



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client:

LumCAT: 1657-S

Luminaire: 92.70.127.00

Report No: nt0100

Test No: NATA07

LampCAT: LUMINUS CLM-9-AA40

Lamp flux(lm): 1234.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 220.5000

Current(A): 0.1010

Power (W): 12.1400

PF: 0.5450

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 1127.28, Efficiency(%): 91.35% , Luminous Efficacy(lm/W): 92.86

Central intensity(cd): 3586.155, Maximum intensity(cd): 3586.155

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.0

[C90/270]Total=26.0

Field angle(10%Imax): [C0/180]Total=62.2

[C90/270]Total=62.2

Maximum s/h(1/2): C0_180=0.44 C90_270=0.44

Maximum s/h(1/4): C0_180=0.46 C90_270=0.46

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.35%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.653%

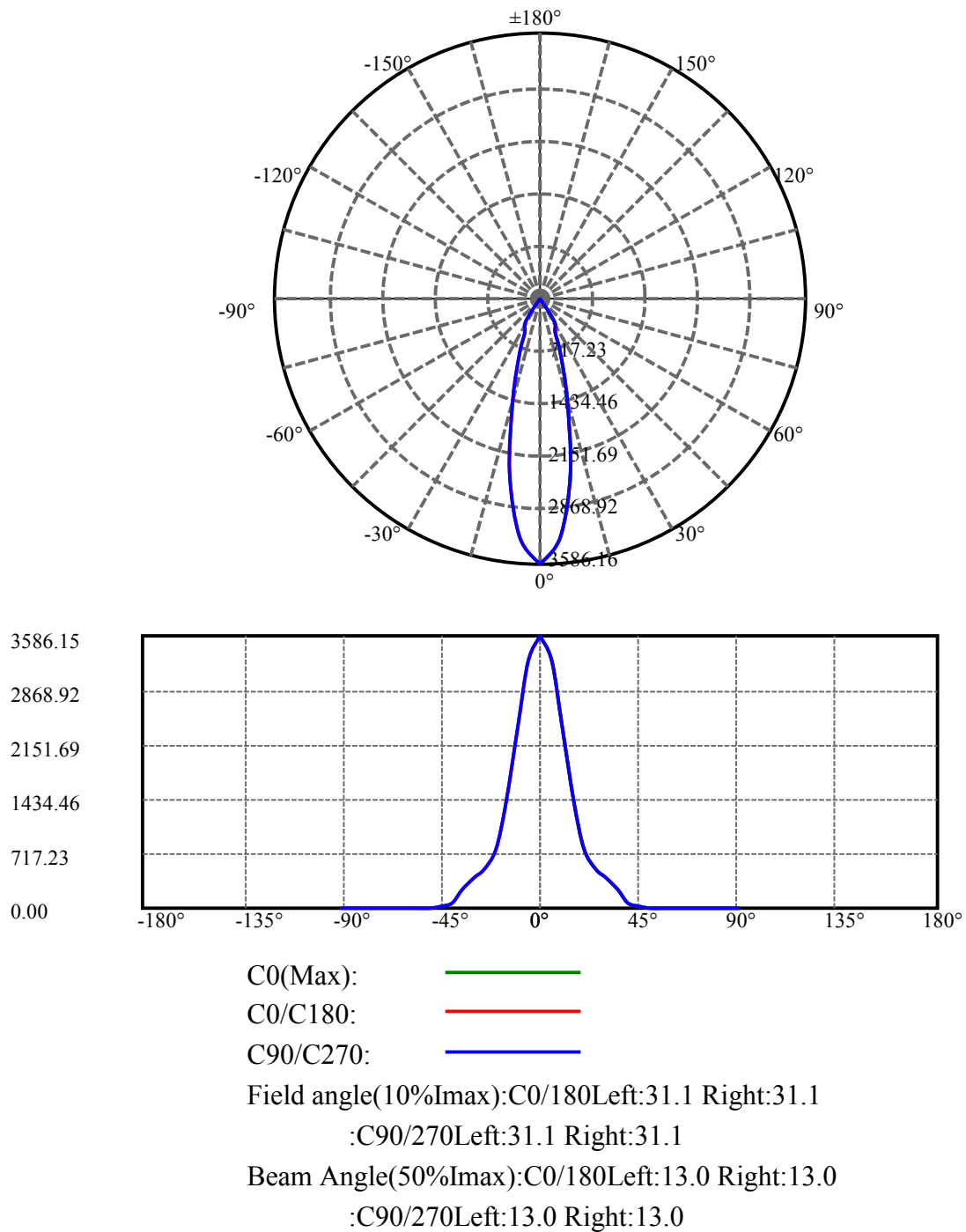
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3586.155	0.000	0	.000%	.000%
5.0	3242.538	81.635	81.635	6.615%	7.242%
10.0	2398.635	201.802	283.438	16.354%	25.143%
15.0	1397.524	225.186	508.623	18.248%	45.119%
20.0	784.657	179.842	688.465	14.574%	61.073%
25.0	505.466	135.310	823.776	10.965%	73.076%
30.0	390.345	113.366	937.141	9.187%	83.133%
35.0	242.939	93.255	1030.397	7.557%	91.405%
40.0	75.144	53.070	1083.466	4.301%	96.113%
45.0	15.278	16.742	1100.209	1.357%	97.598%
50.0	9.182	4.943	1105.151	.401%	98.037%
55.0	7.662	3.663	1108.814	.297%	98.362%
60.0	6.525	3.279	1112.093	.266%	98.653%
65.0	5.667	2.964	1115.057	.240%	98.916%
70.0	5.139	2.736	1117.794	.222%	99.158%
75.0	4.780	2.593	1120.386	.210%	99.388%
80.0	4.414	2.460	1122.846	.199%	99.607%
85.0	4.083	2.309	1125.155	.187%	99.811%
90.0	3.683	2.127	1127.282	.172%	100.000%

