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## Nata

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LumCAT: 3-1700-N  
Luminaire: 92.70.045.00+97.70.089.00  
Report No: NT2018041303  
Test No: nata-0100  
LampCAT: LUXEON COB 1208  
Lamp flux(lm): 2587.0  
Number of Lamps: 1  
Length(mm): 77  
Phm Type: C

Voltage(V): 34.8000  
Current(A): 0.5900  
Power (W): 20.5320  
PF: 0.0000  
Ballast type: DC  
Width(mm): 77  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 2033.71  
Efficiency(%): 78.61%  
Lumens(lm)/Power(W): 100.19  
Central intensity(cd): 4235.764  
Maximum intensity(cd): 4235.764  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=37.4  
                                  [C90/270]Total=37.4  
Field angle(10%Imax): [C0/180]Total=66.6  
                                  [C90/270]Total=66.6  
Maximum s/h(1/2): C0\_180=0.62 C90\_270=0.62  
Maximum s/h(1/4): C0\_180=0.60 C90\_270=0.60  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 79.52%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.042%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/4/13  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

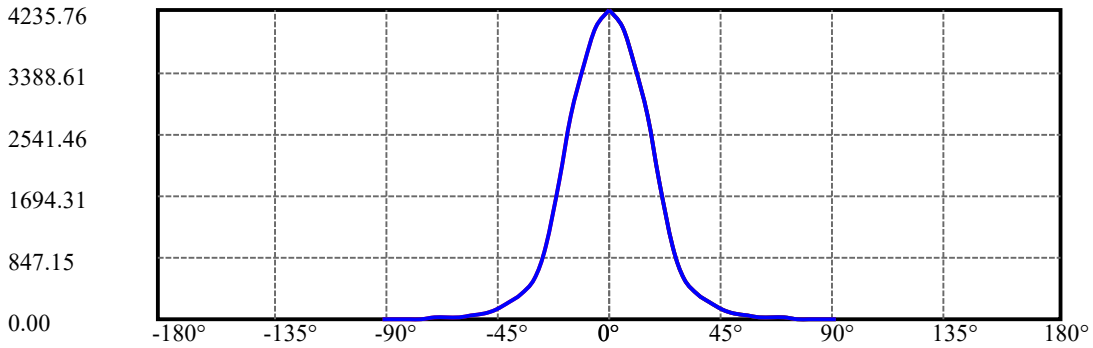
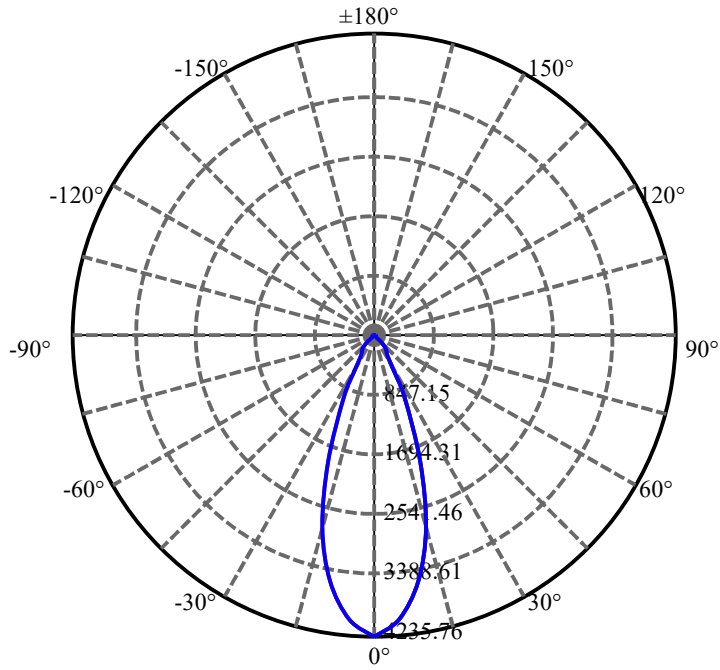
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4235.764	25.331	25.331	.979%	1.246%
5.0	4009.964	191.569	216.9	7.405%	10.665%
10.0	3502.551	333.383	550.283	12.887%	27.058%
15.0	2796.934	396.797	947.08	15.338%	46.569%
20.0	1884.649	353.323	1300.403	13.658%	63.942%
25.0	991.270	229.631	1530.033	8.876%	75.234%
30.0	563.860	154.536	1684.57	5.974%	82.832%
35.0	350.778	110.284	1794.854	4.263%	88.255%
40.0	237.486	83.675	1878.529	3.234%	92.369%
45.0	134.234	52.028	1930.557	2.011%	94.928%
50.0	79.556	33.406	1963.962	1.291%	96.570%
55.0	44.850	20.138	1984.101	.778%	97.561%
60.0	25.594	12.150	1996.25	.470%	98.158%
65.0	18.506	9.193	2005.444	.355%	98.610%
70.0	15.381	7.923	2013.366	.306%	99.000%
75.0	13.076	6.923	2020.289	.268%	99.340%
80.0	11.225	6.059	2026.349	.234%	99.638%
85.0	9.456	5.163	2031.512	.200%	99.892%
90.0	8.024	2.199	2033.711	.085%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1684.57	65.12%	82.83%
0-40	1878.53	72.61%	92.37%
0-60	1996.25	77.16%	98.16%
0-90	2031.51	78.53%	99.89%
0-120	2031.51	78.53%	99.89%
0-180	2033.71	78.61%	100.00%
60-90	47.41	1.83%	2.33%
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%
0-28.14	1626.97	62.89%	80.00%

