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Nata

LumCAT: 1436-N	
Luminaire: 92.70.051.00+92.70.147.00	
Report No: NATA0100	Voltage(V): 37.5000
Test No: GC2018080204	Current(A): 0.2000
LampCAT: BRIDGELUX V4 HD	Power (W): 7.5000
Lamp flux(lm): 718.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 46	Width(mm): 46
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 570.55
Efficiency(%): 79.46%
Lumens(lm)/Power(W): 76.07
Central intensity(cd): 2416.288
Maximum intensity(cd): 2416.288
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=21.7
[C90/270]Total=21.7
Field angle(10%Imax): [C0/180]Total=45.5
[C90/270]Total=45.5
Maximum s/h(1/2): C0_180=0.37 C90_270=0.37
Maximum s/h(1/4): C0_180=0.36 C90_270=0.36
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.40%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.469%

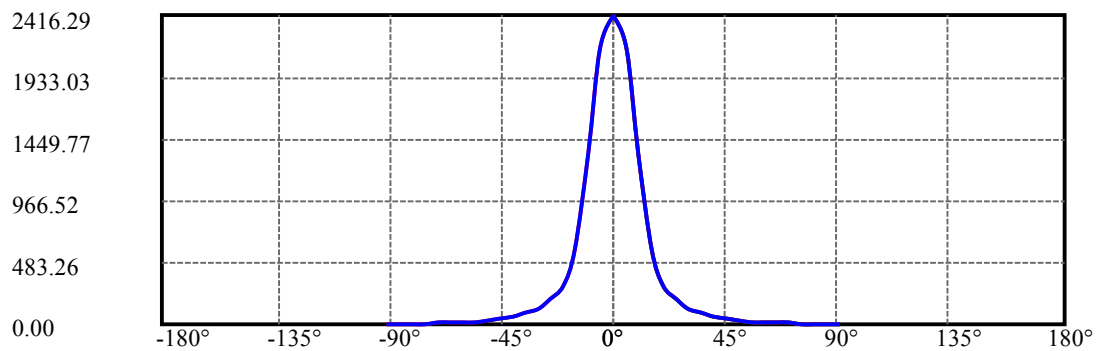
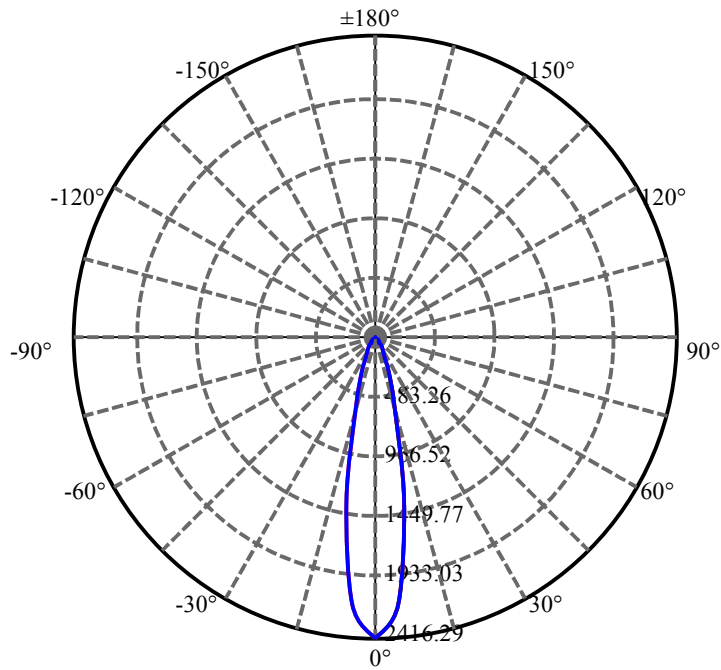
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2416.288	14.450	14.45	2.013%	2.533%
5.0	2152.912	102.852	117.302	14.325%	20.559%
10.0	1333.989	126.973	244.275	17.684%	42.814%
15.0	579.833	82.260	326.535	11.457%	57.231%
20.0	299.121	56.077	382.612	7.810%	67.060%
25.0	194.280	45.006	427.618	6.268%	74.948%
30.0	126.313	34.618	462.236	4.822%	81.016%
35.0	83.238	26.170	488.406	3.645%	85.602%
40.0	58.229	20.516	508.923	2.857%	89.198%
45.0	40.645	15.754	524.676	2.194%	91.959%
50.0	29.331	12.316	536.993	1.715%	94.118%
55.0	19.765	8.875	545.867	1.236%	95.674%
60.0	13.200	6.266	552.133	.873%	96.772%
65.0	9.270	4.605	556.738	.641%	97.579%
70.0	7.632	3.931	560.67	.548%	98.268%
75.0	6.462	3.422	564.091	.477%	98.868%
80.0	5.685	3.069	567.16	.427%	99.405%
85.0	4.955	2.706	569.865	.377%	99.880%
90.0	2.505	0.687	570.552	.096%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	462.24	64.38%	81.02%
0-40	508.92	70.88%	89.20%
0-60	552.13	76.90%	96.77%
0-90	569.87	79.37%	99.88%
0-120	569.87	79.37%	99.88%
0-180	570.55	79.46%	100.00%
60-90	24.00	3.34%	4.21%
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%
0-29.16	456.44	63.57%	80.00%

