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Nata

LumCAT: 1408-N	
Luminaire: 92.70.051.00	
Report No: NATA0100	Voltage(V): 37.3000
Test No: GC2018080105	Current(A): 0.2000
LampCAT: BRIDGELUX V4 HD	Power (W): 7.4600
Lamp flux(lm): 732.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 39	Width(mm): 39
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 618.70
Efficiency(%): 84.52%
Lumens(lm)/Power(W): 83.31
Central intensity(cd): 570.412
Maximum intensity(cd): 570.412
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=58.6
[C90/270]Total=58.6
Field angle(10%Imax): [C0/180]Total=100.6
[C90/270]Total=100.6
Maximum s/h(1/2): C0_180=0.87 C90_270=0.87
Maximum s/h(1/4): C0_180=0.91 C90_270=0.91
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.91%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.126%

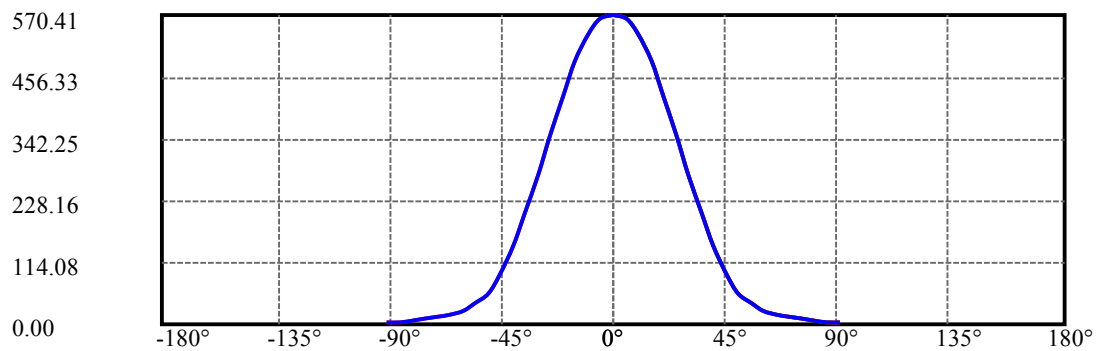
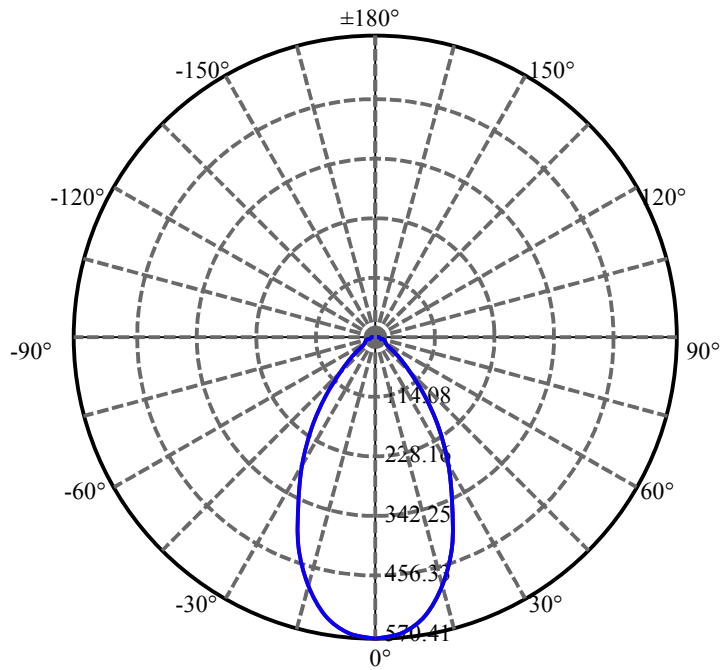
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	570.412	3.411	3.411	.466%	.551%
5.0	563.096	26.901	30.312	3.675%	4.899%
10.0	536.518	51.067	81.38	6.976%	13.153%
15.0	485.735	68.910	150.29	9.414%	24.291%
20.0	421.677	79.053	229.343	10.800%	37.069%
25.0	345.651	80.071	309.415	10.939%	50.011%
30.0	275.406	75.480	384.895	10.311%	62.211%
35.0	206.668	64.976	449.871	8.877%	72.713%
40.0	146.746	51.704	501.575	7.063%	81.070%
45.0	92.412	35.818	537.393	4.893%	86.859%
50.0	58.250	24.459	561.852	3.341%	90.812%
55.0	37.590	16.878	578.73	2.306%	93.540%
60.0	26.324	12.496	591.226	1.707%	95.560%
65.0	18.699	9.289	600.515	1.269%	97.061%
70.0	13.668	7.040	607.555	.962%	98.199%
75.0	9.442	4.999	612.554	.683%	99.007%
80.0	6.208	3.351	615.905	.458%	99.549%
85.0	3.806	2.078	617.983	.284%	99.885%
90.0	2.601	0.713	618.696	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	384.89	52.58%	62.21%
0-40	501.57	68.52%	81.07%
0-60	591.23	80.77%	95.56%
0-90	617.98	84.42%	99.88%
0-120	617.98	84.42%	99.88%
0-180	618.70	84.52%	100.00%
60-90	39.25	5.36%	6.34%
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%
0-39.36	494.96	67.62%	80.00%

