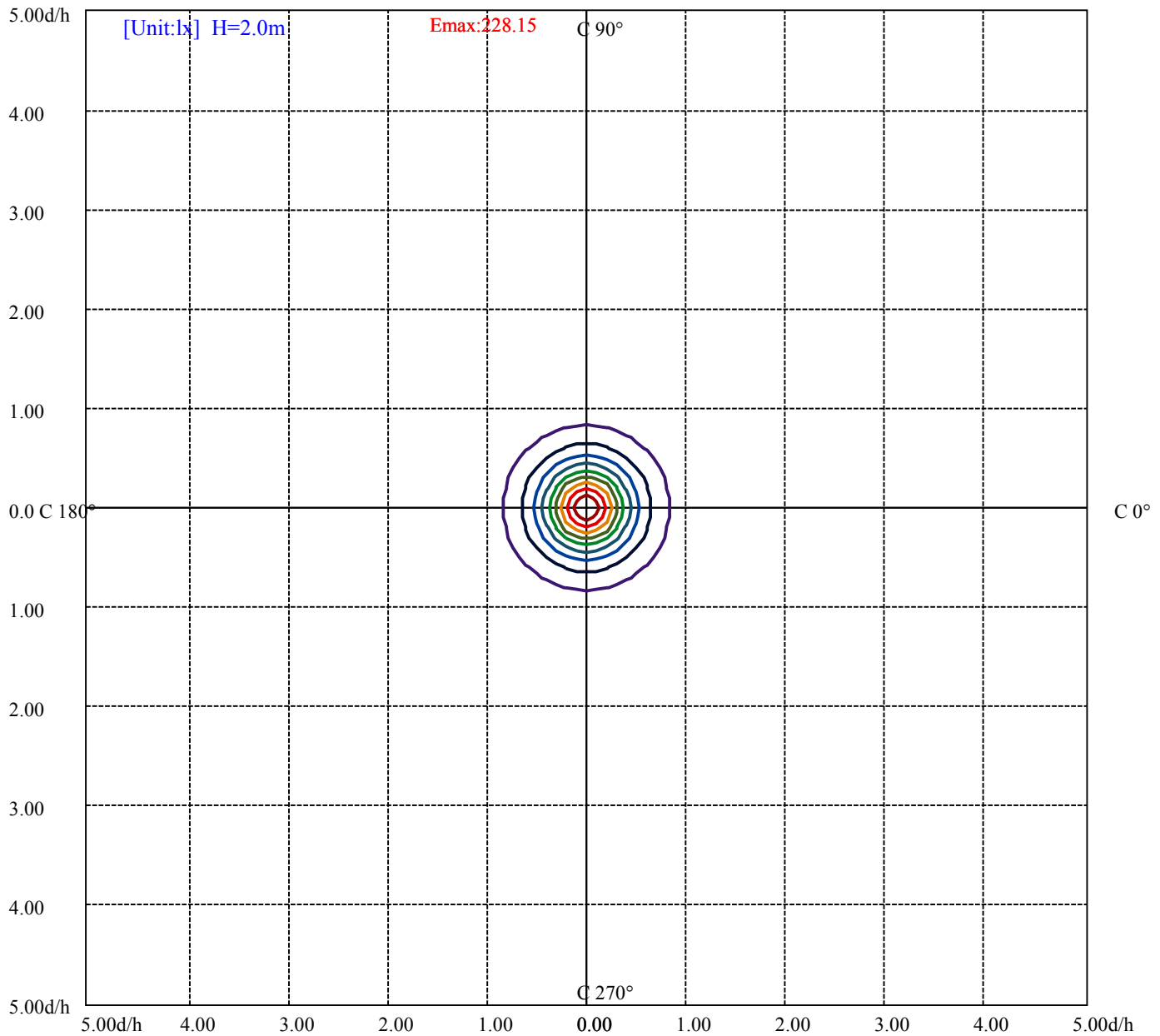
House

[Unit:cd]