ZONAL LUMEN SUMMARY

0-10	244.27
10-20	138.34
20-30	79.62
30-40	46.69
40-50	28.07
50-60	15.14
60-70	8.54
70-80	6.49
80-90	2.71
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: —————

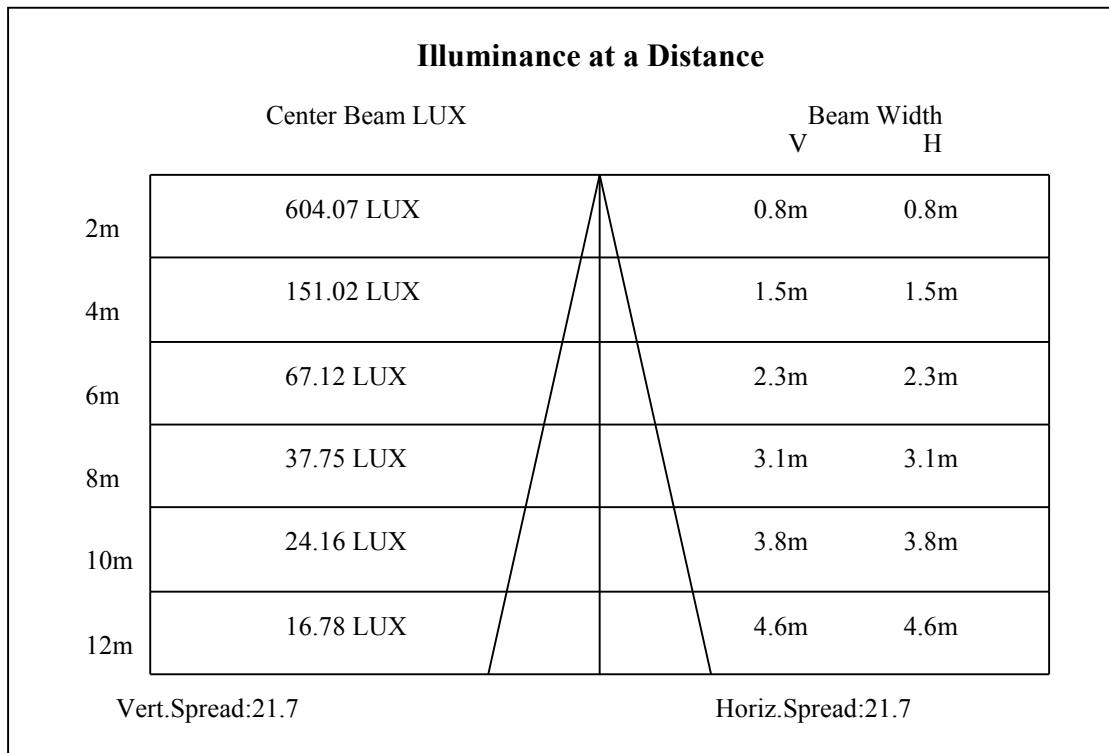
C90/C270: —————

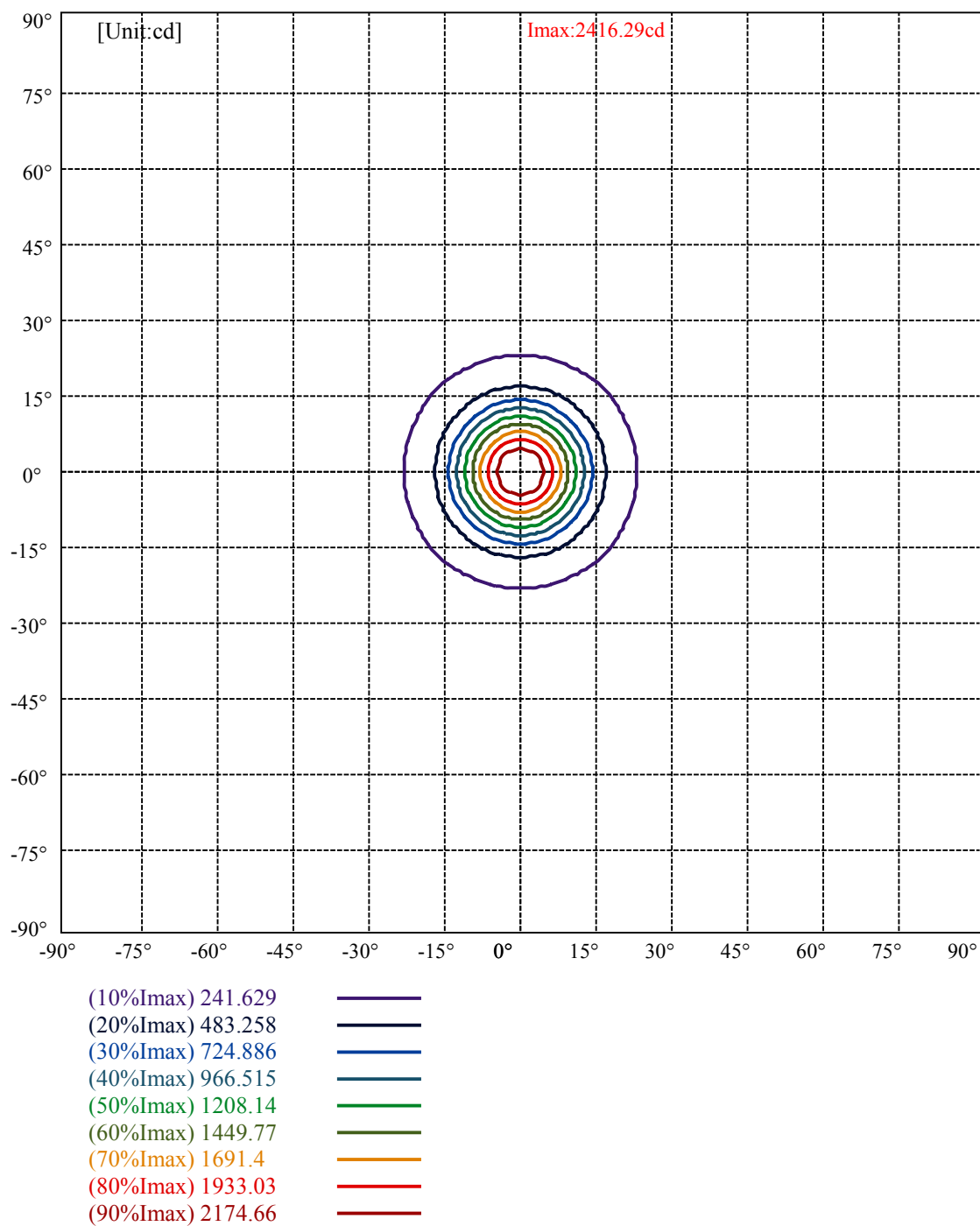
Field angle(10%Imax):C0/180Left:22.7 Right:22.7

