
Nata

Client:

LumCAT: 1547-E

Luminaire: 92.70.043.00

Report No: nata-0100

Test No:

LampCAT: CREE CXA1304

Lamp flux(lm): 359.0

Number of Lamps: 1

Length(mm): 21

Phm Type: C

Voltage(V): 10.0000

Current(A): 0.3500

Power (W): 3.5000

PF: 0.0000

Ballast type: DC

Width(mm): 21

Height(mm): 0

Photometric Results

Lumens(lm): 320.58, Efficiency(%): 89.30% , Luminous Efficacy(lm/W): 91.59

Central intensity(cd): 335.452, Maximum intensity(cd): 335.452

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=58.0

[C90/270]Total=58.0

Field angle(10%Imax): [C0/180]Total=93.6

[C90/270]Total=93.6

Maximum s/h(1/2): C0_180=0.83 C90_270=0.83

Maximum s/h(1/4): C0_180=0.93 C90_270=0.93

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.77%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.963%

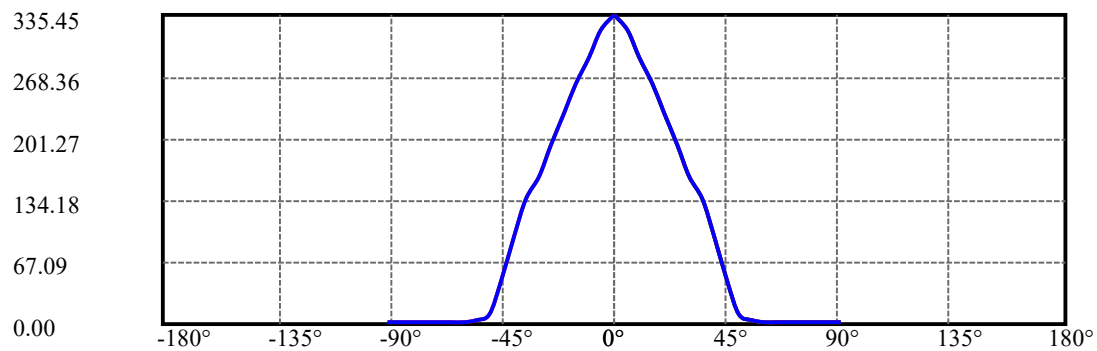
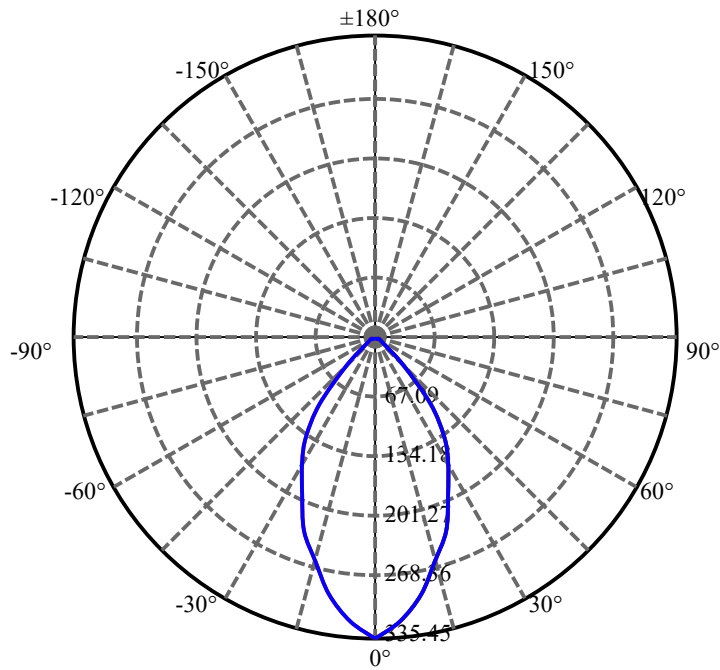
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	335.452	2.006	2.006	.559%	.626%
5.0	317.937	15.189	17.195	4.231%	5.364%
10.0	290.285	27.630	44.825	7.696%	13.983%
15.0	259.859	36.866	81.691	10.269%	25.483%
20.0	228.928	42.918	124.609	11.955%	38.870%
25.0	193.974	44.935	169.544	12.517%	52.887%
30.0	161.167	44.171	213.715	12.304%	66.666%
35.0	134.441	42.268	255.983	11.774%	79.851%
40.0	96.799	34.106	290.089	9.500%	90.490%
45.0	46.371	17.973	308.062	5.006%	96.096%
50.0	11.221	4.712	312.773	1.312%	97.566%
55.0	4.270	1.917	314.691	.534%	98.164%
60.0	2.147	1.019	315.71	.284%	98.482%
65.0	1.548	0.769	316.479	.214%	98.722%
70.0	1.449	0.746	317.226	.208%	98.955%
75.0	1.400	0.742	317.967	.207%	99.186%
80.0	2.192	1.183	319.15	.330%	99.555%
85.0	2.071	1.131	320.281	.315%	99.908%
90.0	1.074	0.294	320.576	.082%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	213.71	59.53%	66.67%
0-40	290.09	80.80%	90.49%
0-60	315.71	87.94%	98.48%
0-90	320.28	89.21%	99.91%
0-120	320.28	89.21%	99.91%
0-180	320.58	89.30%	100.00%
60-90	5.59	1.56%	1.74%
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%
0-35.07	256.46	71.44%	80.00%