ZONAL LUMEN SUMMARY

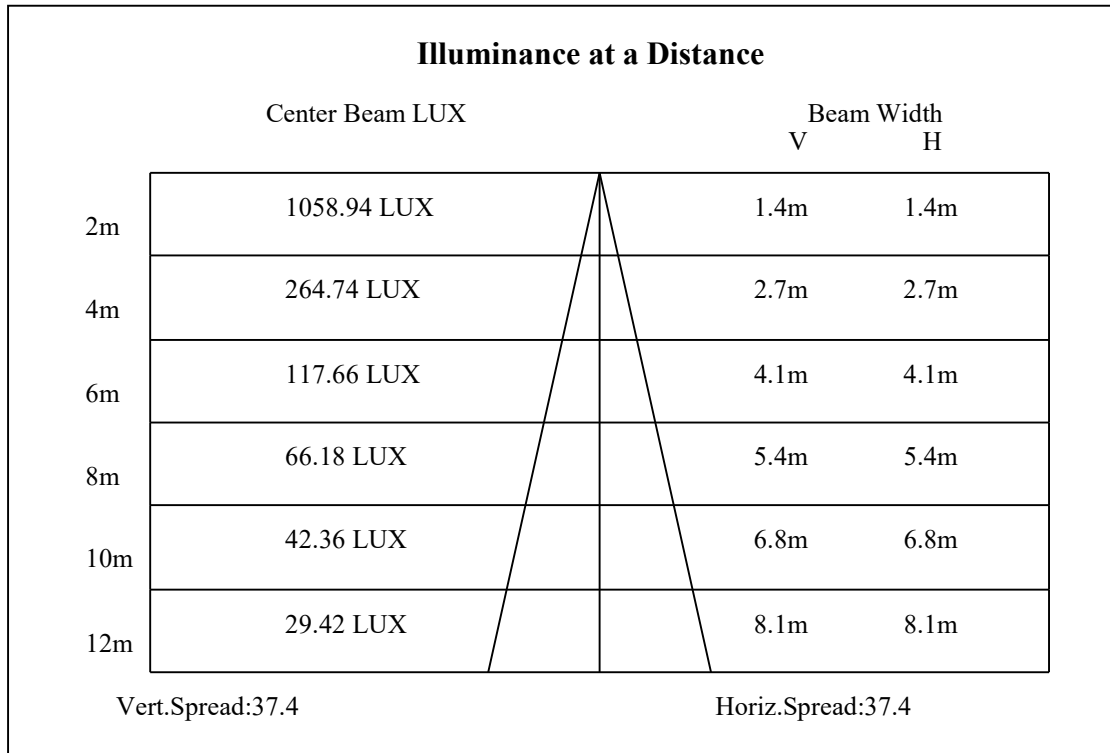
0-10	550.28
10-20	750.12
20-30	384.17
30-40	193.96
40-50	85.43
50-60	32.29
60-70	17.12
70-80	12.98
80-90	5.16
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