ZONAL LUMEN SUMMARY

0-10	81.38
10-20	147.96
20-30	155.55
30-40	116.68
40-50	60.28
50-60	29.37
60-70	16.33
70-80	8.35
80-90	2.08
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:

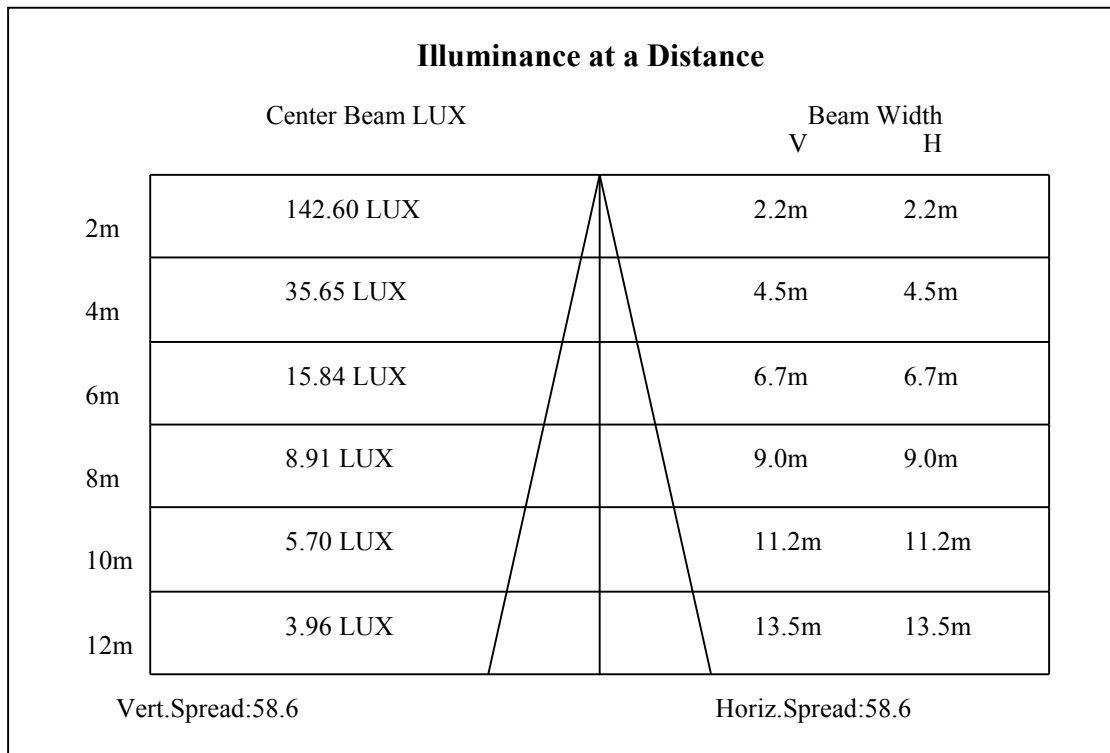
C90/C270:

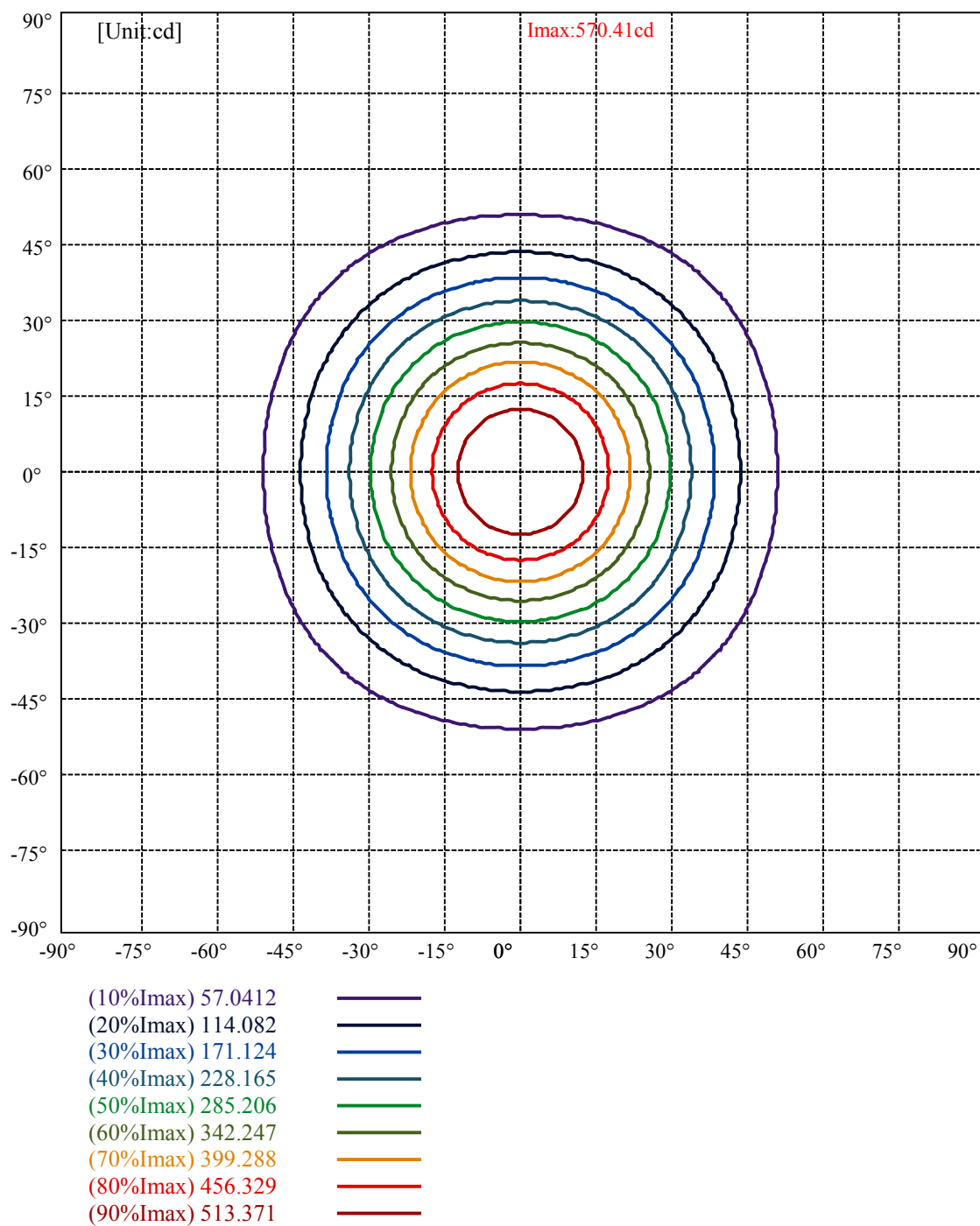
Field angle(10%Imax):C0/180Left:50.3 Right:50.3