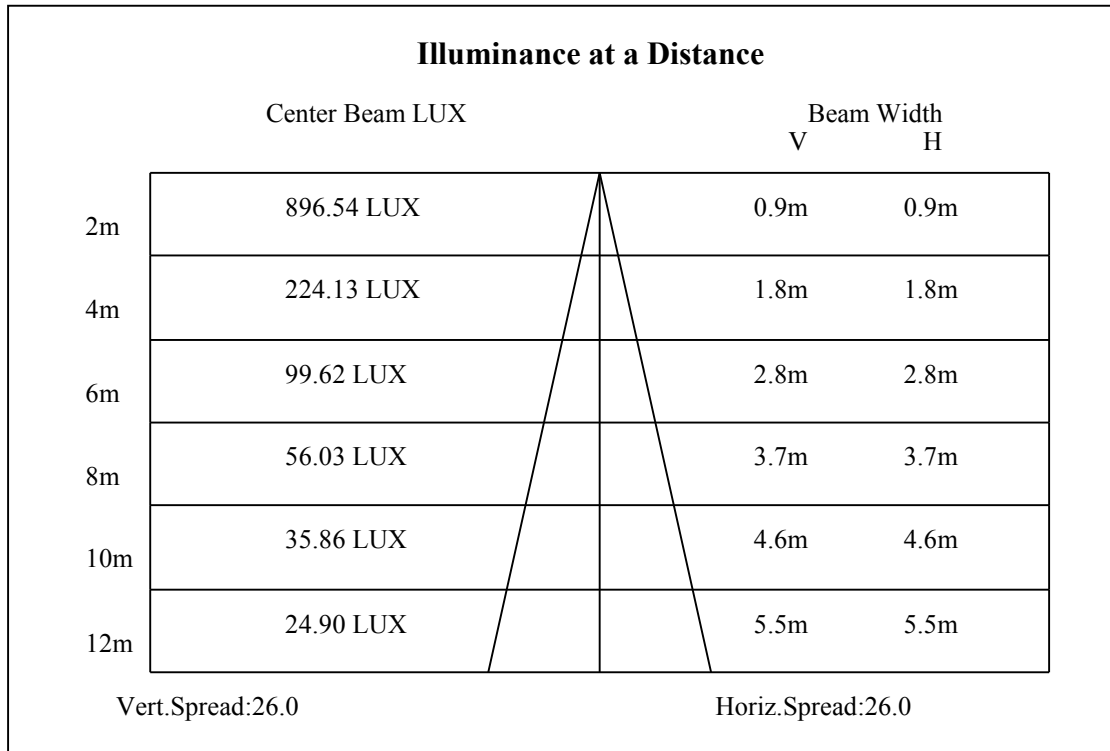
ZONAL LUMEN SUMMARY

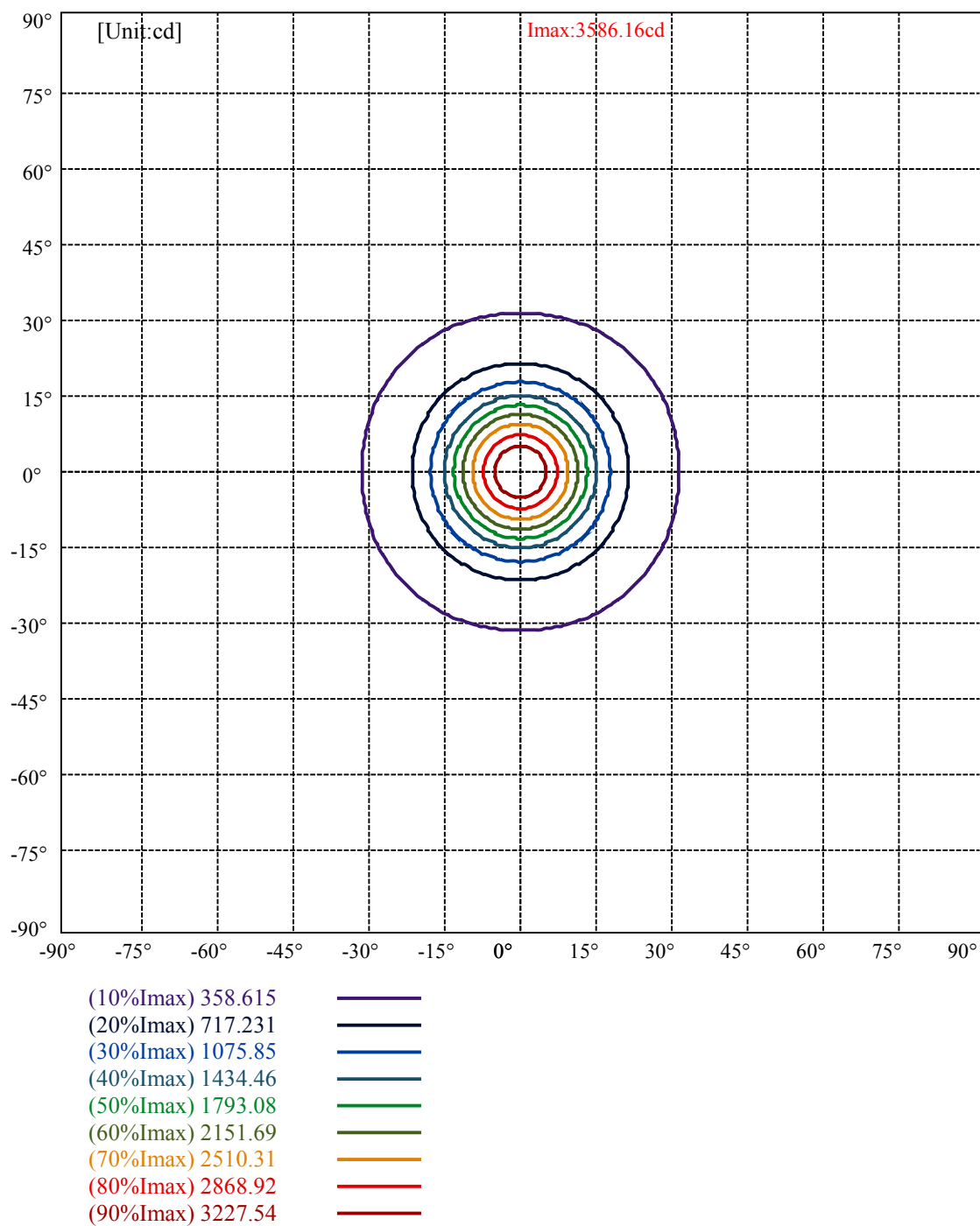
Zone	Lumens	%Lamp	%Fixt
0-30	937.14	75.94%	83.13%
0-40	1083.47	87.80%	96.11%
0-60	1112.09	90.12%	98.65%
0-90	1125.16	91.18%	99.81%
0-120	1125.16	91.18%	99.81%
0-180	1127.28	91.35%	100.00%
60-90	16.34	1.32%	1.45%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.44	901.83	73.08%	80.00%