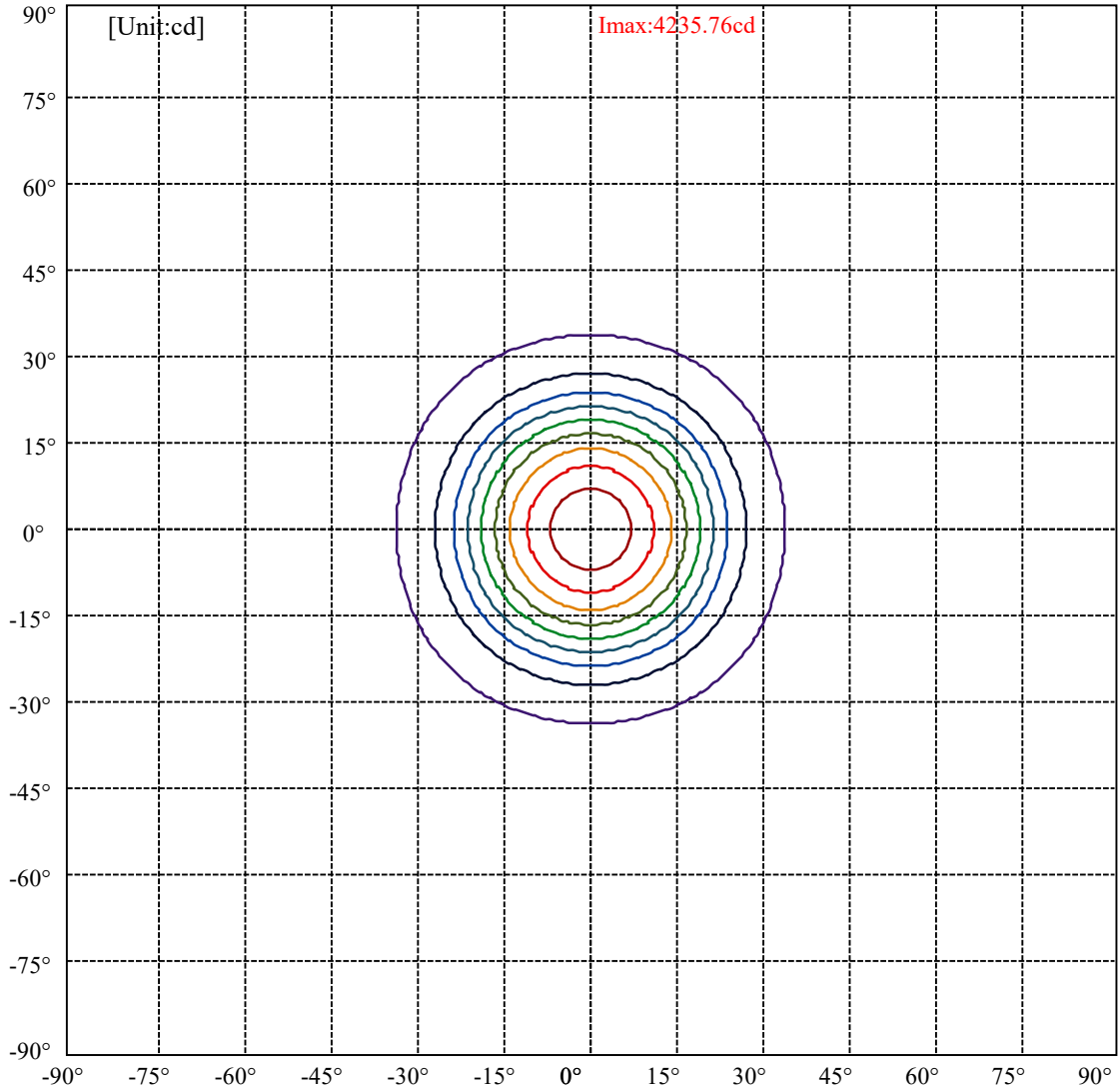


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