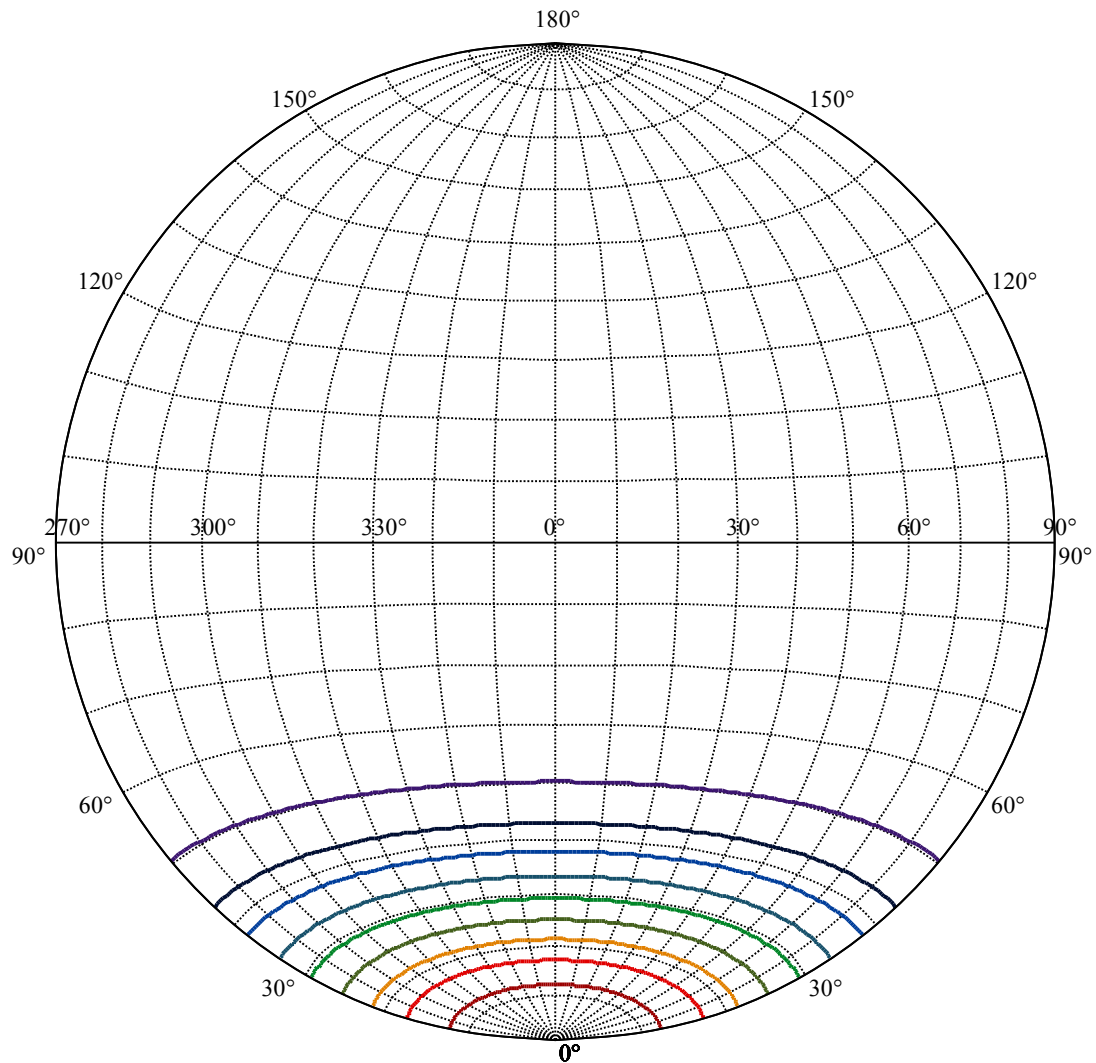
:C90/270Left:50.3 Right:50.3

Beam Angle(50%Imax):C0/180Left:29.3 Right:29.3

:C90/270Left:29.3 Right:29.3







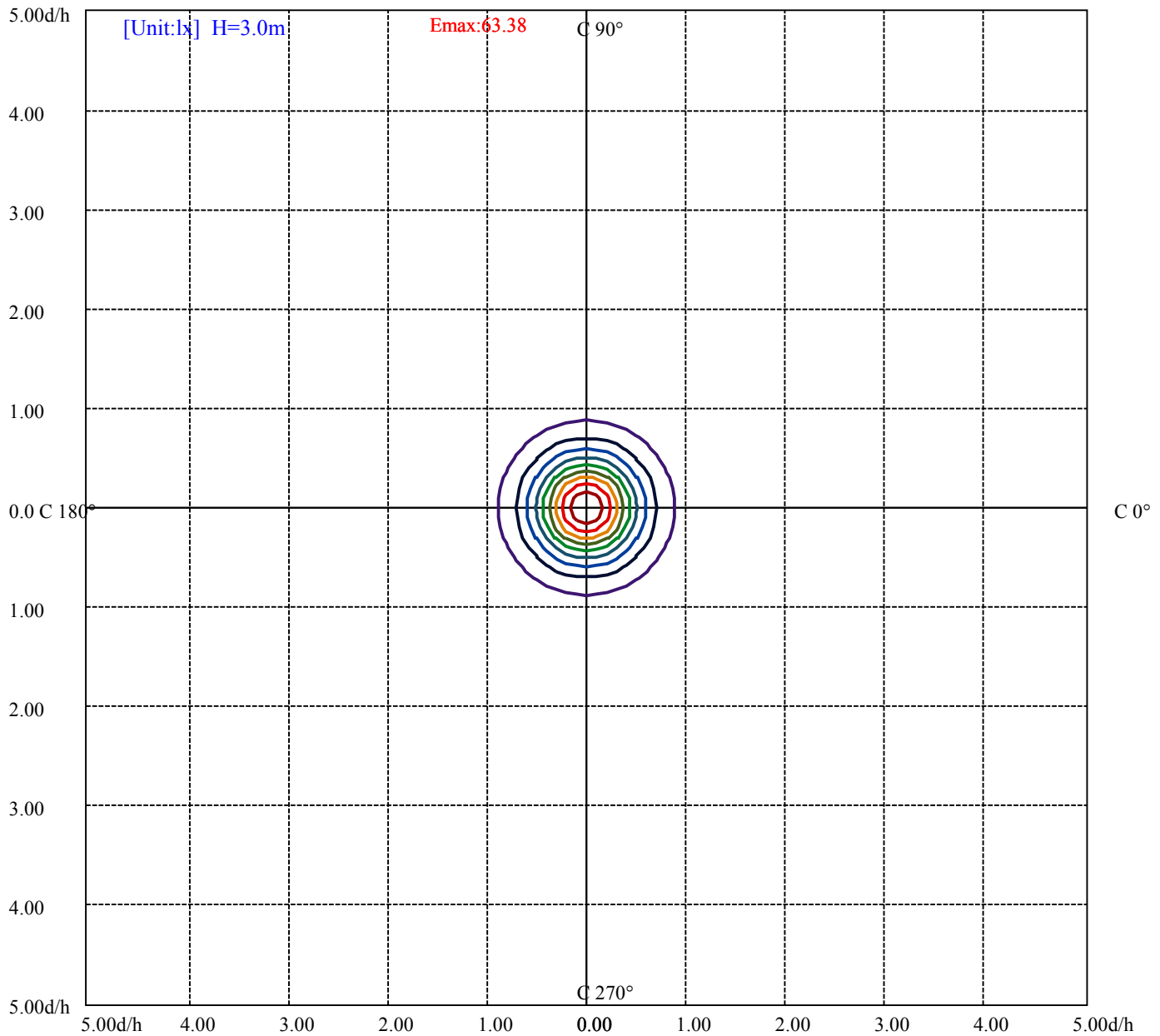
House

[Unit:cd]