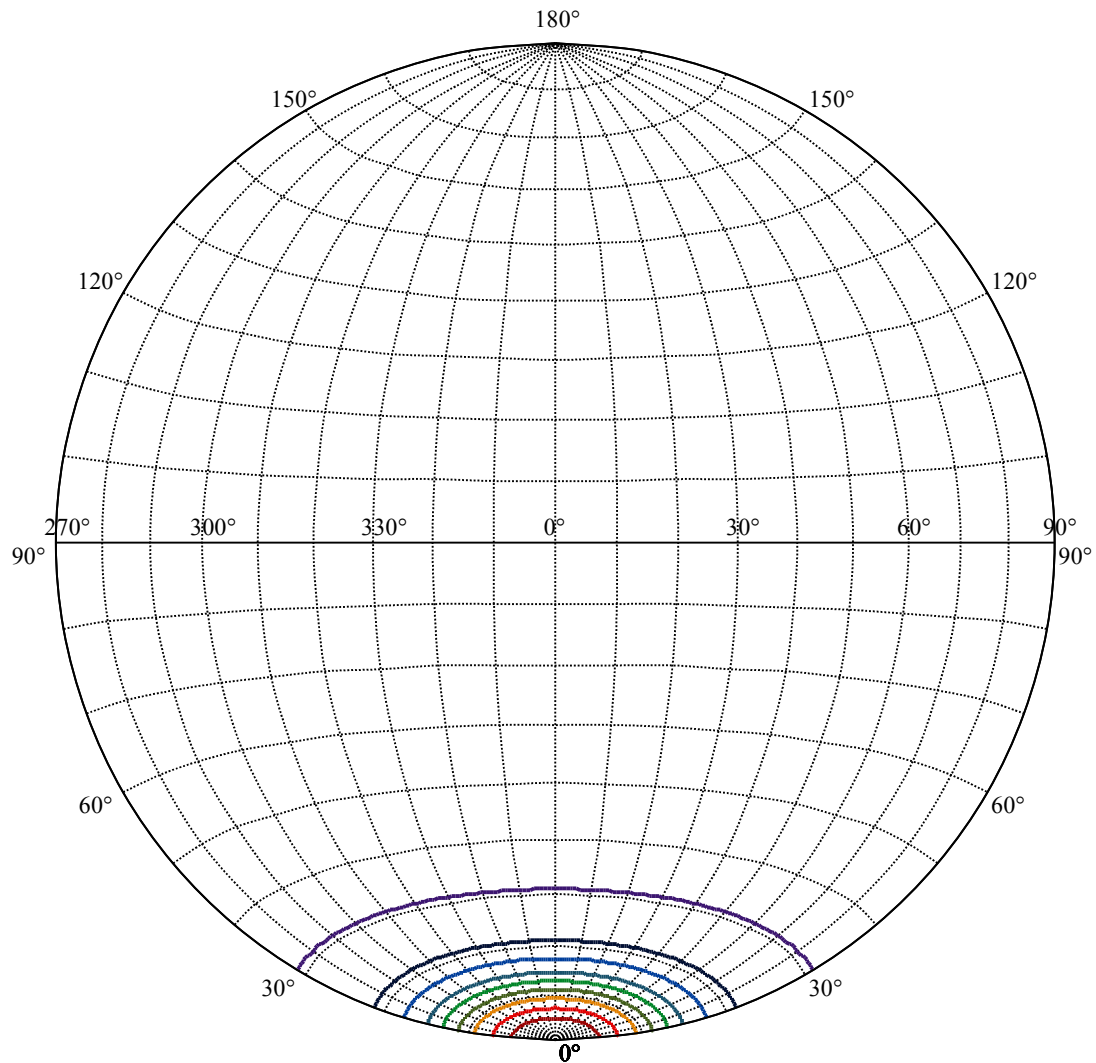
ZONAL LUMEN SUMMARY

0-10	283.44
10-20	405.03
20-30	248.68
30-40	146.33
40-50	21.69
50-60	6.94
60-70	5.70