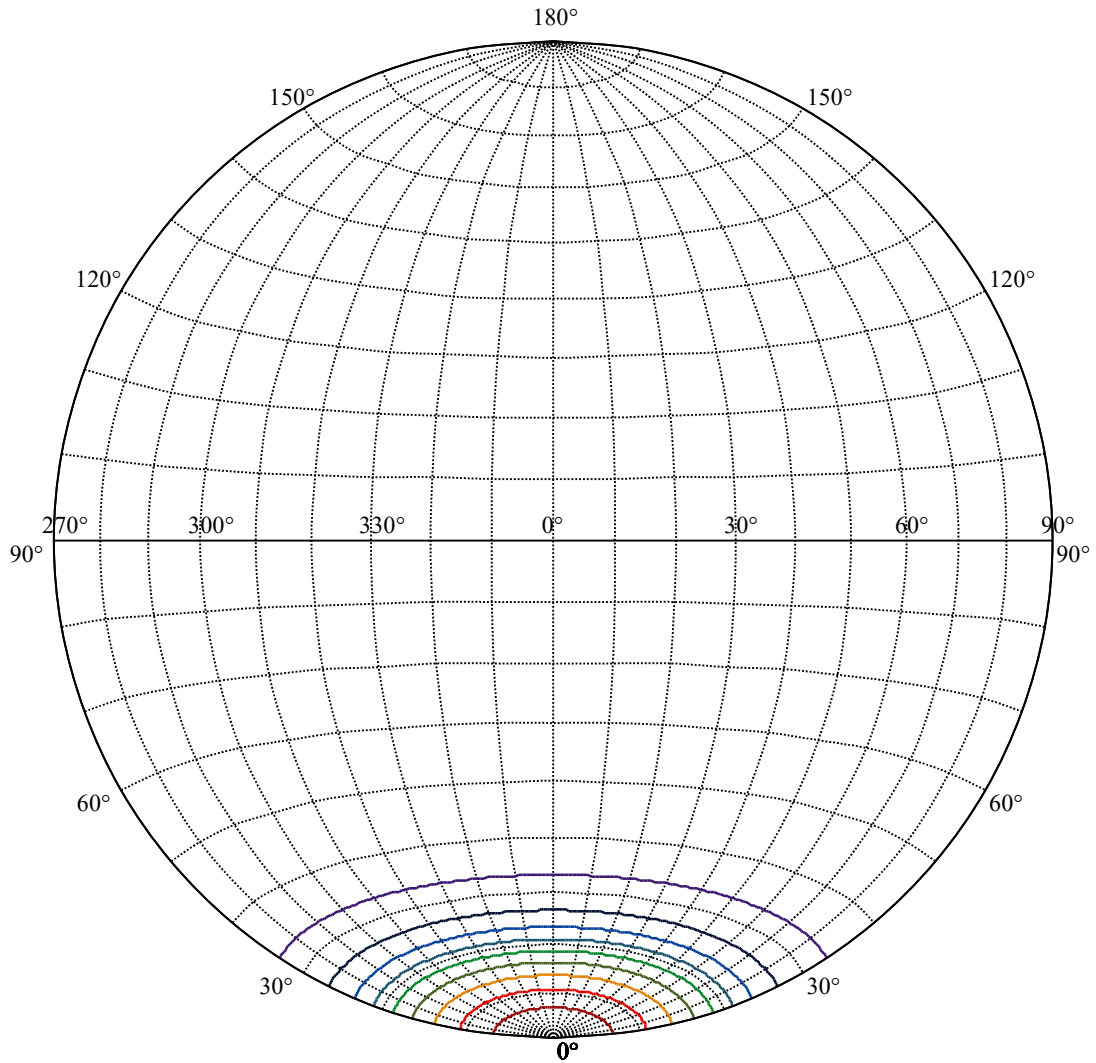
Field angle(10%Imax):C0/180Left:33.3 Right:33.3  
:C90/270Left:33.3 Right:33.3