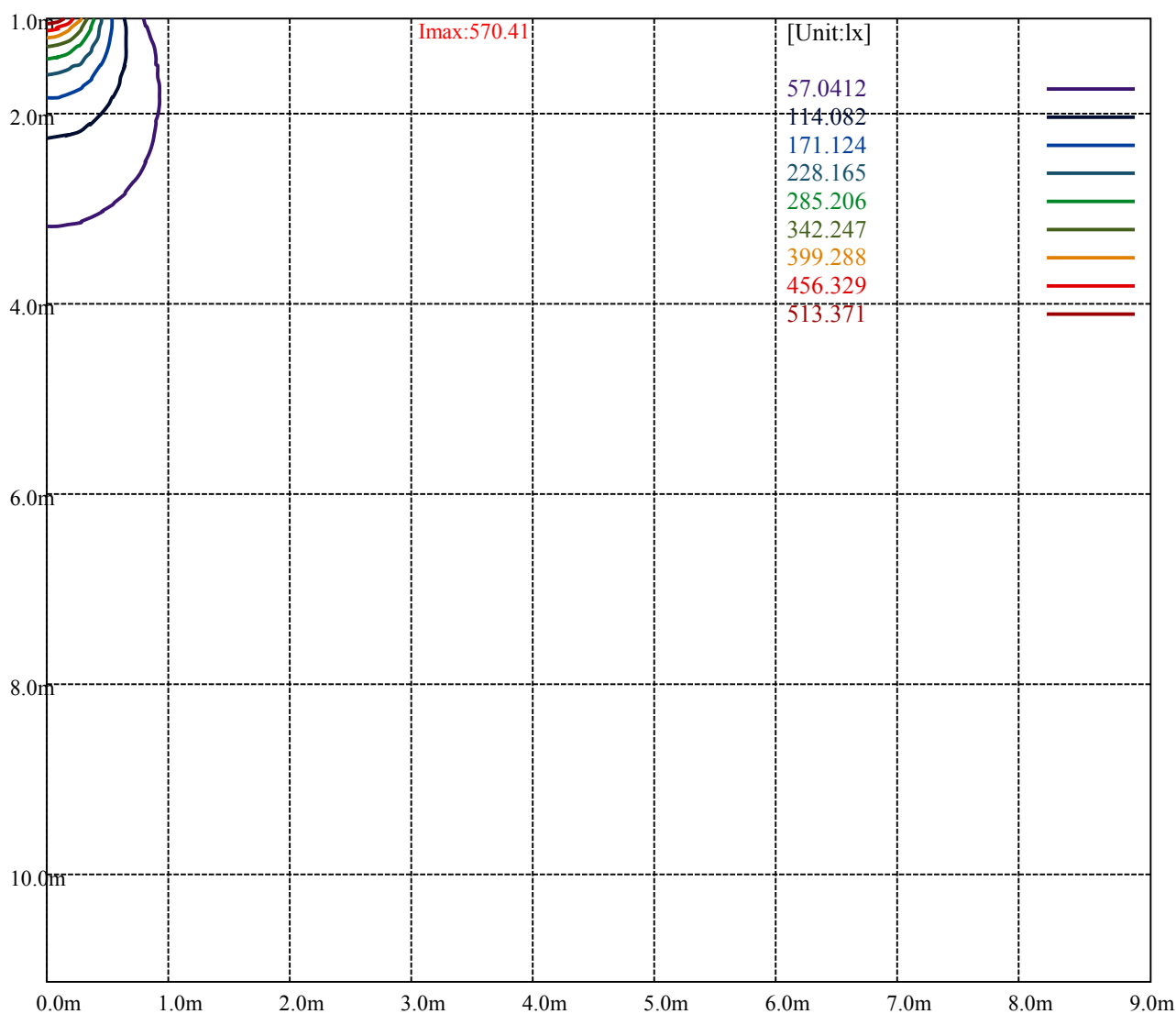
Road

Imax:570.41
(10%Imax) 57.0412
(20%Imax) 114.082
(30%Imax) 171.124
(40%Imax) 228.165
(50%Imax) 285.206
(60%Imax) 342.247
(70%Imax) 399.288
(80%Imax) 456.329
(90%Imax) 513.371