ZONAL LUMEN SUMMARY

0-10	44.83
10-20	79.78
20-30	89.11
30-40	76.37
40-50	22.68
50-60	2.94
60-70	1.52
70-80	1.92
80-90	1.13
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:

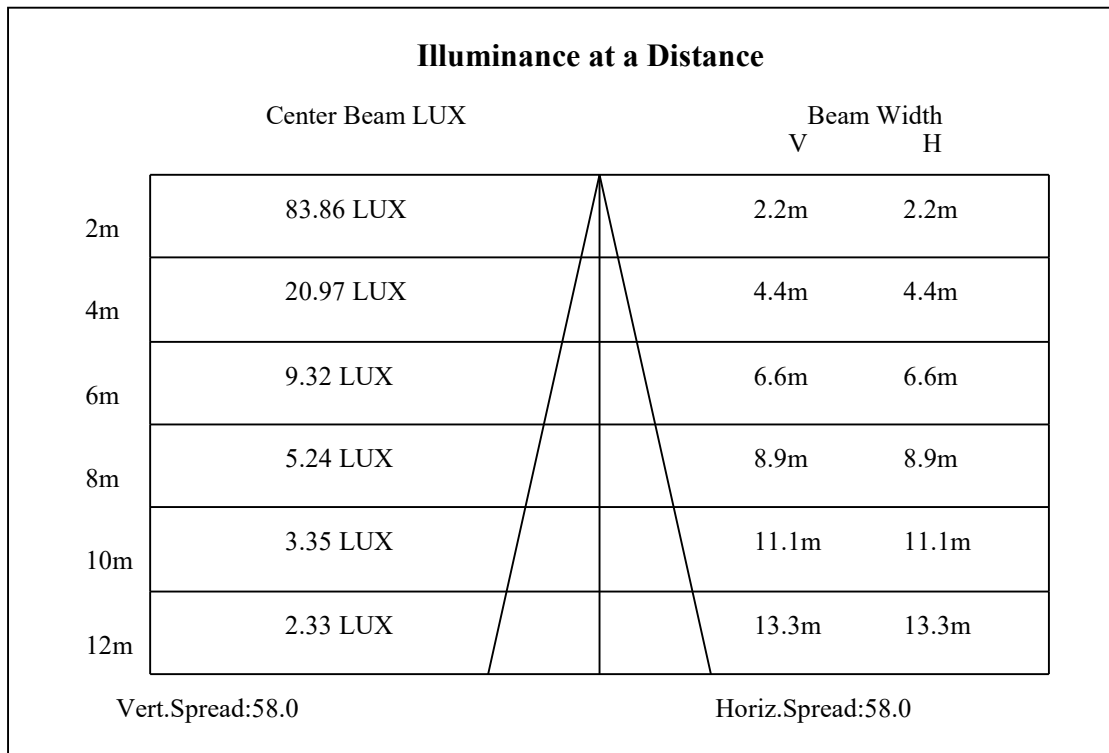
C90/C270:

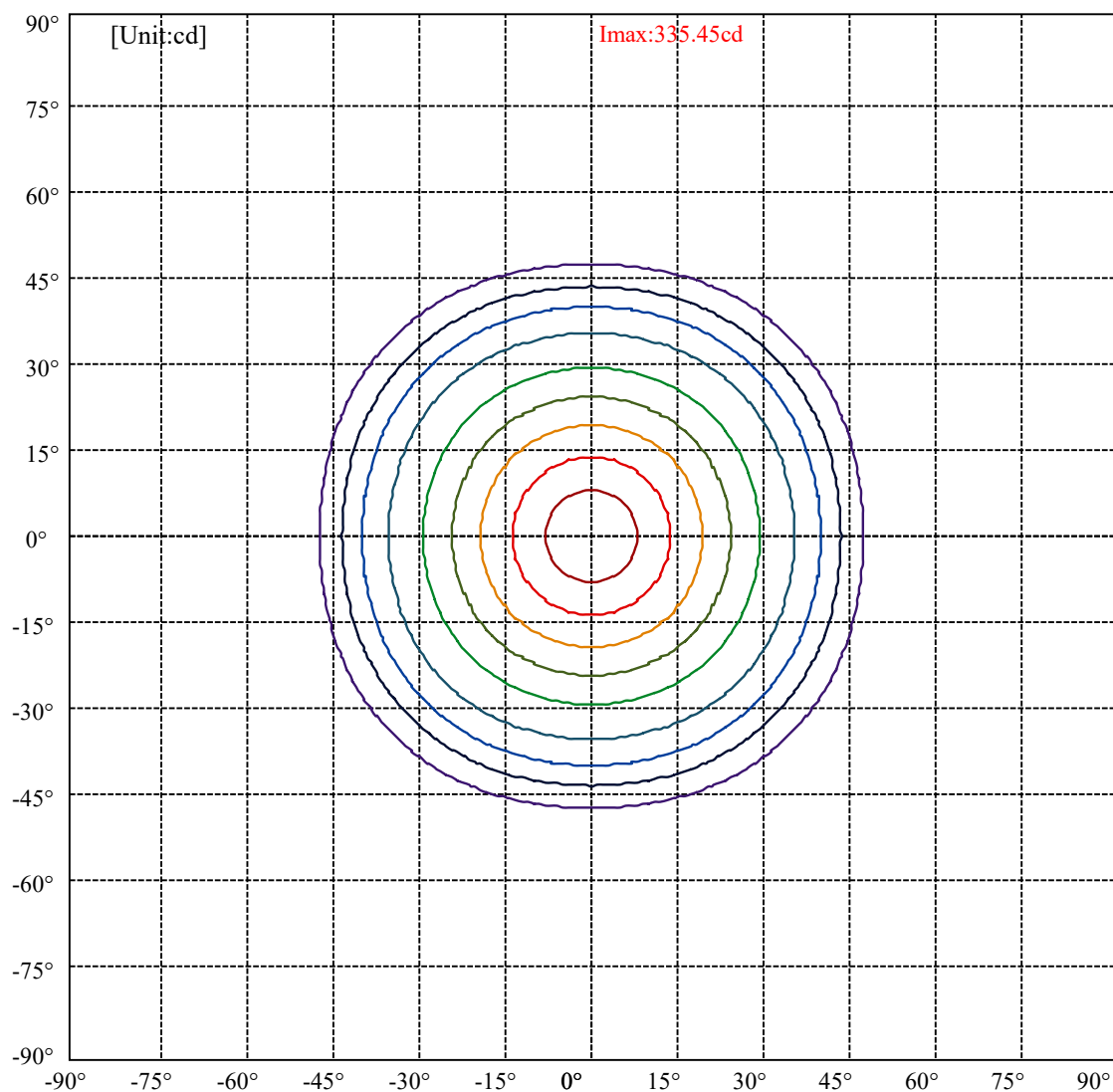
Field angle(10%Imax):C0/180Left:46.8 Right:46.8

:C90/270Left:46.8 Right:46.8

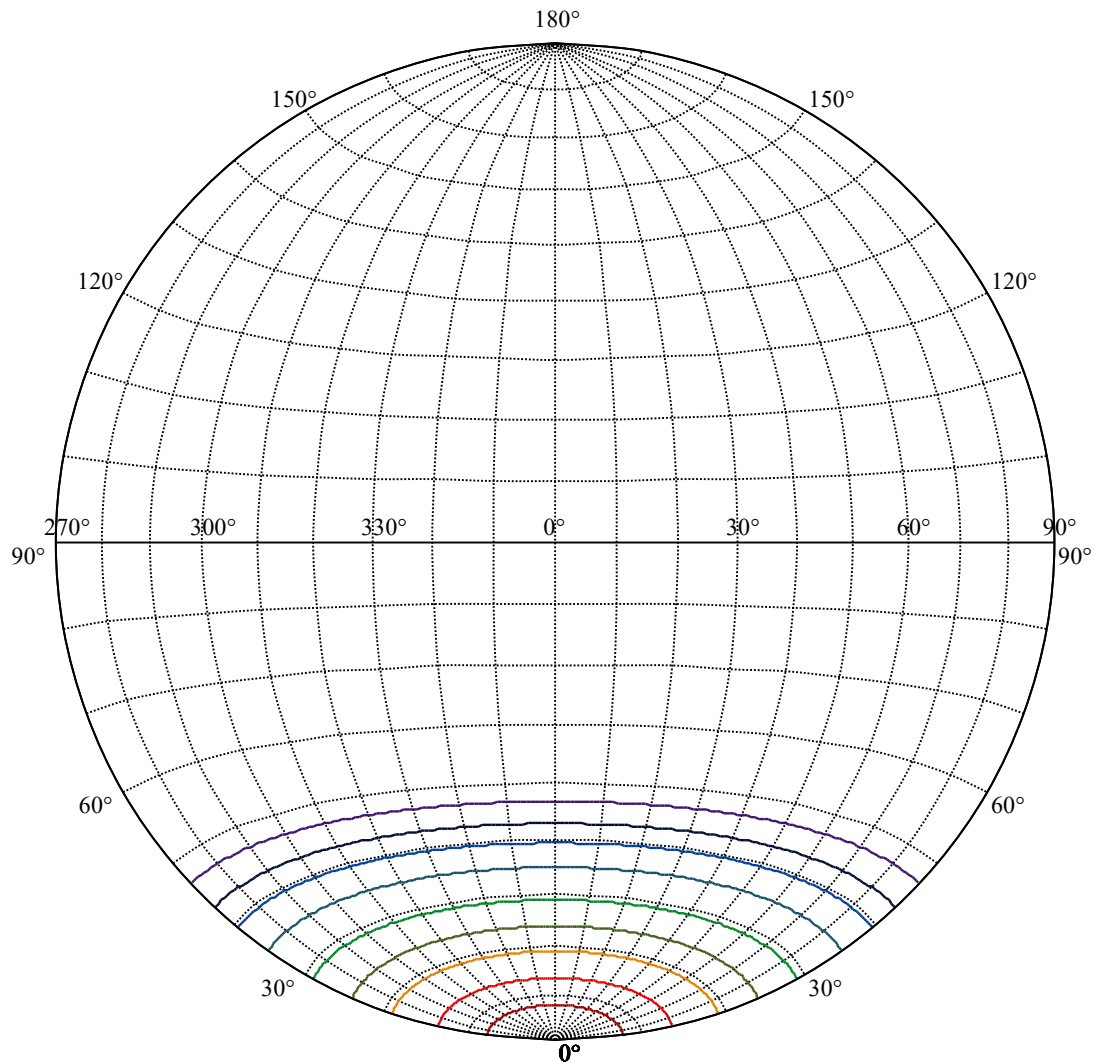
Beam Angle(50%Imax):C0/180Left:29.0 Right:29.0