Beam Angle(50%Imax):C0/180Left:18.7 Right:18.7  
:C90/270Left:18.7 Right:18.7





(10%Imax) 423.576	—
(20%Imax) 847.153	—
(30%Imax) 1270.73	—
(40%Imax) 1694.31	—
(50%Imax) 2117.88	—
(60%Imax) 2541.46	—
(70%Imax) 2965.03	—
(80%Imax) 3388.61	—
(90%Imax) 3812.19	—



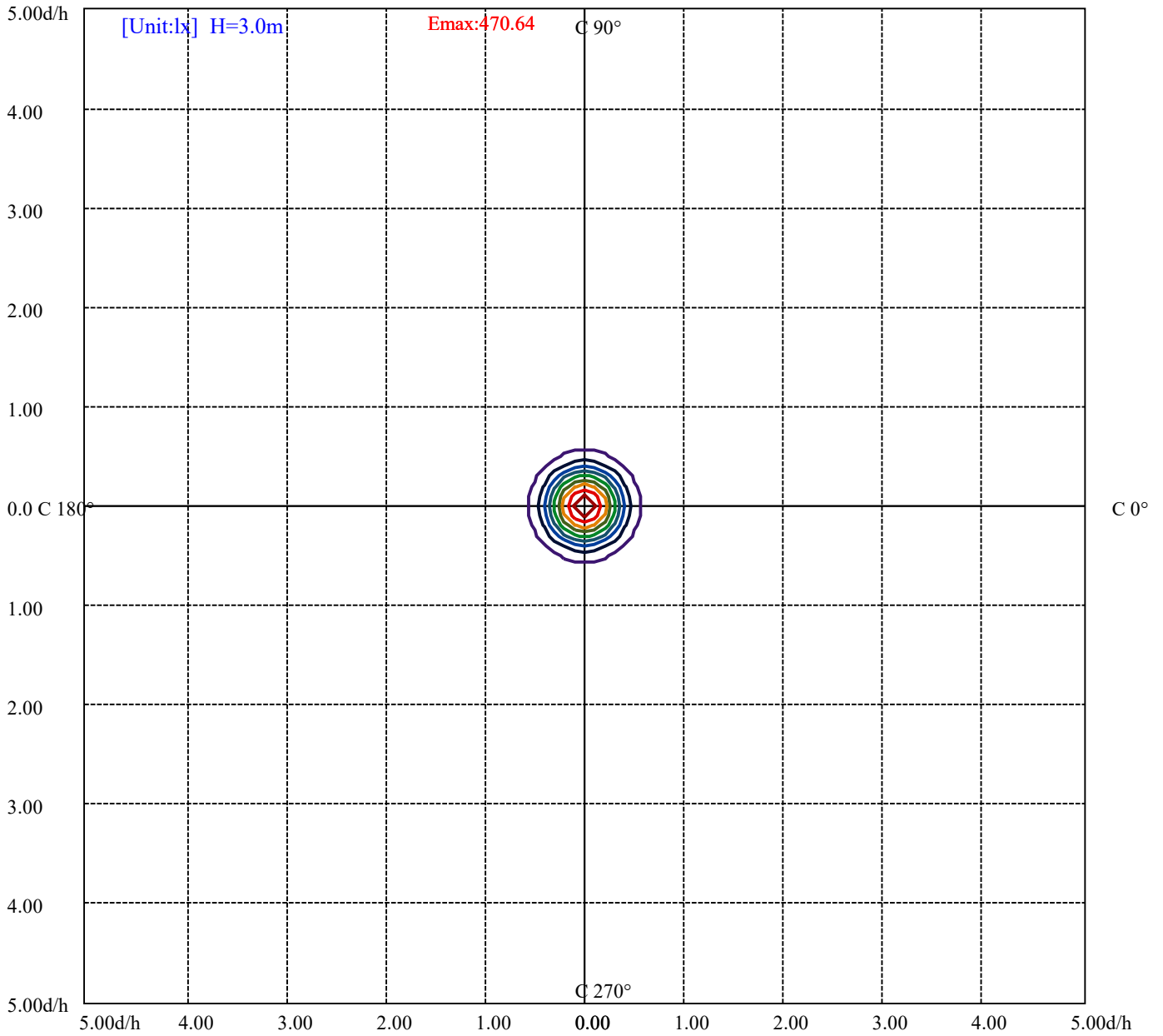
House

[Unit:cd]