(10%Emax) 6.337911	—
(20%Emax) 12.67578	—
(30%Emax) 19.01367	—
(40%Emax) 25.35167	—
(50%Emax) 31.68955	—
(60%Emax) 38.02745	—
(70%Emax) 44.36533	—
(80%Emax) 50.70322	—
(90%Emax) 57.04111	—



Luminance Table

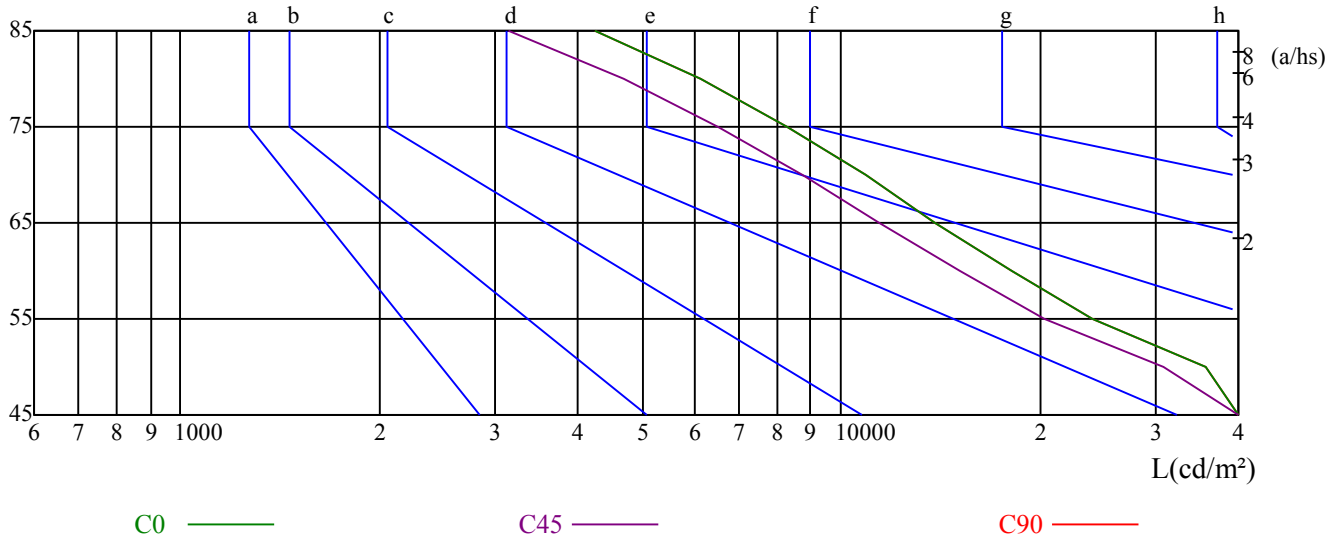
γ	45	50	55	60	65	70	75	80	85
C0	54391	35651	23966	18140	13910	10896	8303	6134	4237
C45	47694	30810	20394	15182	11430	8771	6528	4688	3130
C90	54391	35651	23966	18140	13910	10896	8303	6134	4237