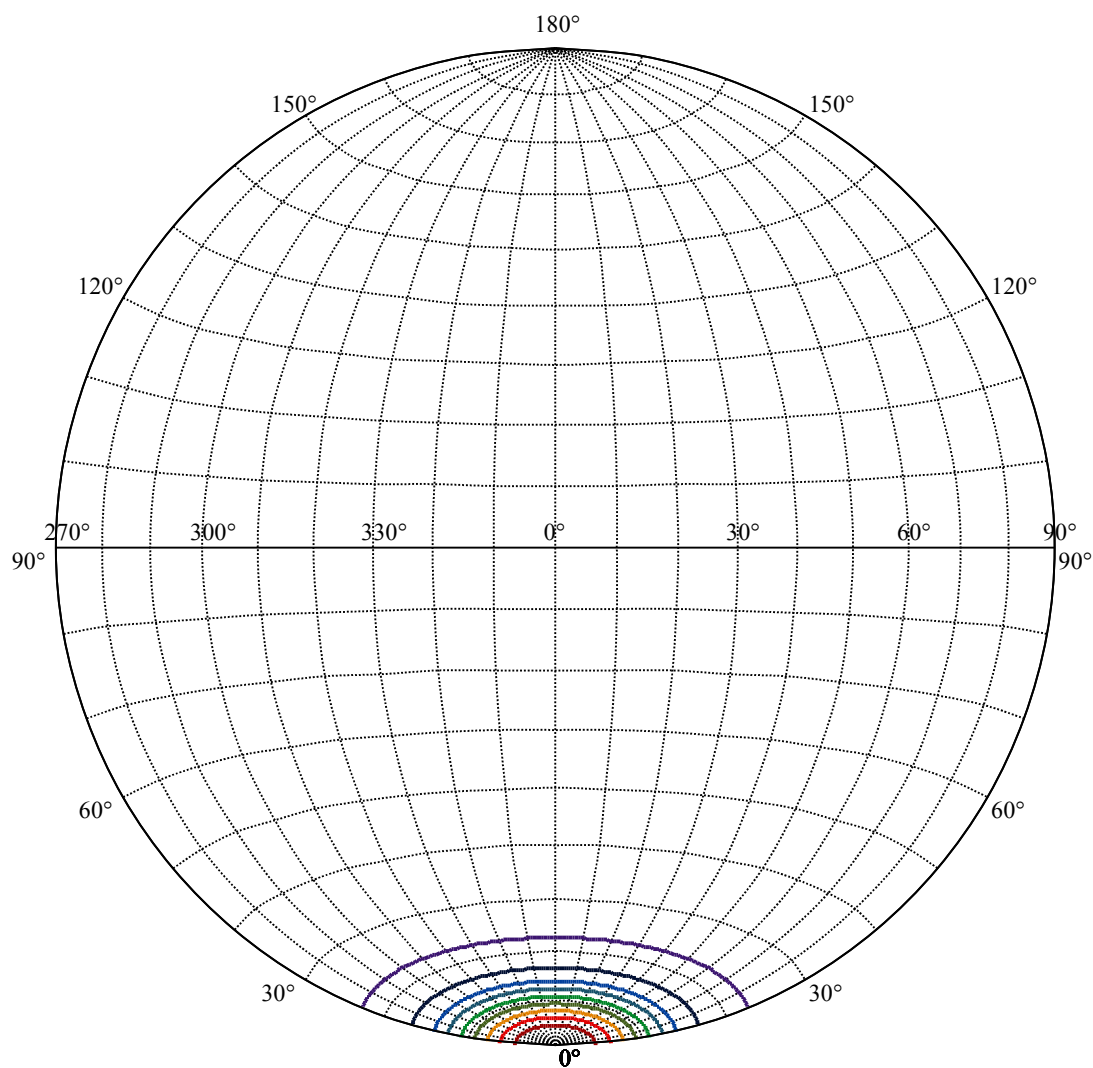
:C90/270Left:22.7 Right:22.7

Beam Angle(50%Imax):C0/180Left:10.8 Right:10.8

:C90/270Left:10.8 Right:10.8