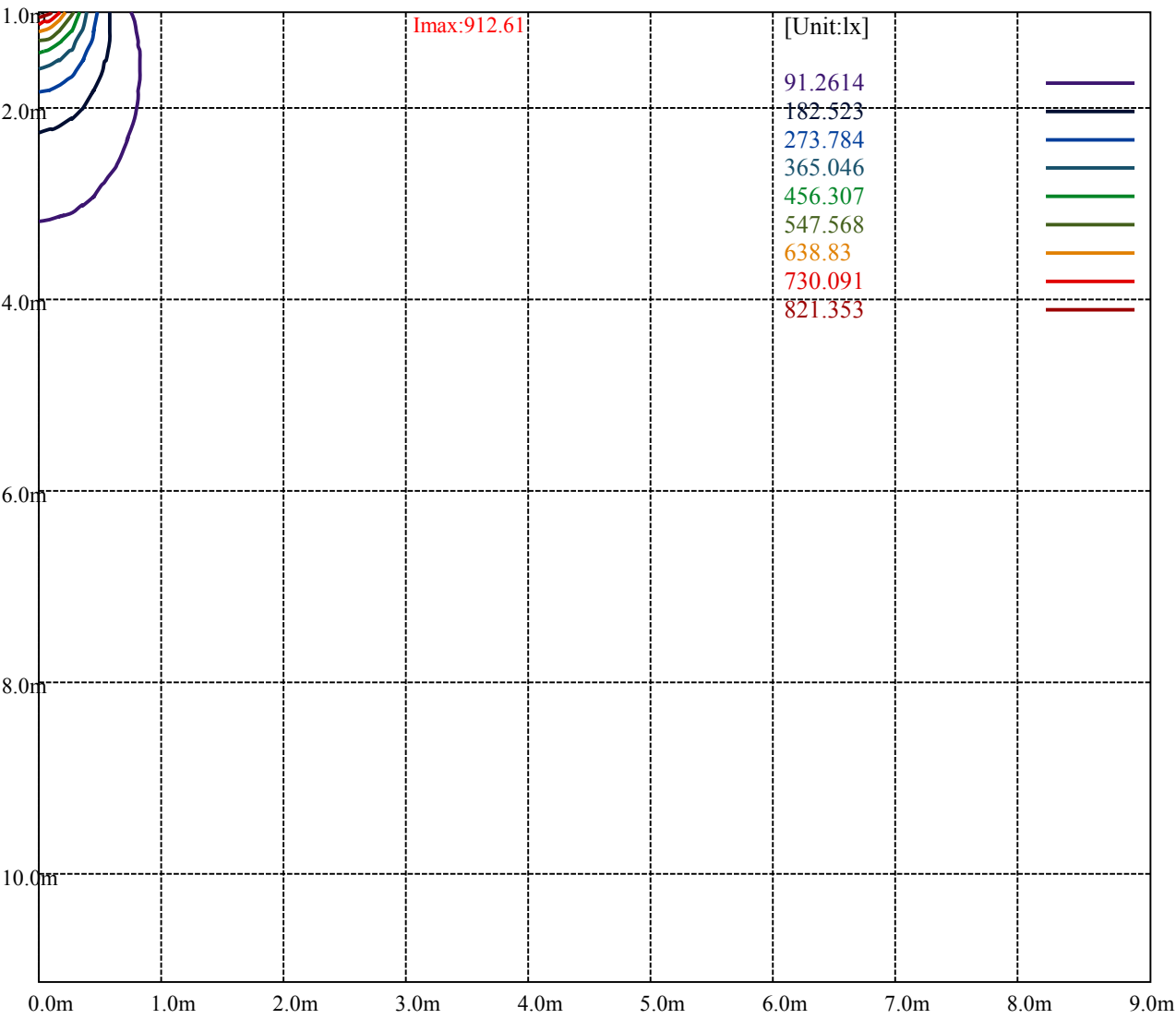
Road

Imax:912.61
(10%Imax) 91.2614
(20%Imax) 182.523
(30%Imax) 273.784
(40%Imax) 365.046
(50%Imax) 456.307
(60%Imax) 547.568
(70%Imax) 638.83
(80%Imax) 730.091
(90%Imax) 821.353





(10%Emax) 22.81532	—
(20%Emax) 45.63075	—
(30%Emax) 68.446	—
(40%Emax) 91.26125	—
(50%Emax) 114.0768	—
(60%Emax) 136.892	—
(70%Emax) 159.7072	—
(80%Emax) 182.5225	—
(90%Emax) 205.338	—



