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Nata

Client:

LumCAT: 1-0920-M

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): 0.1000

Power (W): 12.1400

PF: 0.5450

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 919.99, Efficiency(%): 74.55% , Luminous Efficacy(lm/W): 75.78

Central intensity(cd): 2685.523, Maximum intensity(cd): 2685.523

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.2

[C90/270]Total=35.2

Field angle(10%Imax): [C0/180]Total=54.0

[C90/270]Total=54.0

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

Maximum s/h(1/4): C0_180=0.55 C90_270=0.55

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 74.55%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.594%

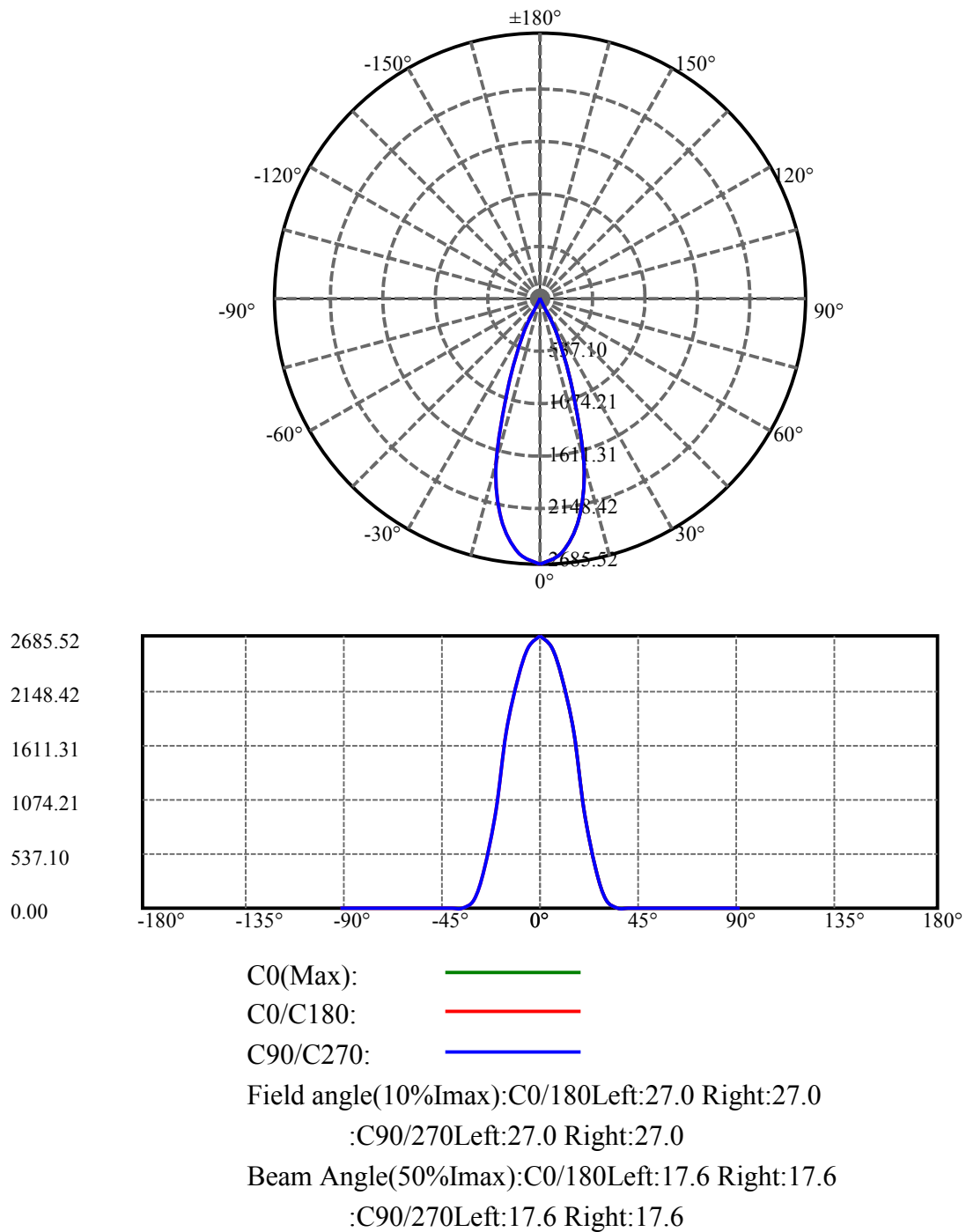
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2685.524	0.000	0	.000%	.000%
5.0	2570.212	62.831	62.831	5.092%	6.829%
10.0	2266.328	173.018	235.849	14.021%	25.636%
15.0	1738.142	237.542	473.391	19.250%	51.456%
20.0	970.451	223.226	696.617	18.090%	75.720%
25.0	387.677	142.442	839.06	11.543%	91.203%
30.0	84.094	59.703	898.763	4.838%	97.692%
35.0	4.872	13.101	911.864	1.062%	99.116%
40.0	2.865	1.291	913.155	.105%	99.257%
45.0	2.193	0.937	914.091	.076%	99.359%
50.0	1.769	0.801	914.892	.065%	99.446%
55.0	1.497	0.710	915.602	.058%	99.523%
60.0	1.346	0.657	916.259	.053%	99.594%
65.0	1.247	0.630	916.889	.051%	99.663%
70.0	1.189	0.617	917.506	.050%	99.730%
75.0	1.154	0.613	918.119	.050%	99.796%
80.0	1.131	0.611	918.73	.050%	99.863%
85.0	1.137	0.616	919.346	.050%	99.930%
90.0	1.224	0.646	919.993	.052%	100.000%