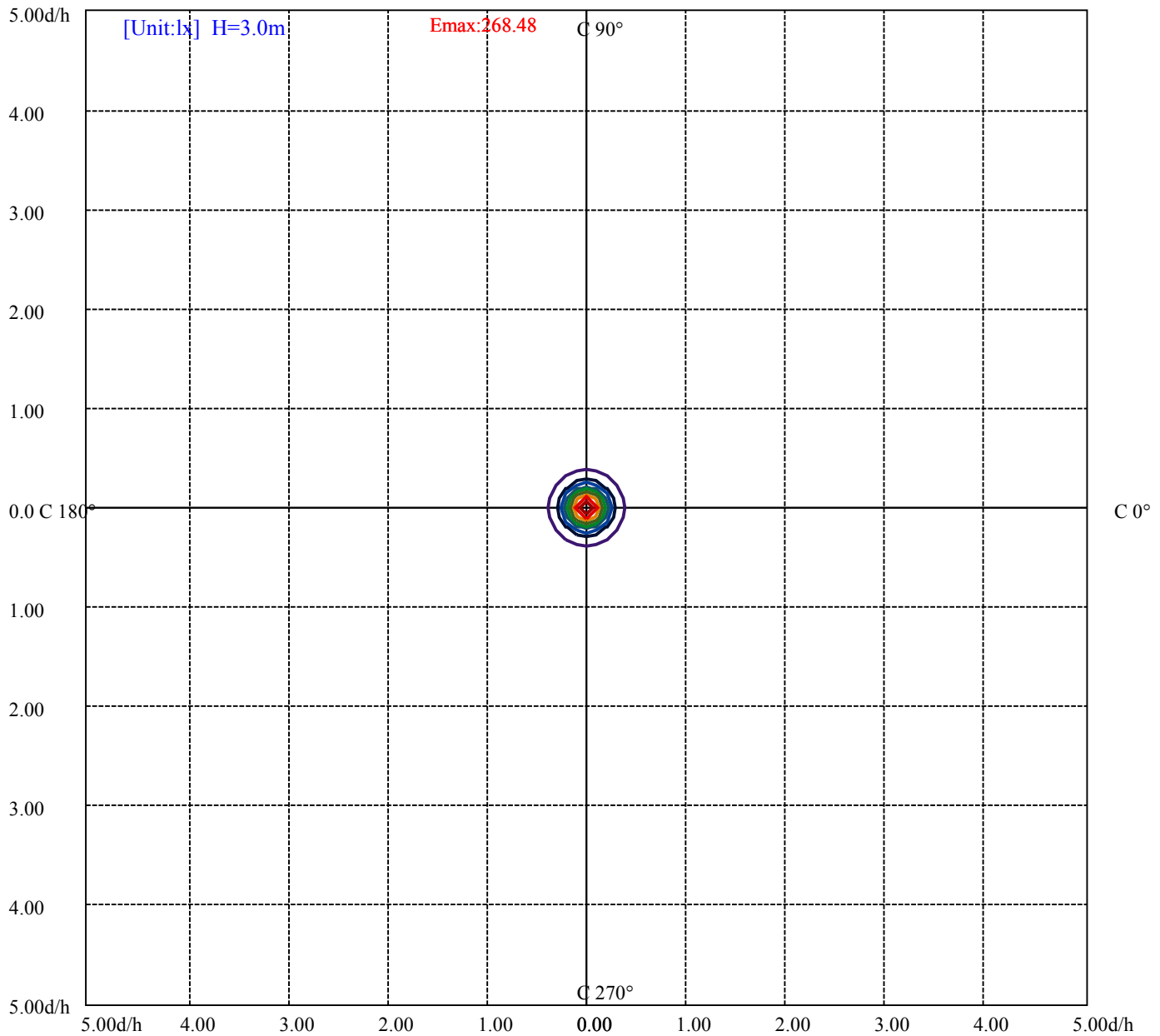
House

[Unit:cd]

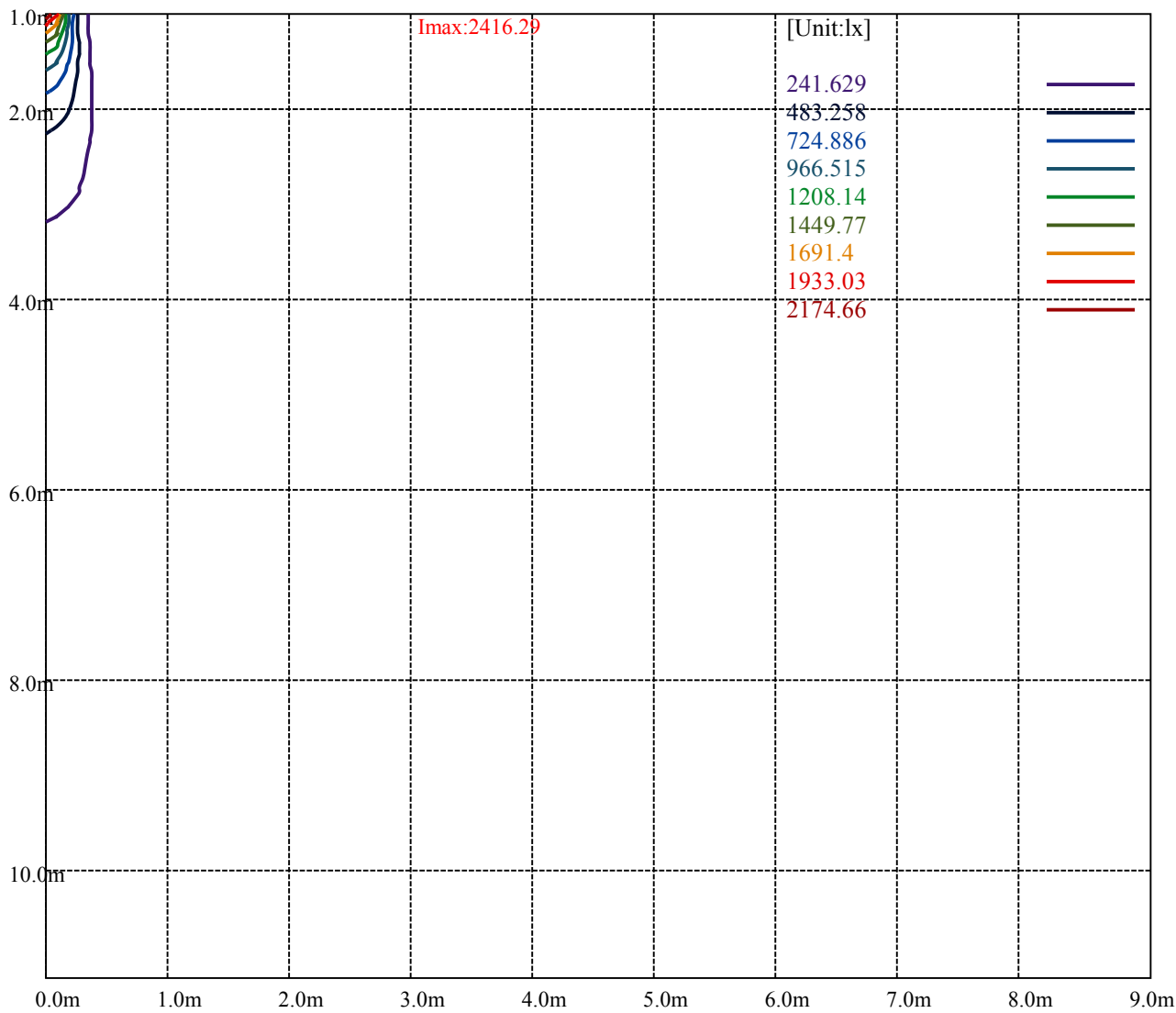
Road

Imax:2416.29

(10%Imax)	241.629	—
(20%Imax)	483.258	—
(30%Imax)	724.886	—
(40%Imax)	966.515	—
(50%Imax)	1208.14	—
(60%Imax)	1449.77	—
(70%Imax)	1691.4	—
(80%Imax)	1933.03	—
(90%Imax)	2174.66	—