Road

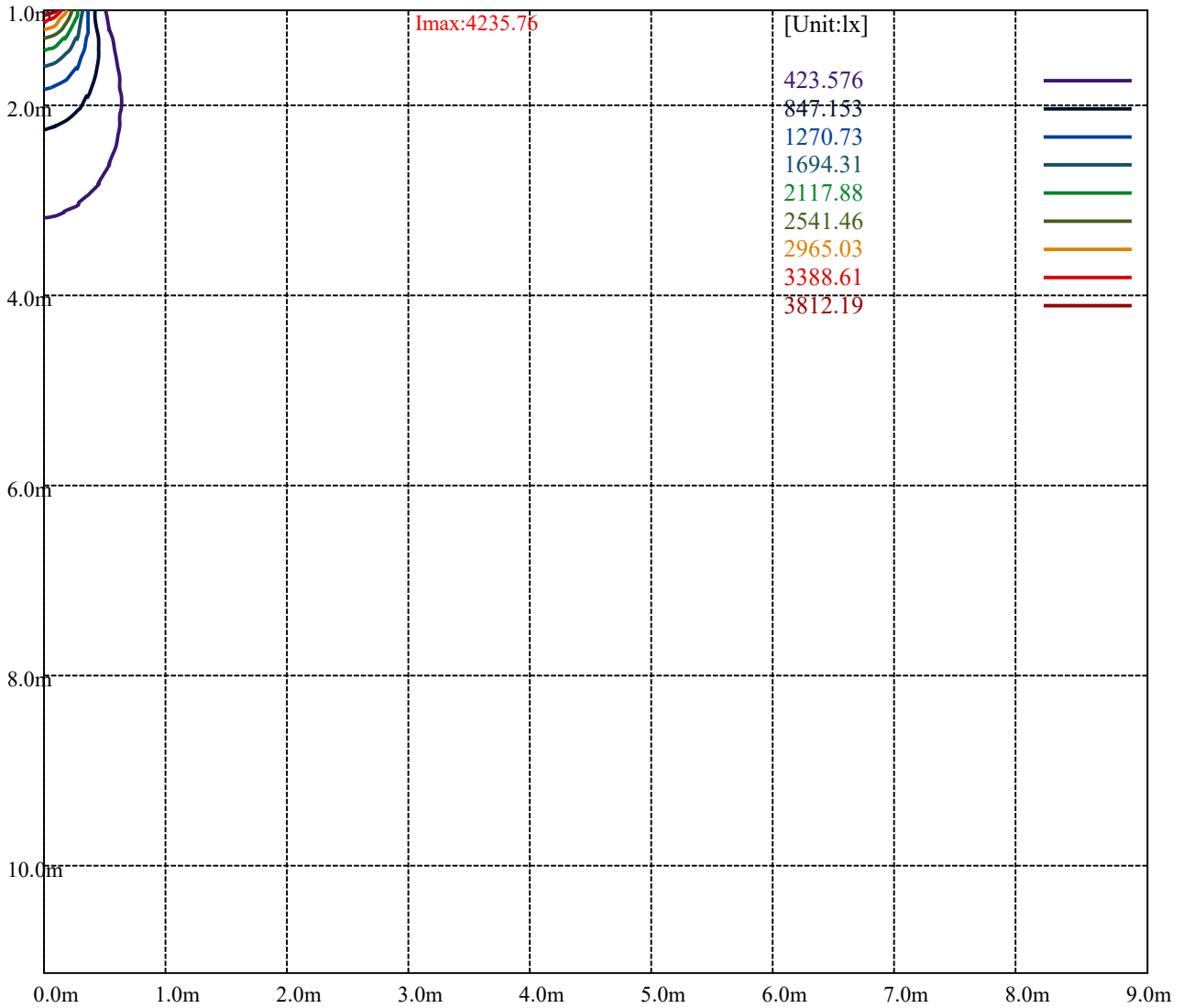
**Imax:4235.76**

(10%Imax) 423.576	—
(20%Imax) 847.153	—
(30%Imax) 1270.73	—
(40%Imax) 1694.31	—
(50%Imax) 2117.88	—
(60%Imax) 2541.46	—
(70%Imax) 2965.03	—
(80%Imax) 3388.61	—
(90%Imax) 3812.19	—



(10%Emax) 47.064	—
(20%Emax) 94.12789	—
(30%Emax) 141.1922	—
(40%Emax) 188.2556	—
(50%Emax) 235.32	—
(60%Emax) 282.3833	—
(70%Emax) 329.4478	—
(80%Emax) 376.5122	—
(90%Emax) 423.5756	—





Luminance Table

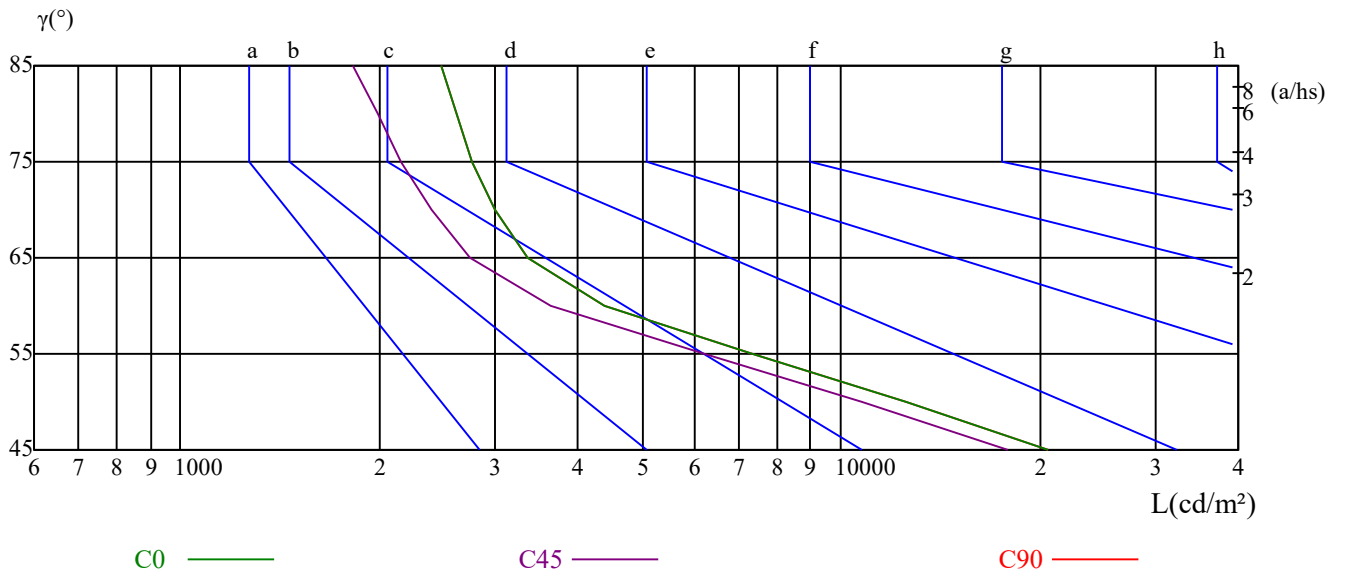
$\gamma$	45	50	55	60	65	70	75	80	85
C0	20545	12534	7337	4389	3361	2993	2763	2616	2479
C45	17890	10754	6198	3646	2742	2393	2159	1990	1825
C90	20545	12534	7337	4389	3361	2993	2763	2616	2479