70-80	5.05
80-90	2.31
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









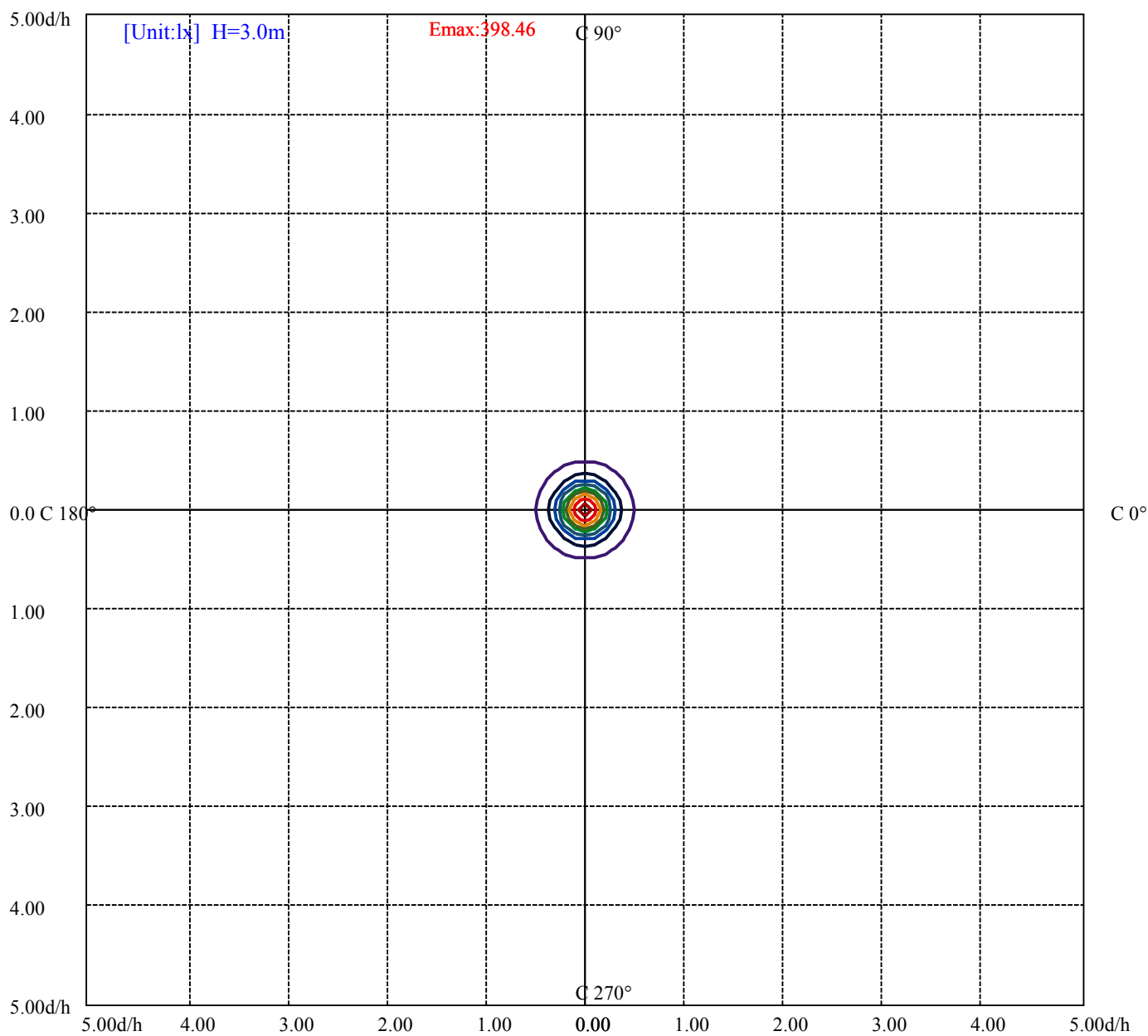
House

[Unit:cd]