(10%Emax)	26.84756	—
(20%Emax)	53.69511	—
(30%Emax)	80.54266	—
(40%Emax)	107.3902	—
(50%Emax)	134.2378	—
(60%Emax)	161.0856	—
(70%Emax)	187.9333	—
(80%Emax)	214.78	—
(90%Emax)	241.6278	—



Luminance Table

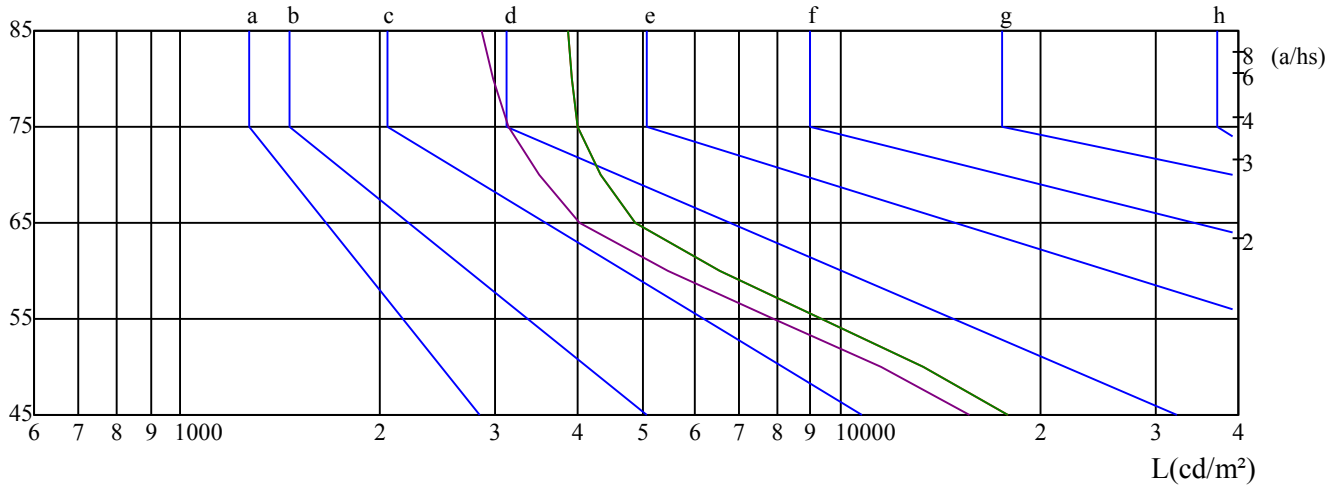
γ	45	50	55	60	65	70	75	80	85
C0	17851	13297	9332	6554	4892	4334	4004	3908	3858
C45	15631	11475	7929	5477	4014	3484	3143	2984	2848
C90	17851	13297	9332	6554	4892	4334	4004	3908	3858

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10366	10366	10366	11800	11800	11800	26868	26868	26868