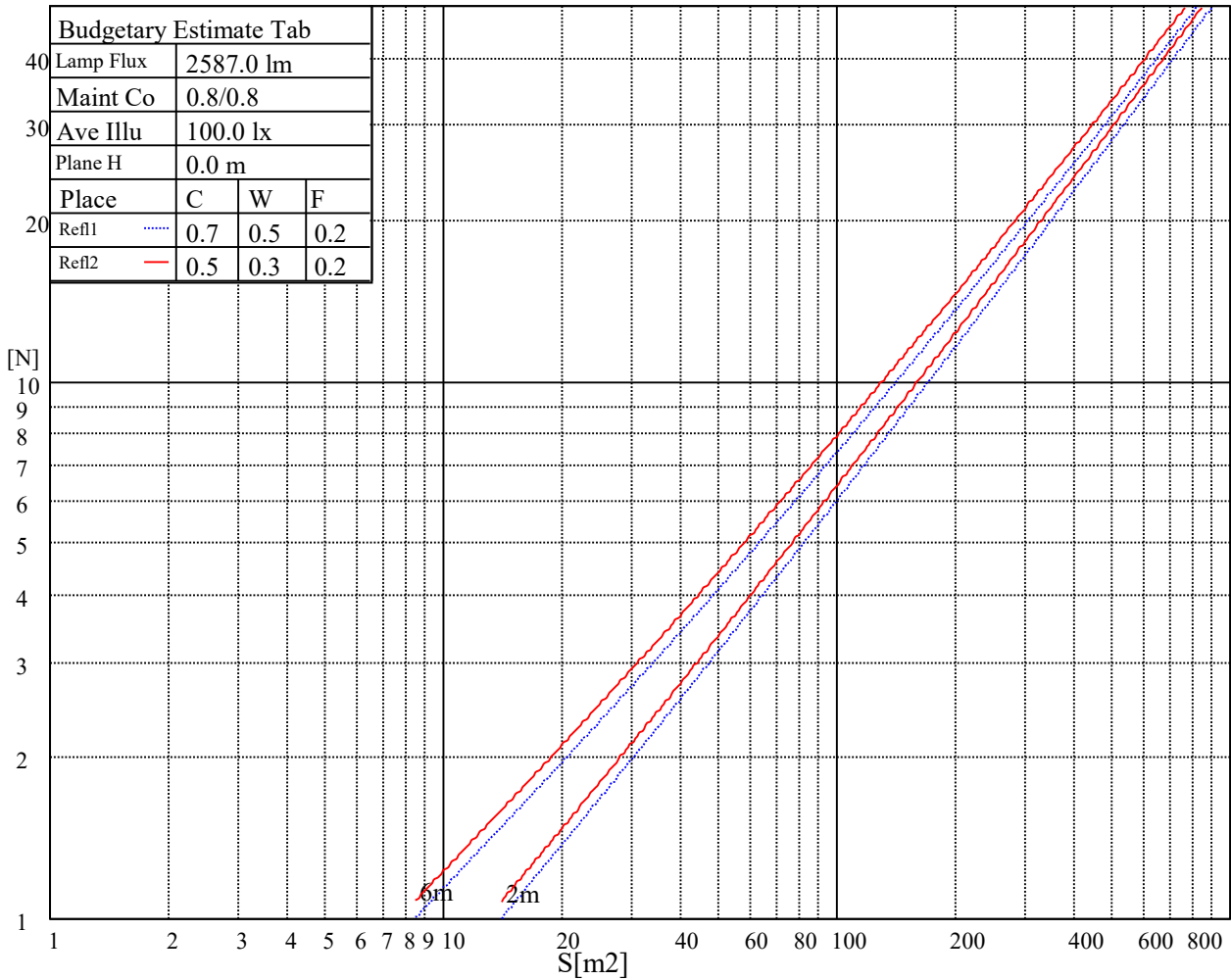
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7385	7385	7385	8521	8521	8521	18299	18299	18299