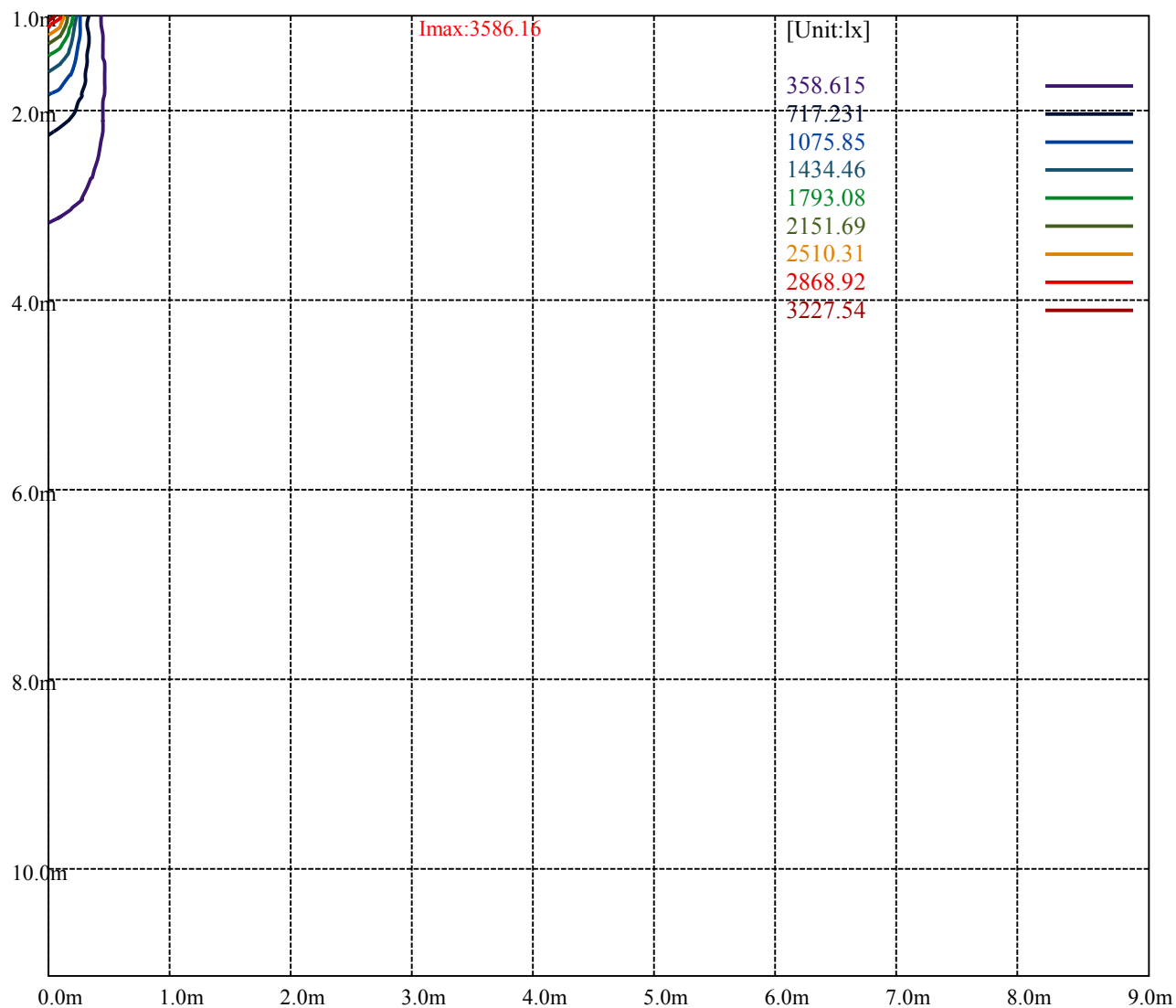
Road

Imax:3586.16

(10%Imax)	358.615	—
(20%Imax)	717.231	—
(30%Imax)	1075.85	—
(40%Imax)	1434.46	—
(50%Imax)	1793.08	—
(60%Imax)	2151.69	—
(70%Imax)	2510.31	—
(80%Imax)	2868.92	—
(90%Imax)	3227.54	—



(10%Emax)	39.846	—
(20%Emax)	79.69211	—
(30%Emax)	119.5378	—
(40%Emax)	159.3844	—
(50%Emax)	199.23	—
(60%Emax)	239.0767	—
(70%Emax)	278.9222	—
(80%Emax)	318.7689	—
(90%Emax)	358.6144	—