:C90/270Left:29.0 Right:29.0





(10%Imax)	33.5452	—
(20%Imax)	67.0903	—
(30%Imax)	100.636	—
(40%Imax)	134.181	—
(50%Imax)	167.726	—
(60%Imax)	201.271	—
(70%Imax)	234.816	—
(80%Imax)	268.361	—
(90%Imax)	301.907	—



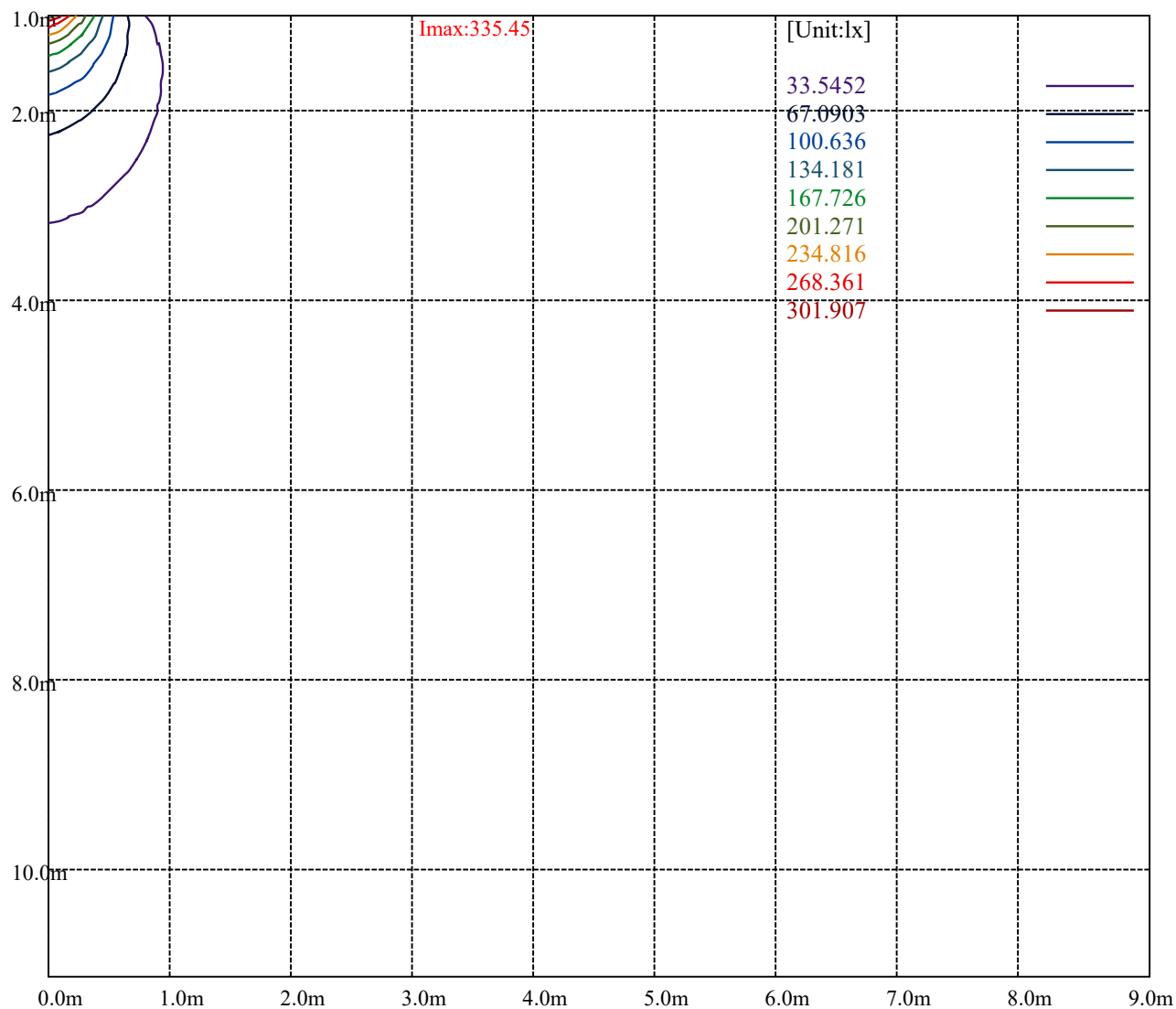
House

[Unit:cd]