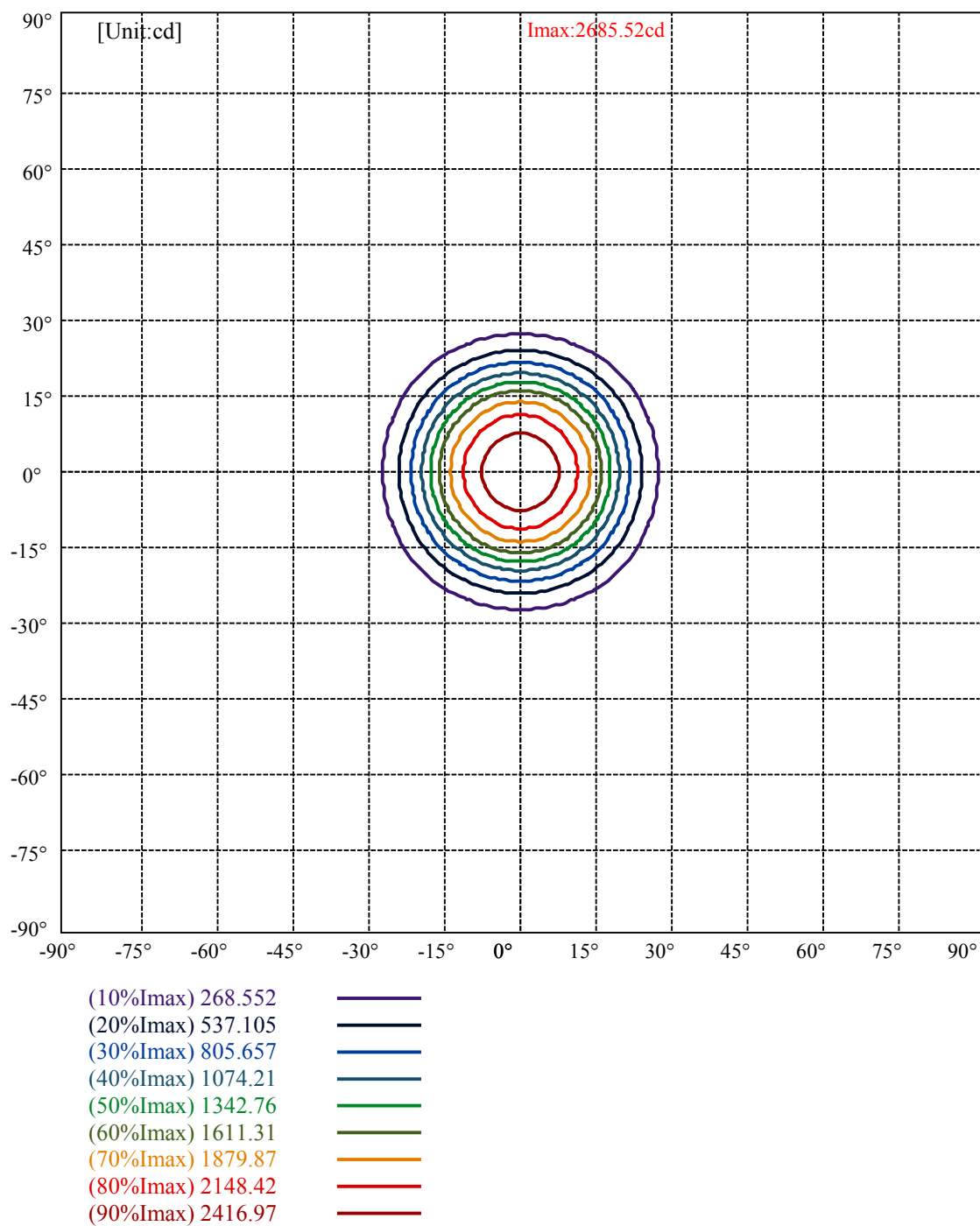
ZONAL LUMEN SUMMARY

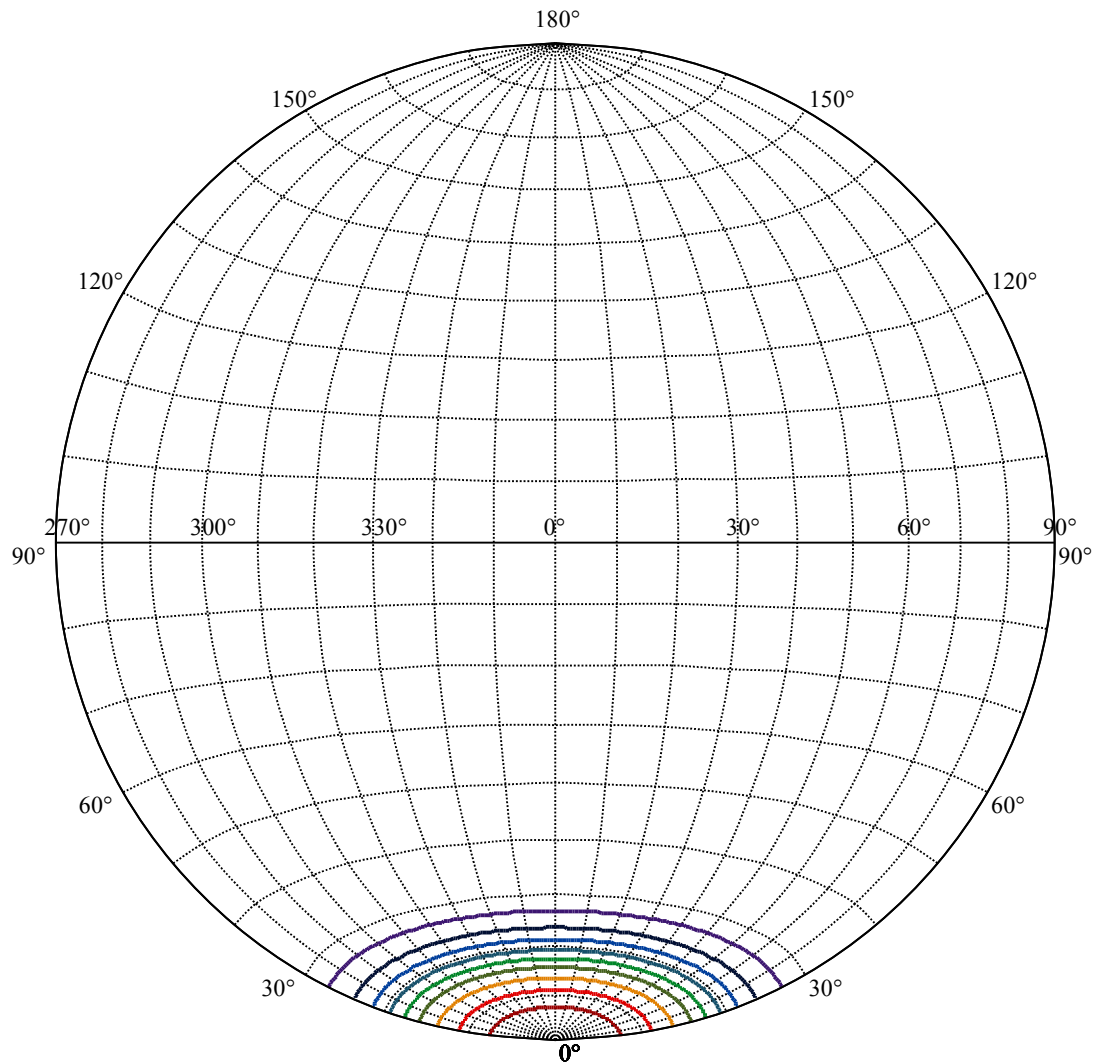
Zone	Lumens	%Lamp	%Fixt
0-30	898.76	72.83%	97.69%
0-40	913.15	74.00%	99.26%
0-60	916.26	74.25%	99.59%
0-90	919.35	74.50%	99.93%
0-120	919.35	74.50%	99.93%
0-180	919.99	74.55%	100.00%
60-90	3.74	0.30%	0.41%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.38	735.99	59.64%	80.00%