Luminance Table

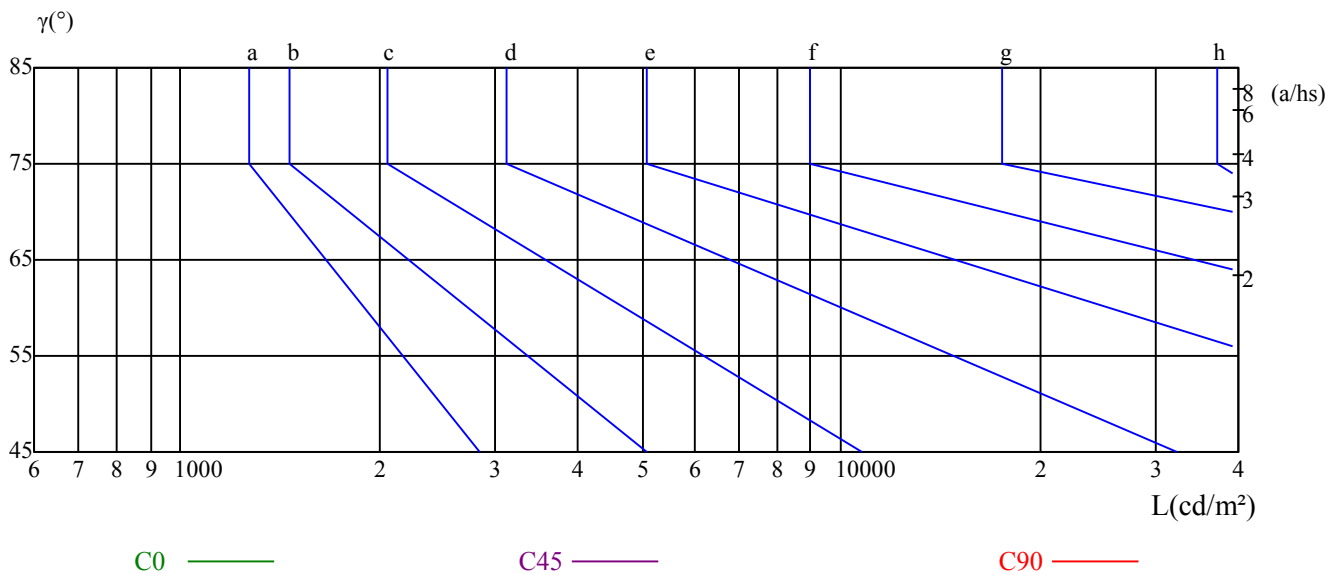
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

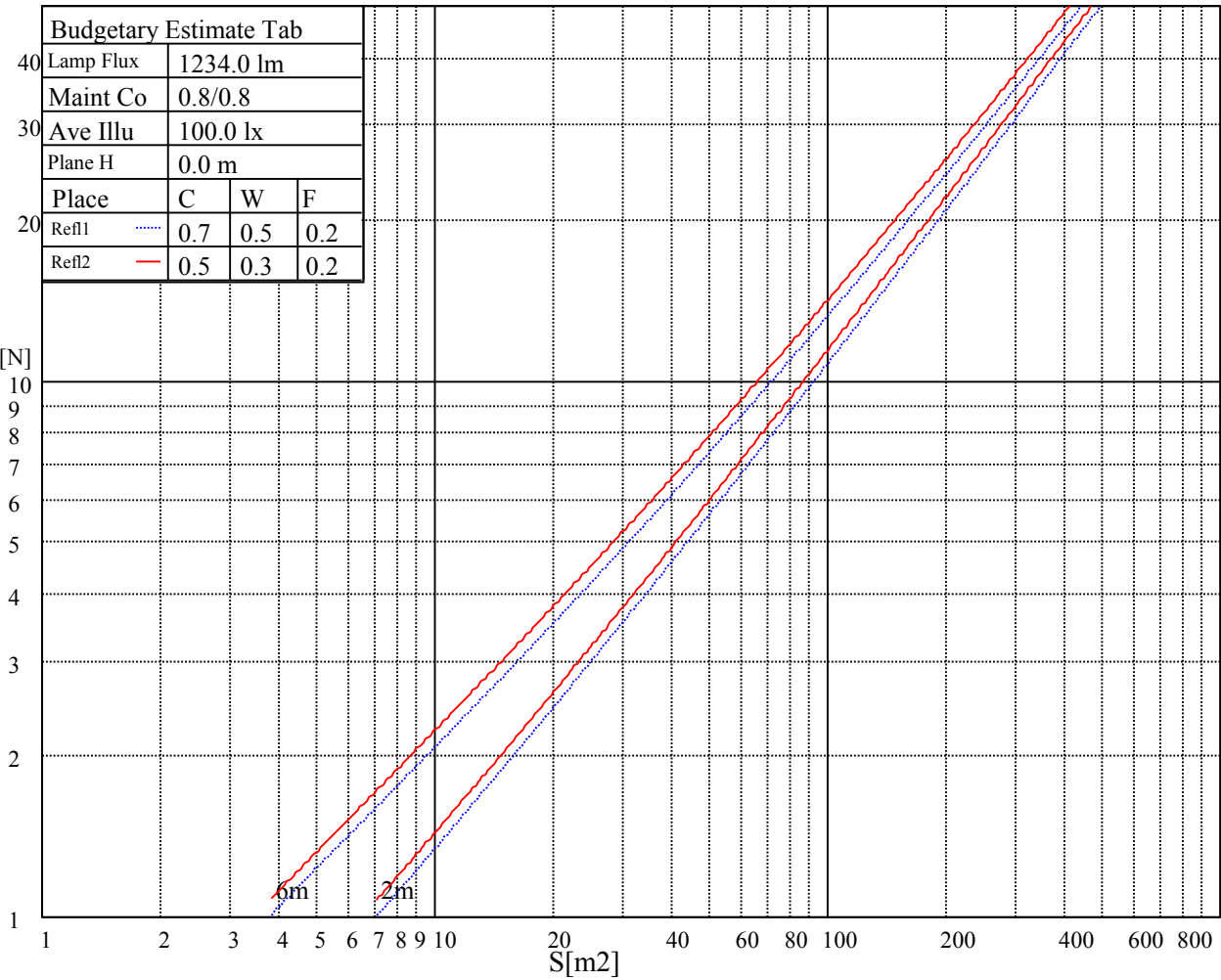
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