Road

Imax:335.45
(10%Imax) 33.5452
(20%Imax) 67.0903
(30%Imax) 100.636
(40%Imax) 134.181
(50%Imax) 167.726
(60%Imax) 201.271
(70%Imax) 234.816
(80%Imax) 268.361
(90%Imax) 301.907





Luminance Table

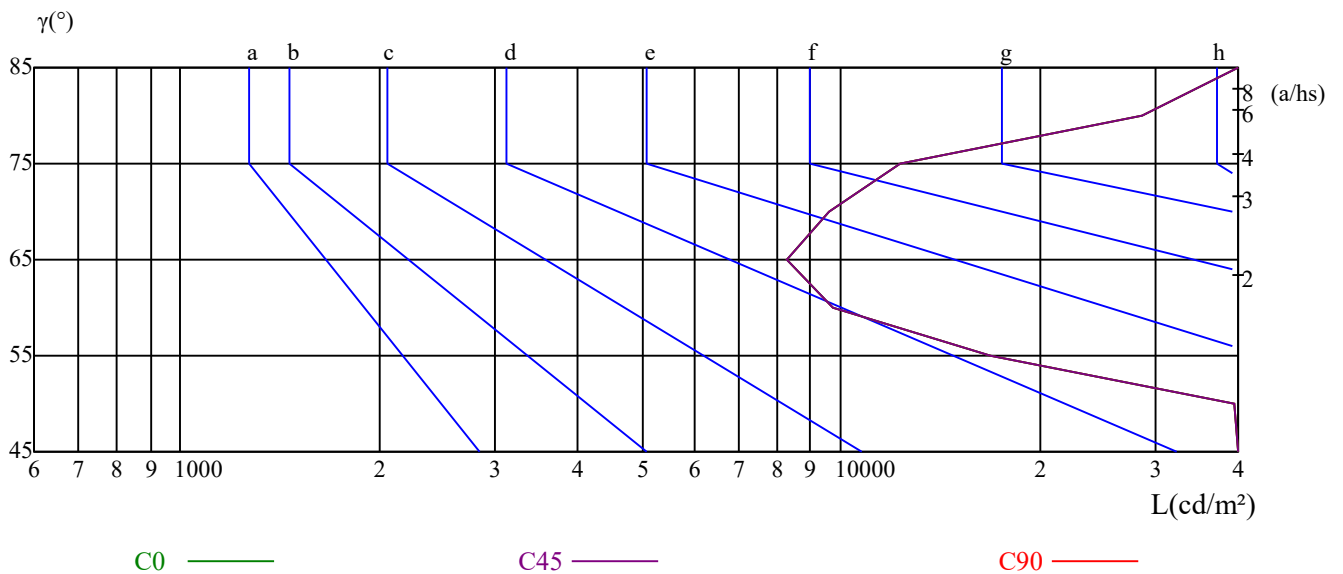
γ	45	50	55	60	65	70	75	80	85
C0	148705	39585	16882	9738	8308	9605	12270	28623	53895
C45	148705	39585	16882	9738	8308	9605	12270	28623	53895
C90	148705	39585	16882	9738	8308	9605	12270	28623	53895