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

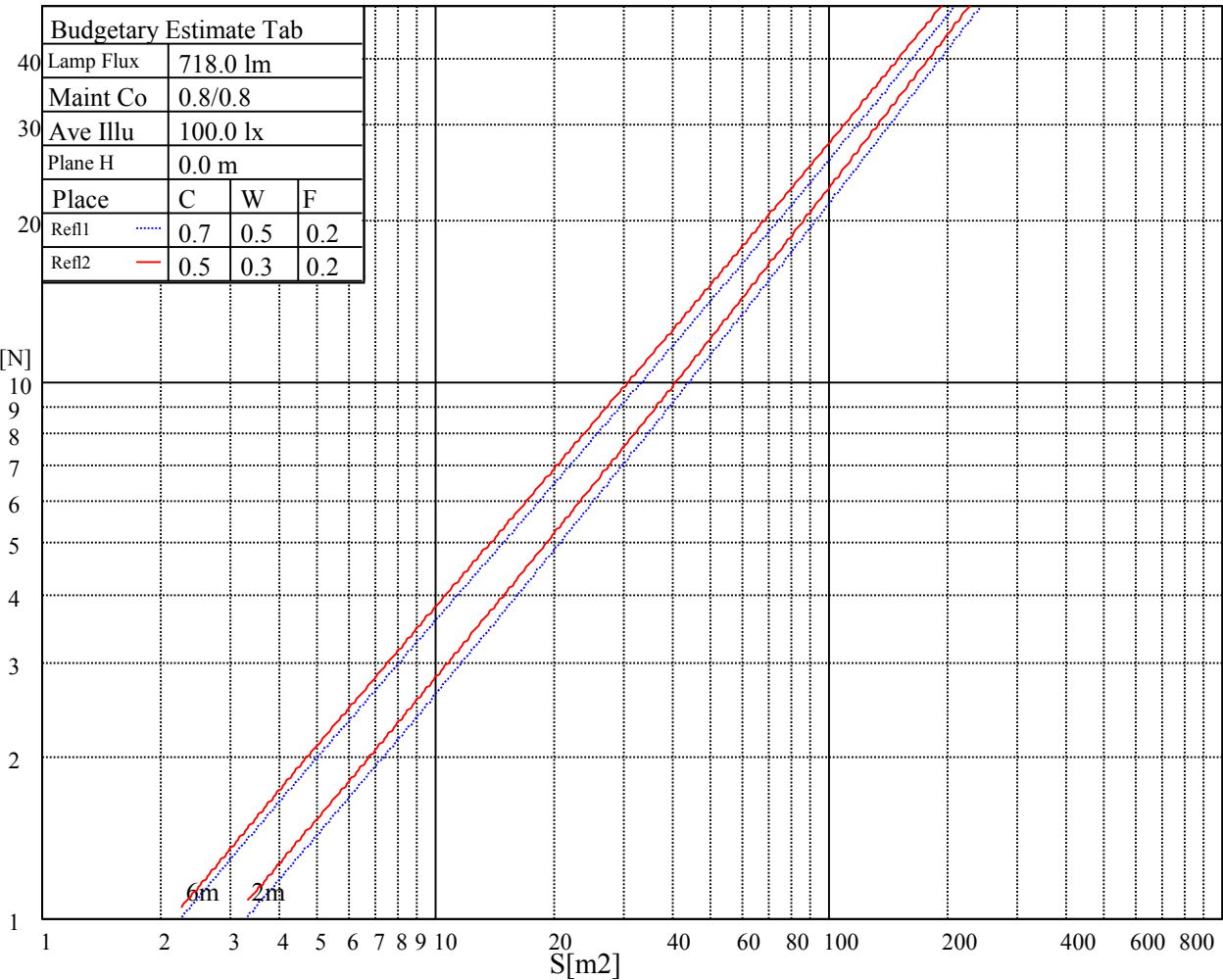
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