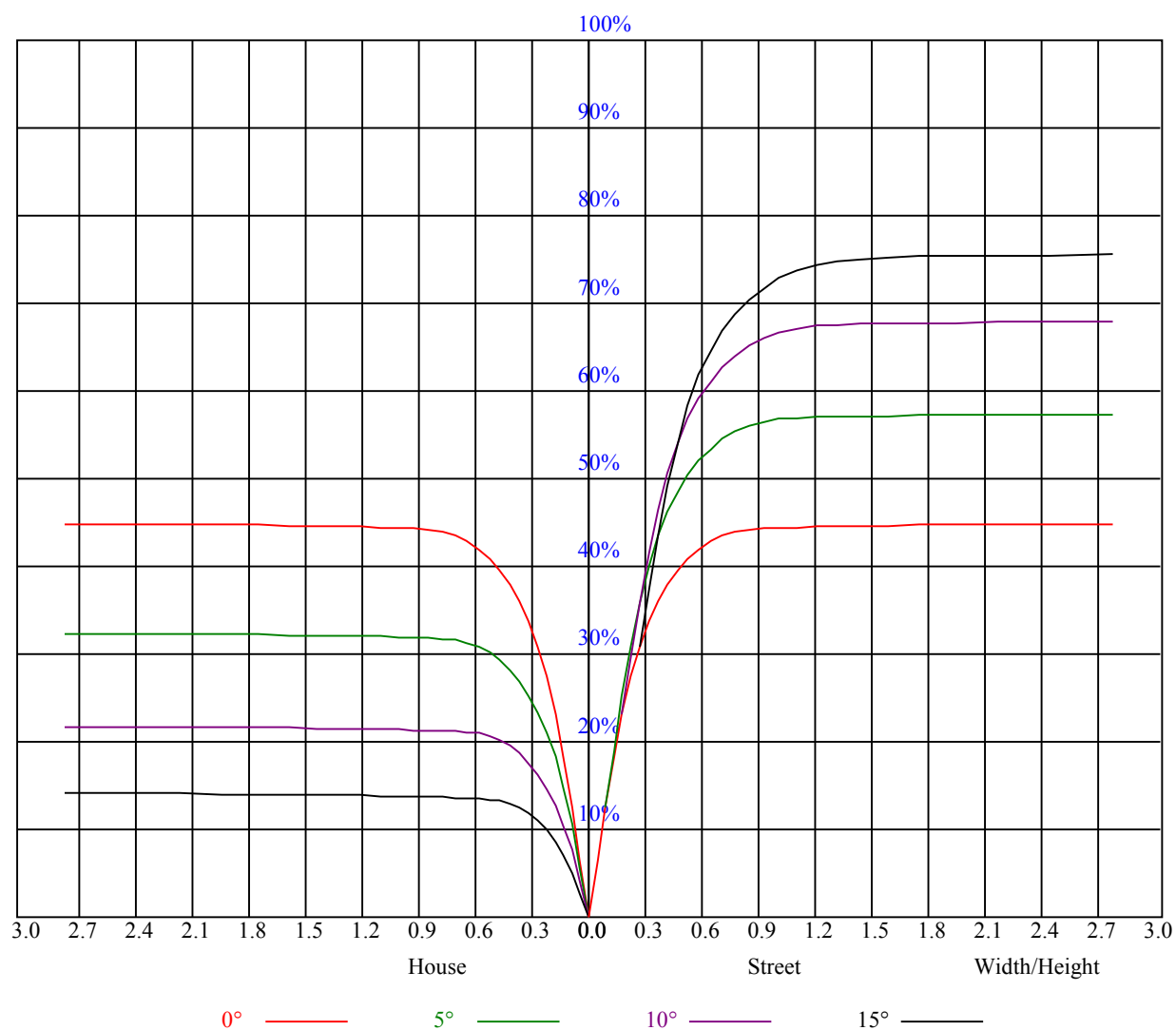
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