Luminance Table

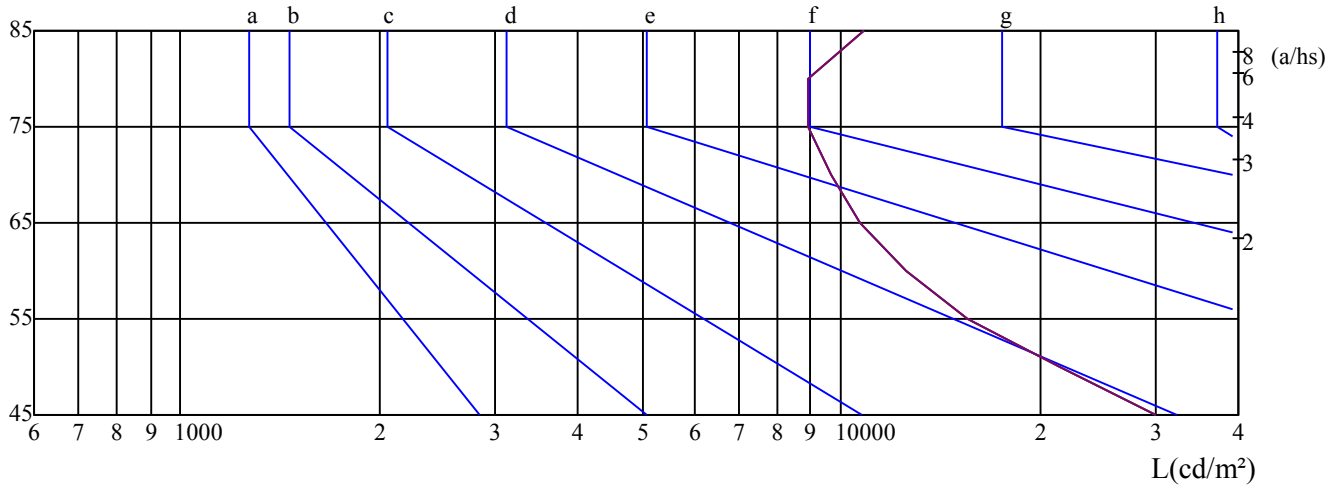
γ	45	50	55	60	65	70	75	80	85
C0	30037	21422	15539	12576	10681	9698	8908	8912	10834
C45	30037	21422	15539	12576	10681	9698	8908	8912	10834
C90	30037	21422	15539	12576	10681	9698	8908	8912	10834

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10681	10681	10681	8908	8908	8908	10834	10834	10834

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

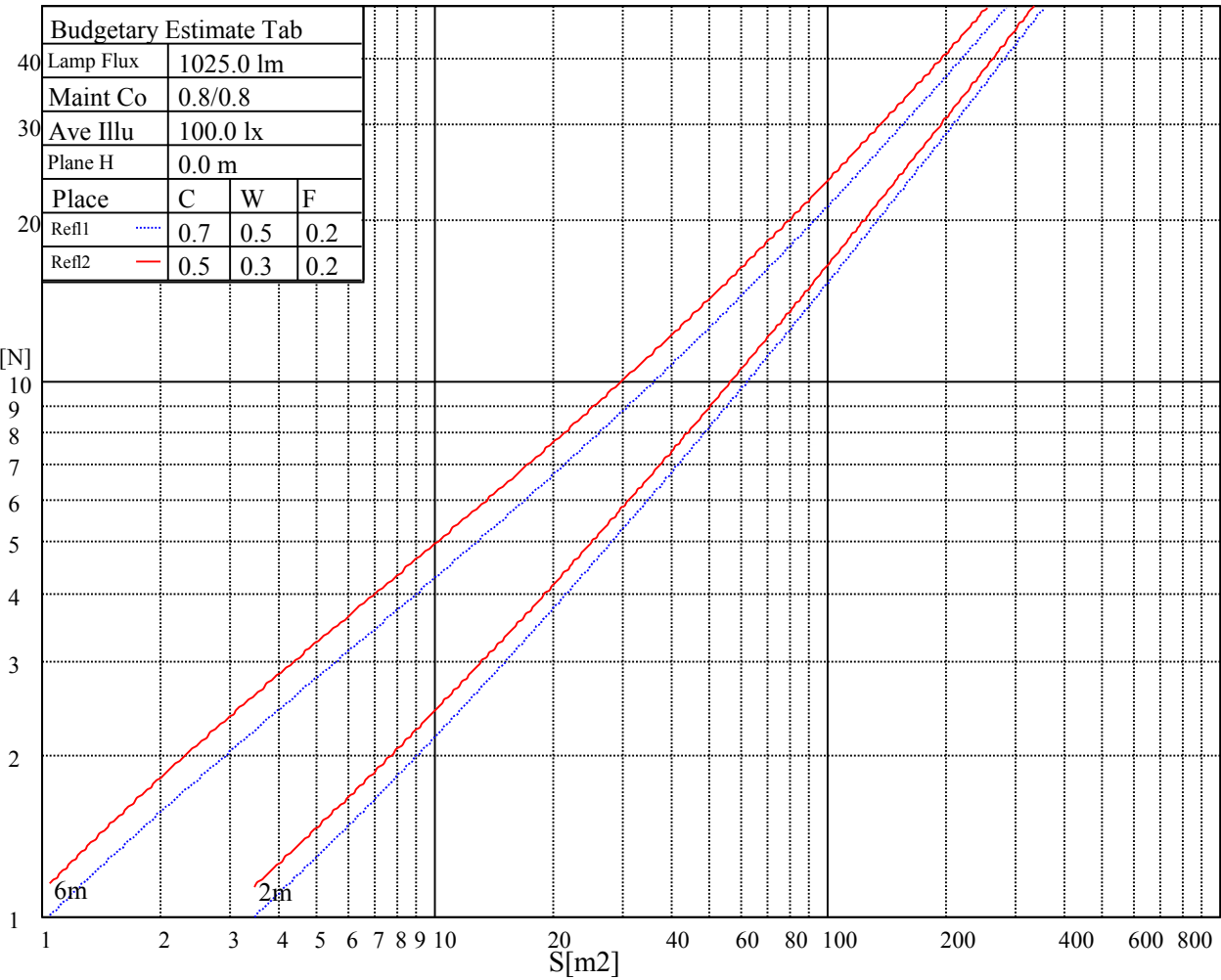
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