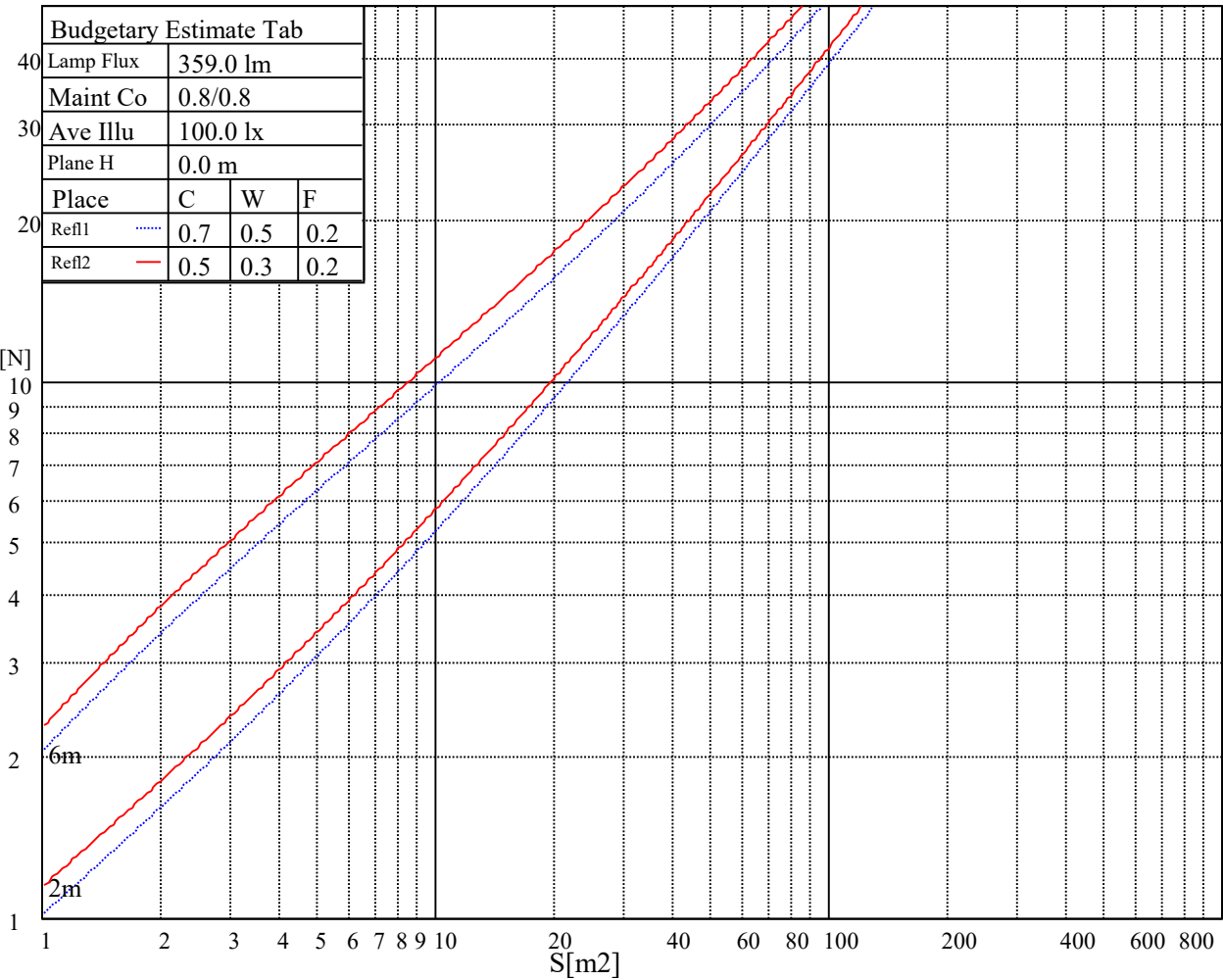
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8308	8308	8308	12270	12270	12270	53895	53895	53895

Glare Table

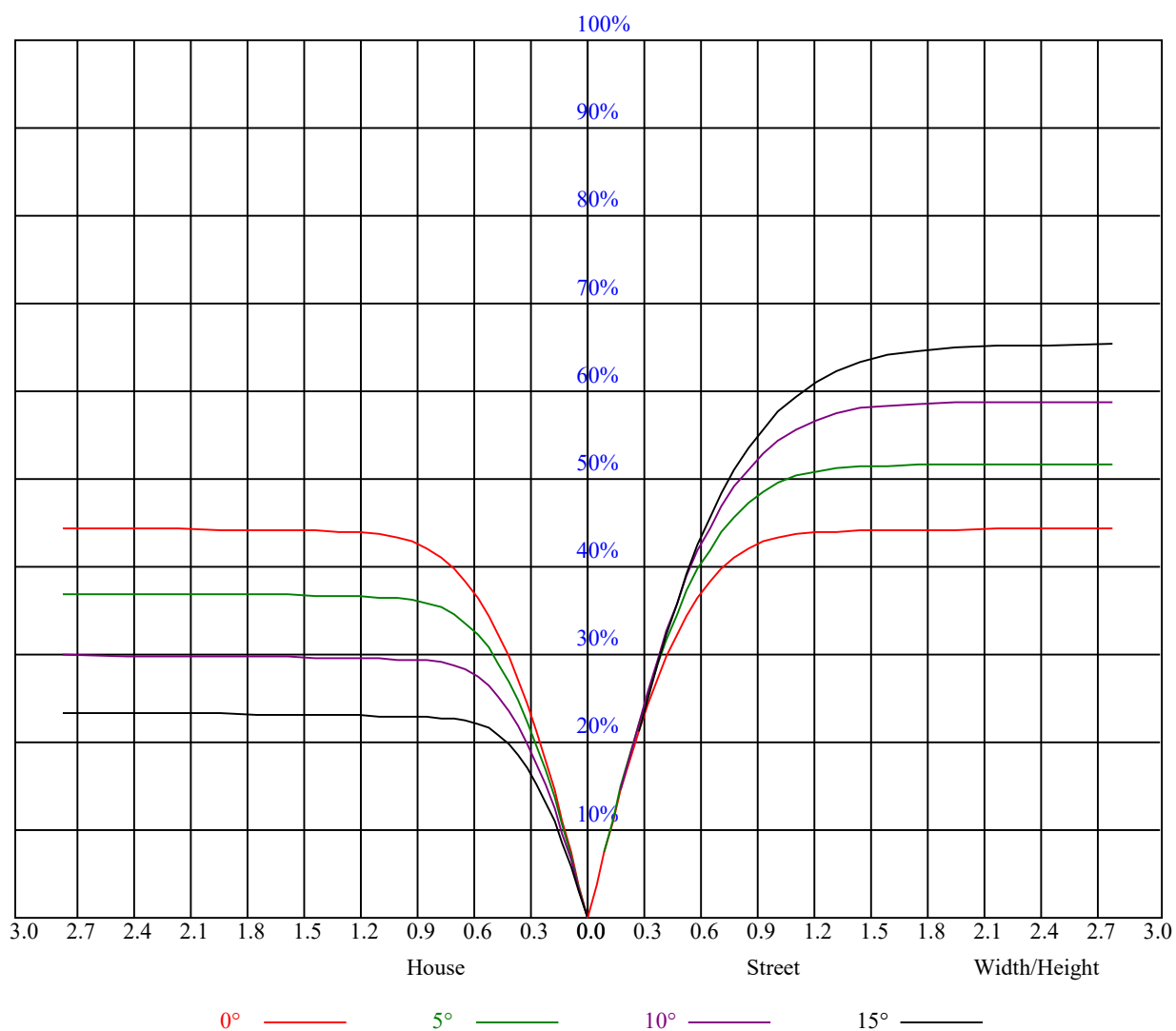
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