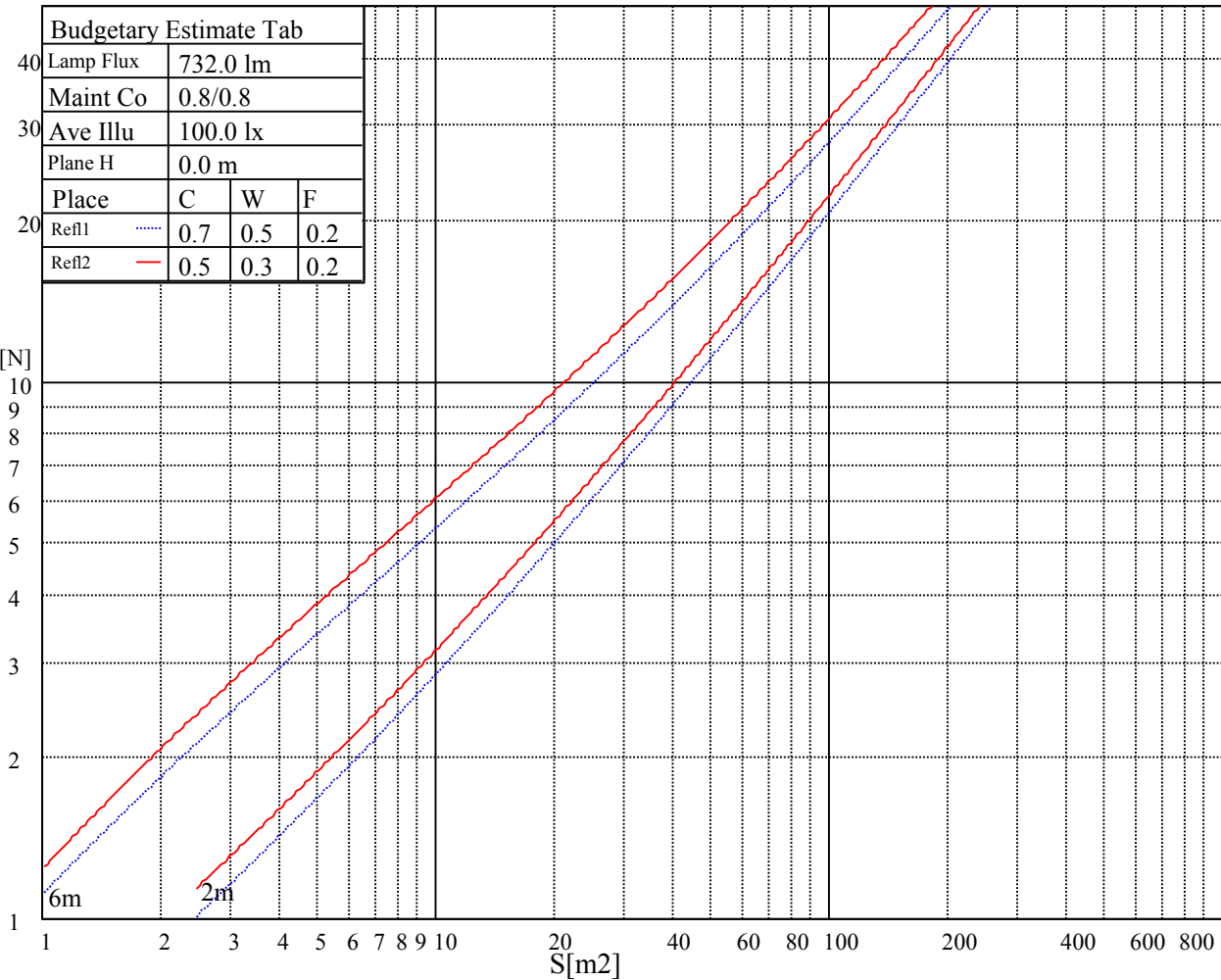
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29207	29207	29207	24195	24195	24195	29072	29072	29072

Glare Table

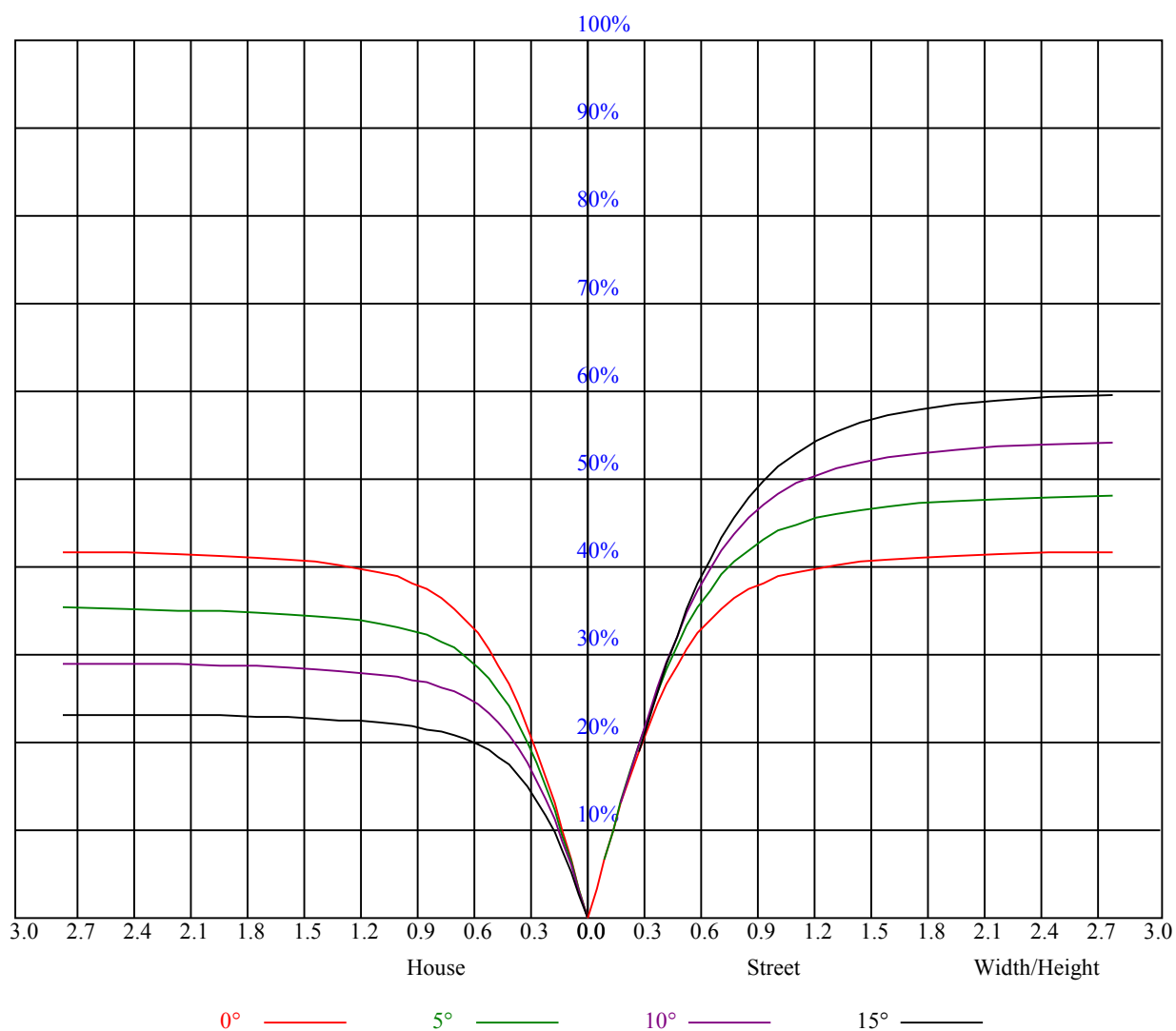
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