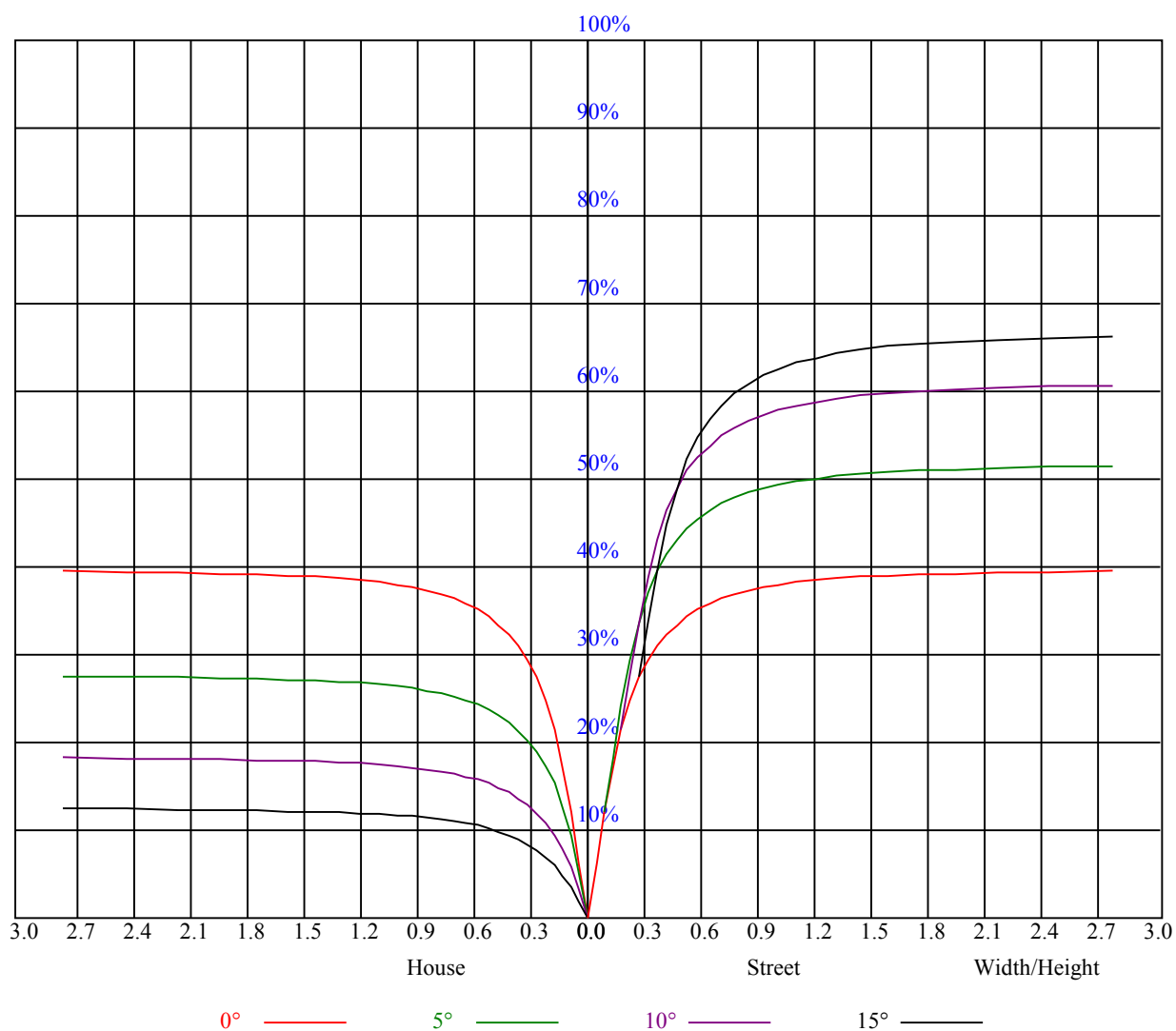
C0 ———

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	0.97	0.97	0.97	0.95	0.95	0.95	0.90	0.90	0.90	0.87	0.87	0.87	0.83	0.83	0.83	0.81
1	0.88	0.86	0.83	0.86	0.84	0.82	0.83	0.81	0.79	0.80	0.78	0.77	0.77	0.76	0.75	0.73
2	0.83	0.80	0.77	0.82	0.78	0.76	0.79	0.76	0.74	0.77	0.74	0.73	0.74	0.73	0.71	0.70
3	0.79	0.75	0.72	0.78	0.74	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.69	0.68	0.66
4	0.75	0.71	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.69	0.67	0.65	0.64
5	0.72	0.67	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
6	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.59
7	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.57
8	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.55
9	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.52



Nata 1436-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	2420.28	2310.72	1764.56	907.88	401.91	278.59	162.14	108.57	73.72		
45.0	2404.31	2195.65	1527.82	673.34	333.64	208.72	138.96	90.13	63.76		
90.0	2416.43	2048.65	1051.58	442.05	243.57	160.76	102.57	67.50	49.17		
135.0	2424.13	2130.13	1244.27	459.72	281.34	174.20	114.41	74.16	52.80		
180.0	2420.28	1938.54	948.73	389.52	242.30	161.32	106.04	71.41	49.22		
225.0	2404.31	2094.90	1050.70	442.71	265.76	174.47	115.62	78.24	55.33		
270.0	2416.43	2250.16	1538.28	650.22	302.26	190.88	127.90	83.36	57.70		
315.0	2424.13	2254.56	1545.98	673.23	322.19	205.31	142.87	92.55	64.14		
360.0	2420.28	2310.72	1764.56	907.88	401.91	278.59	162.14	108.57	73.72		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	49.33	34.58	24.06	15.75	10.02	7.87	6.44	5.45	4.96		
45.0	45.53	33.64	22.52	14.37	9.97	7.93	6.83	6.28	5.73		
90.0	35.24	25.82	17.29	12.06	9.25	7.82	6.94	6.11	5.29		
135.0	36.72	26.59	18.00	12.17	8.59	7.05	5.84	4.96	4.46		
180.0	34.41	25.55	16.85	10.90	8.15	6.88	5.73	5.07	4.13		
225.0	39.64	28.79	19.16	12.28	8.70	7.49	6.50	5.89	5.01		
270.0	40.85	29.23	19.71	13.98	9.97	8.31	7.05	6.11	5.07		
315.0	43.44	30.45	20.54	14.09	9.52	7.71	6.39	5.62	5.01		
360.0	49.33	34.58	24.06	15.75	10.02	7.87	6.44	5.45	4.96		
C/γ(°)	90.0										
0.0	2.75										
45.0	2.53										
90.0	2.42										
135.0	2.42										
180.0	2.42										
225.0	2.42										
270.0	2.42										
315.0	2.64										
360.0	2.75										