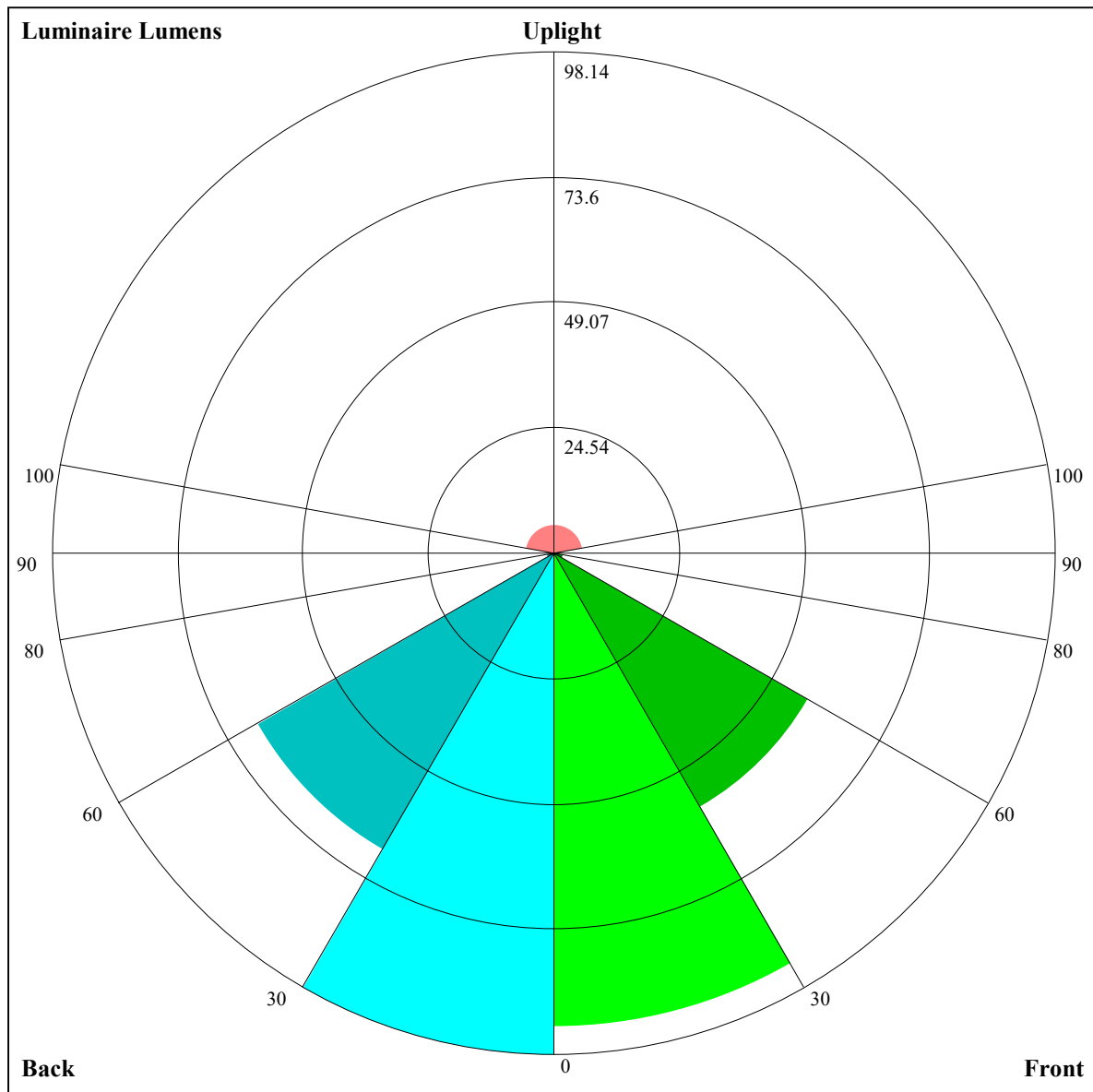
Luminance Limiting Curve





RHOC	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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.98	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.82
2	0.91	0.88	0.84	0.90	0.86	0.83	0.87	0.84	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.77
3	0.85	0.80	0.77	0.84	0.80	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.71
4	0.79	0.74	0.70	0.78	0.74	0.70	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.66
5	0.74	0.69	0.65	0.73	0.68	0.65	0.72	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.62
6	0.70	0.64	0.60	0.69	0.64	0.60	0.68	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
7	0.66	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.54
8	0.62	0.56	0.53	0.61	0.56	0.52	0.60	0.56	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.51
9	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.56	0.52	0.49	0.48
10	0.55	0.50	0.47	0.55	0.50	0.46	0.54	0.50	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.45





Luminaire Lumens:

FL=92.89,FM=57.37,FH=1.79,FVH=1.19

BL=98.14,BM=67.15,BH=1.54,BVH=0.75

UL=1.17,UH=5.57

BUG Rating:B0-U1-G0

Nata 1547-E

Intensity data(cd)

Appendix Page: 15 Total:15

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	335.40	316.85	284.97	251.77	221.38	186.20	155.26	128.01	88.59
22.5	338.87	314.87	283.10	248.52	216.43	182.51	147.06	127.95	85.50
45.0	336.01	307.16	277.04	245.11	213.34	179.81	152.67	123.38	80.33
67.5	336.28	313.33	284.75	253.81	224.02	190.22	158.56	132.63	93.93
90.0	334.25	311.12	283.93	254.80	221.71	187.19	157.19	130.26	90.95
112.5	334.41	319.88	292.79	263.39	234.21	198.97	165.61	139.90	106.86
135.0	335.24	318.45	293.01	264.44	232.56	196.77	164.07	137.15	103.29
157.5	333.15	324.56	298.85	271.10	243.29	207.07	172.33	144.36	115.12