Glare Table

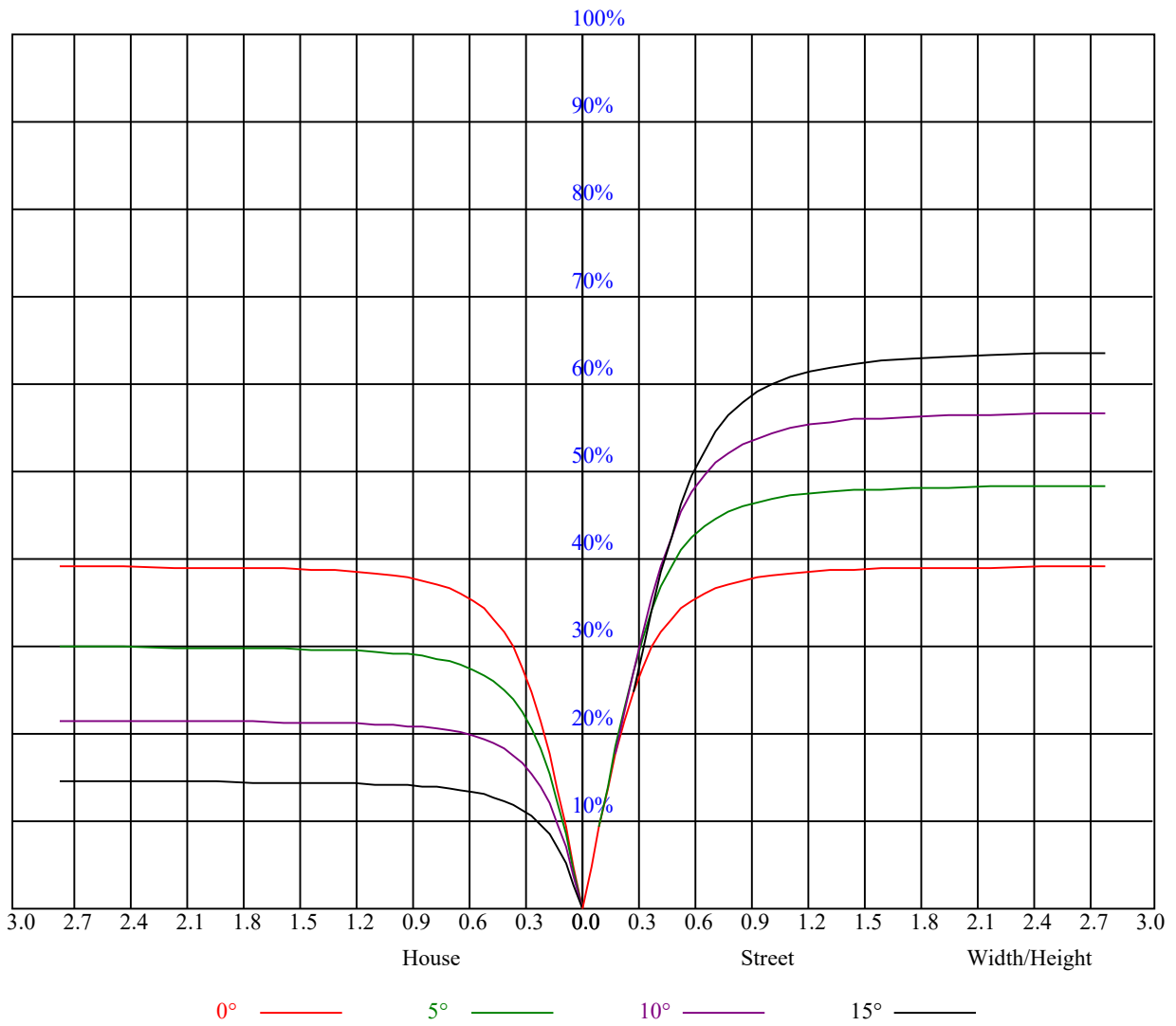
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.95	0.95	0.95	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.81	0.81	0.81	0.80
1	0.87	0.85	0.83	0.86	0.84	0.82	0.82	0.81	0.80	0.79	0.78	0.77	0.77	0.76	0.75	0.73
2	0.82	0.79	0.76	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.71	0.70
3	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.70	0.68	0.71	0.69	0.67	0.66
4	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.63
5	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
6	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.58	0.57
7	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.55
8	0.62	0.57	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.53
9	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.51	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49



Nata 3-1700-N

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	4233.84	4120.42	3695.94	3007.18	2146.65	1164.44	639.20	395.30	280.24
45.0	4223.93	4098.40	3641.98	3020.39	2114.17	1171.05	635.35	387.60	282.99
90.0	4233.84	3950.30	3412.40	2641.61	1744.74	877.32	508.45	327.37	210.65
135.0	4251.46	3993.24	3464.70	2796.31	1825.12	925.50	557.72	344.10	215.00
180.0	4233.84	3876.52	3342.47	2546.91	1597.19	823.81	485.27	306.11	195.06
225.0	4223.93	3889.73	3350.18	2612.98	1680.32	839.67	509.27	317.40	200.79
270.0	4233.84	4083.53	3574.26	2919.09	2034.88	1082.41	588.55	366.13	279.14
315.0	4251.46	4067.57	3538.47	2831.00	1934.13	1045.96	587.07	362.22	236.03
360.0	4233.84	4120.42	3695.94	3007.18	2146.65	1164.44	639.20	395.30	280.24
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	156.31	92.99	52.63	30.45	20.10	16.46	14.04	12.11	10.35
45.0	149.70	89.19	50.87	28.57	19.49	15.97	13.65	11.62	9.80
90.0	123.93	75.76	41.90	23.78	18.17	15.09	12.66	10.74	9.08
135.0	125.09	75.48	41.73	23.89	18.11	14.98	12.66	10.90	8.92
180.0	117.77	69.59	38.70	22.96	17.62	14.92	12.77	10.90	9.03
225.0	119.80	69.37	38.10	22.68	17.34	14.59	12.39	10.68	8.97
270.0	142.87	83.85	48.67	26.70	18.72	15.64	13.32	11.51	9.69
315.0	138.41	80.22	46.19	25.71	18.50	15.42	13.10	11.34	9.80
360.0	156.31	92.99	52.63	30.45	20.10	16.46	14.04	12.11	10.35
C/γ(°)	90.0								
0.0	8.20								
45.0	7.98								
90.0	7.93								
135.0	8.04								
180.0	8.09								
225.0	7.98								
270.0	7.93								
315.0	8.04								
360.0	8.20								