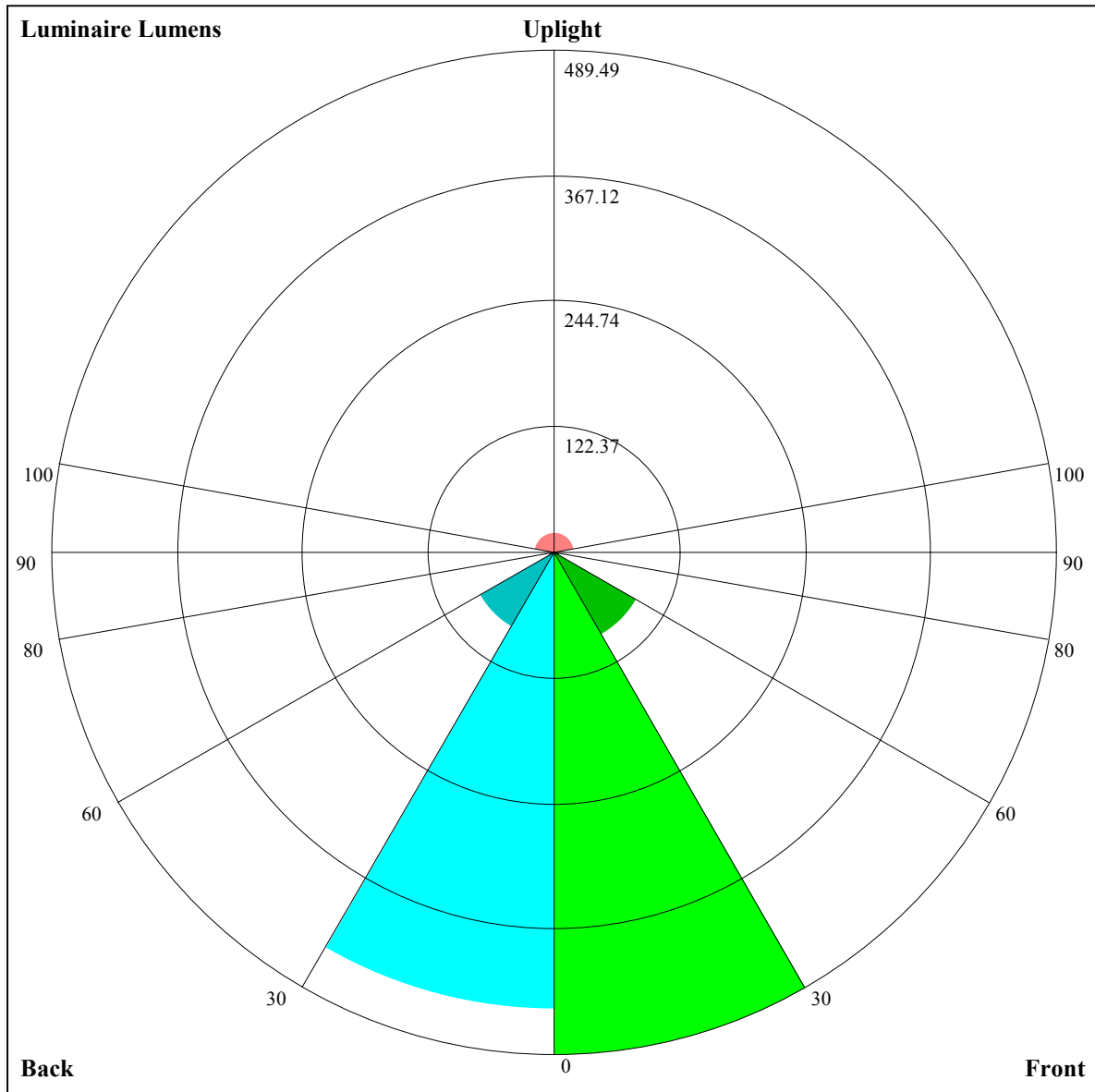
Luminance Limiting Curve





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	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.02	1.00	0.98	1.00	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	0.74
5	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
6	0.79	0.74	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
7	0.75	0.71	0.67	0.75	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.72	0.68	0.66	0.65
8	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60
10	0.67	0.62	0.59	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.58





Luminaire Lumens:

FL=489.49,FM=92.38,FH=5.35,FVH=2.2

BL=445.96,BM=84.61,BH=5.49,BVH=2.23

UL=4.02,UH=19.12

BUG Rating:B1-U2-G0

Nata 1657-S

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	3609.76	3333.20	2478.45	1395.39	762.22	497.40	401.53	218.70	54.57		
45.0	3605.59	3207.91	2385.64	1277.07	741.11	489.60	407.47	258.98	33.09		
90.0	3419.97	2485.41	1449.69	755.82	501.02	426.45	273.87	50.02	13.27		
135.0	3680.76	2985.64	1991.68	965.70	545.75	375.91	284.03	174.57	30.53		
180.0	3609.76	3175.43	2208.85	1316.97	716.51	489.60	420.00	244.59	46.68		
225.0	3605.59	3276.59	2359.66	1181.48	759.81	502.64	424.13	269.65	50.90		
270.0	3419.97	3785.63	3345.73	2430.65	1384.72	696.10	464.54	385.66	260.37		
315.0	3737.84	3690.50	2969.40	1857.11	866.12	566.03	447.19	341.34	111.74		
360.0	3609.76	3333.20	2478.45	1395.39	762.22	497.40	401.53	218.70	54.57		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	7.75	5.61	5.24	5.10	4.73	4.41	4.13	3.71	3.57		
45.0	7.29	6.13	5.75	5.38	4.69	4.27	3.94	3.67	3.43		
90.0	10.07	8.35	6.64	5.48	4.69	4.27	3.99	3.62	3.43		
135.0	14.90	10.16	7.70	6.17	5.01	4.45	4.04	3.62	3.43		
180.0	11.23	9.00	7.84	6.73	6.08	5.48	5.20	4.92	4.50		
225.0	11.46	8.91	7.56	6.73	6.03	5.61	5.20	4.83	4.45		
270.0	43.25	15.36	11.42	8.72	7.19	6.36	5.85	5.38	4.69		
315.0	16.29	9.93	9.14	7.89	6.91	6.26	5.89	5.57	5.15		
360.0	7.75	5.61	5.24	5.10	4.73	4.41	4.13	3.71	3.57		
C/γ(°)	90.0										
0.0	3.53										
45.0	3.20										
90.0	3.20										
135.0	3.39										
180.0	3.94										
225.0	3.90										
270.0	3.99										
315.0	4.32										
360.0	3.53										