180.0	335.40	321.31	294.61	267.79	237.73	202.44	167.98	140.72	107.25
202.5	338.87	328.19	301.49	269.78	241.20	204.53	169.13	141.22	107.80
225.0	336.01	329.84	305.01	275.17	243.68	210.15	174.25	143.86	110.00
247.5	336.28	322.58	296.20	265.04	234.49	198.04	163.90	137.04	98.94
270.0	334.25	320.76	296.92	267.79	234.76	200.35	165.50	137.26	100.59
292.5	334.41	314.15	286.02	254.14	223.36	187.74	155.53	129.99	88.37
315.0	335.24	314.43	286.79	257.11	224.24	190.77	158.62	132.41	90.73
337.5	333.15	309.53	279.08	247.97	216.43	180.81	151.02	124.92	80.55
360.0	335.40	316.85	284.97	251.77	221.38	186.20	155.26	128.01	88.59
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	37.38	6.94	3.30	1.82	1.65	1.54	1.54	4.96	4.57
22.5	34.85	6.83	3.41	1.82	1.65	1.54	1.71	6.22	4.84
45.0	32.26	5.29	3.41	1.76	1.65	1.54	1.71	3.47	2.26
67.5	43.00	9.69	4.35	1.87	1.65	1.65	1.43	1.38	1.21
90.0	42.89	8.81	4.90	1.76	1.54	1.49	1.32	1.27	1.16
112.5	55.83	15.47	5.07	2.26	1.54	1.43	1.38	1.27	1.21
135.0	53.96	12.83	4.79	1.82	1.49	1.38	1.27	1.21	1.16
157.5	64.75	21.36	5.62	3.03	1.49	1.38	1.27	1.21	1.38
180.0	52.80	15.86	5.34	2.09	1.43	1.32	1.27	1.32	1.82
202.5	56.32	14.92	5.18	2.75	1.43	1.32	1.32	1.32	2.97
225.0	62.49	19.21	4.68	4.18	1.49	1.38	1.32	1.27	2.20
247.5	47.18	10.30	4.07	1.71	1.49	1.38	1.27	1.27	1.16
270.0	51.70	12.22	3.80	2.20	1.54	1.43	1.32	1.27	1.21
292.5	35.73	6.61	3.69	1.71	1.54	1.43	1.38	1.60	1.32
315.0	41.07	8.15	3.52	1.82	1.60	1.49	1.43	1.98	2.37
337.5	29.73	5.07	3.19	1.76	1.60	1.49	1.49	4.07	2.31
360.0	37.38	6.94	3.30	1.82	1.65	1.54	1.54	4.96	4.57
C/γ(°)	90.0								
0.0	1.10								
22.5	1.10								
45.0	1.10								
67.5	1.05								
90.0	1.05								
112.5	1.10								
135.0	1.05								
157.5	1.05								
180.0	1.10								
202.5	1.10								
225.0	1.05								
247.5	1.10								
270.0	1.05								
292.5	1.05								
315.0	1.10								
337.5	1.05								
360.0	1.10								