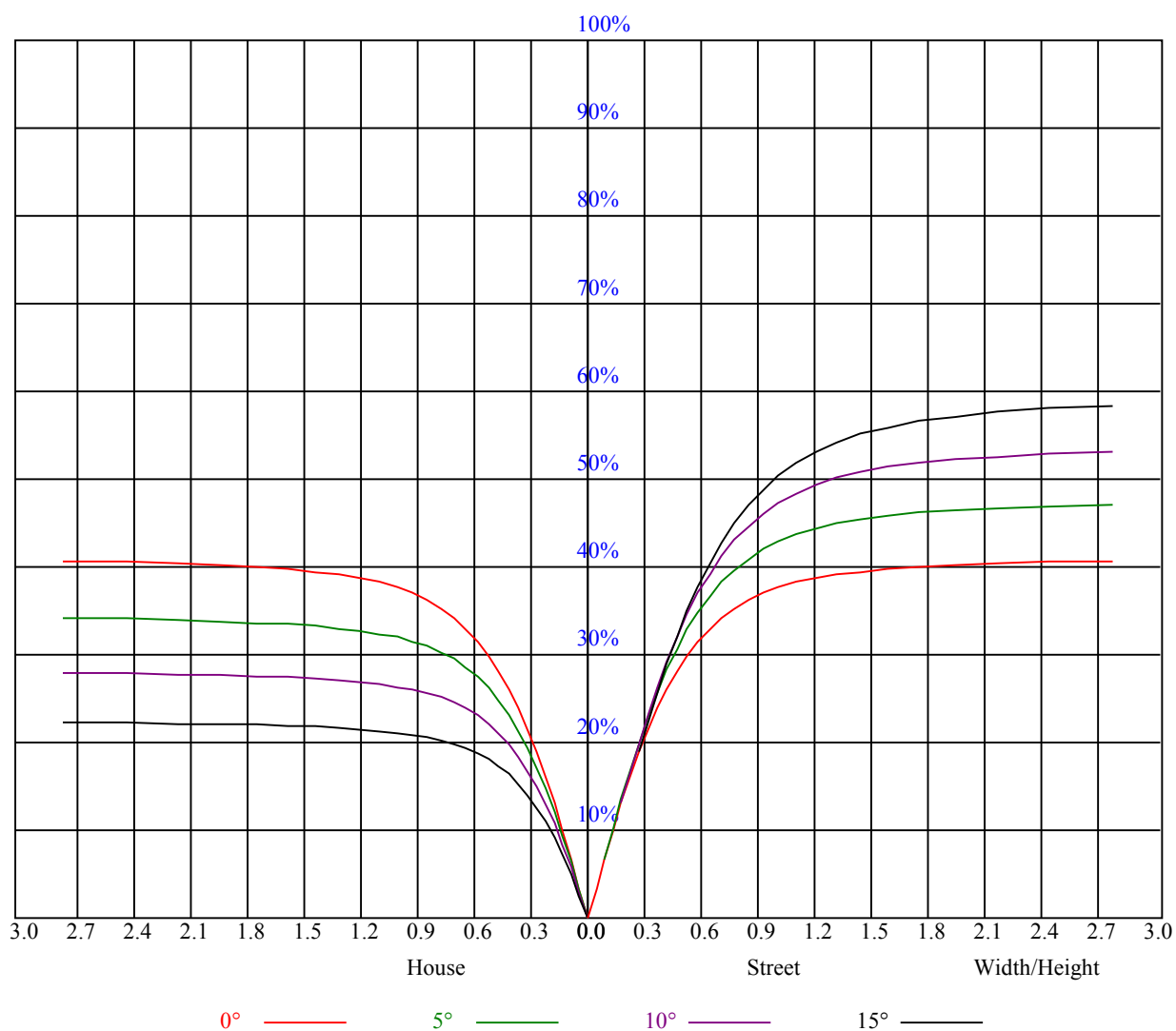
C0 ———

C45 ———

C90 ———



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	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.90	0.88	0.85	0.88	0.86	0.84	0.85	0.83	0.81	0.82	0.80	0.79	0.79	0.78	0.77	0.75
2	0.82	0.78	0.75	0.81	0.77	0.74	0.78	0.75	0.72	0.76	0.73	0.71	0.73	0.71	0.69	0.68
3	0.76	0.71	0.67	0.74	0.70	0.66	0.72	0.68	0.65	0.70	0.67	0.64	0.68	0.65	0.63	0.62
4	0.70	0.64	0.60	0.69	0.64	0.60	0.67	0.62	0.59	0.65	0.61	0.58	0.63	0.60	0.58	0.56
5	0.64	0.59	0.55	0.64	0.58	0.54	0.62	0.57	0.54	0.61	0.56	0.53	0.59	0.56	0.53	0.51
6	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.49	0.57	0.52	0.49	0.55	0.52	0.49	0.47
7	0.56	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.45	0.52	0.48	0.45	0.44
8	0.52	0.47	0.43	0.52	0.46	0.43	0.51	0.46	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.41
9	0.49	0.43	0.40	0.48	0.43	0.40	0.48	0.43	0.40	0.47	0.42	0.39	0.46	0.42	0.39	0.38
10	0.46	0.41	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.44	0.40	0.37	0.44	0.40	0.37	0.36



Nata 1407-N

Intensity data(cd)										Appendix Page: 14 Total:14	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	911.70	871.09	771.53	648.51	534.83	419.34	323.72	237.88	168.75		
45.0	912.83	871.03	777.38	652.73	533.76	420.13	328.05	243.17	175.39		