 $\gamma(^{\circ})$ 



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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.92	0.90	0.88	0.91	0.88	0.86	0.87	0.85	0.84	0.84	0.82	0.81	0.81	0.80	0.79	0.77
2	0.85	0.81	0.78	0.84	0.80	0.77	0.81	0.78	0.75	0.78	0.76	0.74	0.76	0.74	0.72	0.70
3	0.79	0.74	0.70	0.77	0.73	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.65
4	0.73	0.68	0.64	0.72	0.67	0.63	0.70	0.66	0.62	0.68	0.65	0.62	0.67	0.63	0.61	0.60
5	0.68	0.62	0.58	0.67	0.62	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
6	0.63	0.58	0.54	0.63	0.57	0.54	0.61	0.57	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.51
7	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.52	0.49	0.56	0.52	0.49	0.48
8	0.56	0.50	0.47	0.55	0.50	0.47	0.54	0.50	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.45
9	0.53	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.42
10	0.50	0.45	0.41	0.49	0.44	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.47	0.44	0.41	0.40



Nata 1408-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	568.57	563.78	544.12	500.41	442.43	365.46	290.81	222.37	156.14		
45.0	571.93	564.00	538.62	487.74	423.00	349.83	278.92	209.76	153.88		
90.0	572.42	561.41	528.43	472.33	399.32	321.31	253.98	186.42	130.15		
135.0	568.73	564.38	537.63	487.25	424.87	347.24	277.48	205.80	148.87		
180.0	568.57	558.55	530.69	475.91	419.03	344.71	271.32	203.10	140.12		
225.0	571.93	564.38	535.70	485.32	420.63	344.05	279.08	208.66	146.62		
270.0	572.42	566.37	541.31	489.12	421.46	347.90	275.67	206.30	149.15		
315.0	568.73	561.91	535.64	487.80	422.67	344.71	276.00	210.92	149.04		
360.0	568.57	563.78	544.12	500.41	442.43	365.46	290.81	222.37	156.14		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	98.06	60.84	39.42	27.31	19.10	14.04	9.74	6.55	4.02		
45.0	97.56	60.51	37.82	26.48	18.61	13.38	9.36	6.11	3.63		
90.0	80.88	54.45	35.24	24.83	17.78	12.83	8.59	5.62	3.36		
135.0	95.25	61.22	40.30	28.13	19.88	14.76	10.02	6.61	3.91		
180.0	88.09	57.64	37.60	26.43	18.39	13.76	9.52	6.22	3.96		
225.0	93.76	57.31	37.00	26.10	19.05	13.82	9.69	6.44	4.13		
270.0	93.49	56.43	37.33	26.43	18.77	13.71	9.63	6.22	3.74		
315.0	92.22	57.59	36.01	24.89	18.00	13.05	8.97	5.89	3.69		
360.0	98.06	60.84	39.42	27.31	19.10	14.04	9.74	6.55	4.02		
C/γ(°)	90.0										
0.0	2.70										
45.0	2.59										
90.0	2.53										
135.0	2.53										
180.0	2.59										
225.0	2.64										
270.0	2.59										
315.0	2.64										
360.0	2.70										