90.0	913.44	865.74	775.86	655.26	518.85	409.95	312.58	240.08	168.69		
135.0	912.49	891.62	824.68	705.77	580.11	470.81	373.73	290.59	227.25		
180.0	911.70	895.78	824.01	718.31	602.55	489.38	400.16	311.68	234.56		
225.0	912.83	889.31	814.33	710.55	597.83	482.63	388.41	296.89	219.71		
270.0	913.44	882.84	808.88	688.89	567.17	453.15	356.18	272.31	198.11		
315.0	912.49	856.58	767.25	645.86	531.68	416.42	329.51	243.45	170.27		
360.0	911.70	871.09	771.53	648.51	534.83	419.34	323.72	237.88	168.75		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	107.66	69.08	46.80	33.41	24.08	18.17	12.21	7.99	4.84		
45.0	112.22	72.51	48.43	34.20	24.41	18.51	12.38	8.04	4.89		
90.0	112.05	73.01	49.05	34.48	25.65	18.28	12.66	7.99	4.84		
135.0	149.63	94.67	59.51	42.53	30.38	22.28	16.03	10.86	6.58		
180.0	158.51	105.30	66.09	45.34	32.29	23.51	16.48	11.42	6.98		
225.0	147.15	96.75	60.53	41.57	29.87	21.83	15.36	10.69	6.58		
270.0	135.34	87.08	56.03	40.39	28.24	20.81	14.74	9.96	5.96		
315.0	111.21	71.83	47.36	34.14	24.81	18.06	12.38	8.38	5.29		
360.0	107.66	69.08	46.80	33.41	24.08	18.17	12.21	7.99	4.84		
C/ γ (°)	90.0										
0.0	3.54										
45.0	3.49										
90.0	3.43										
135.0	3.88										
180.0	4.11										
225.0	4.16										
270.0	3.66										
315.0	3.43										
360.0	3.54										