ZONAL LUMEN SUMMARY

0-10	235.85
10-20	460.77
20-30	202.15
30-40	14.39
40-50	1.74
50-60	1.37
60-70	1.25
70-80	1.22
80-90	0.62
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







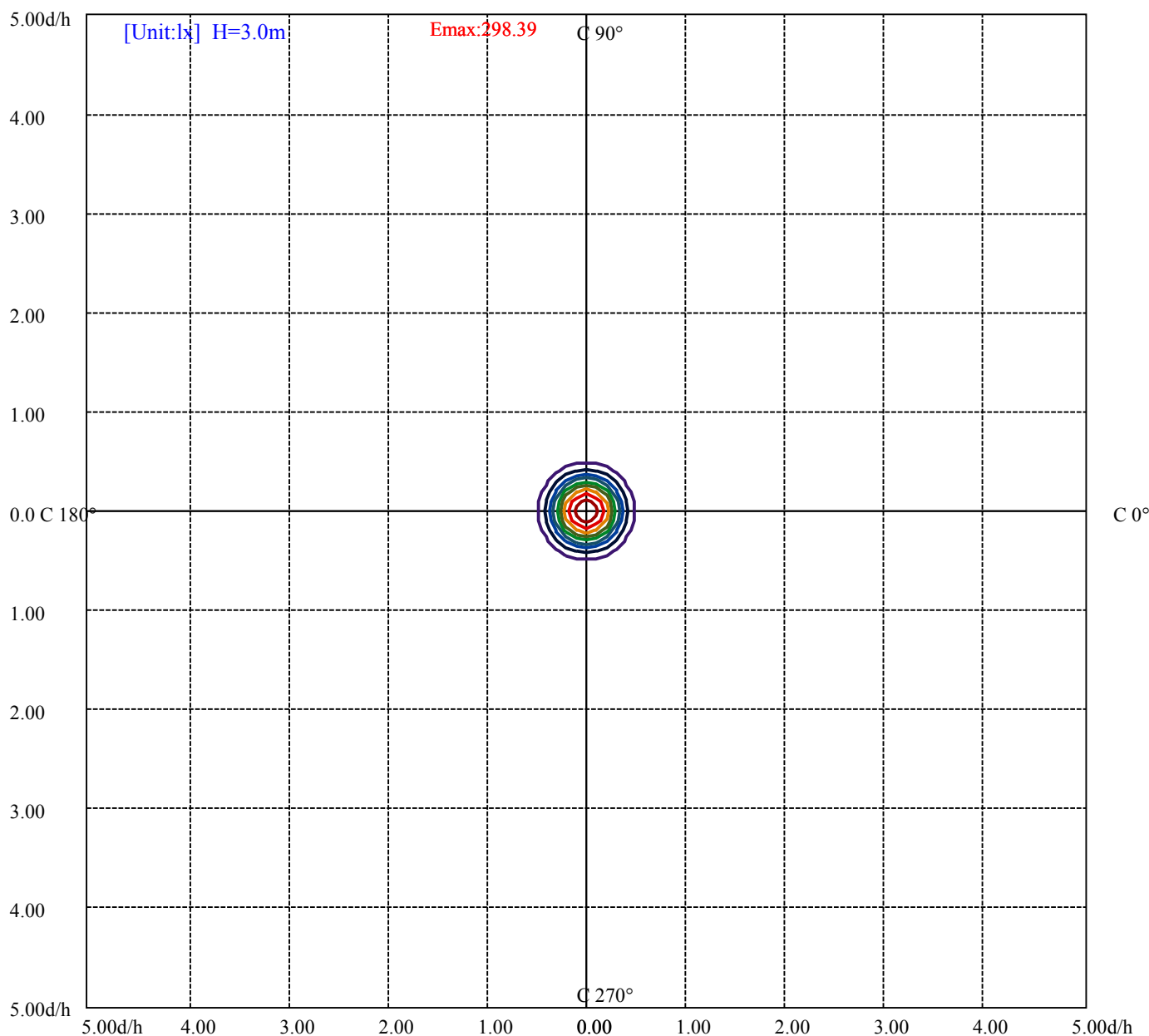
House

[Unit:cd]

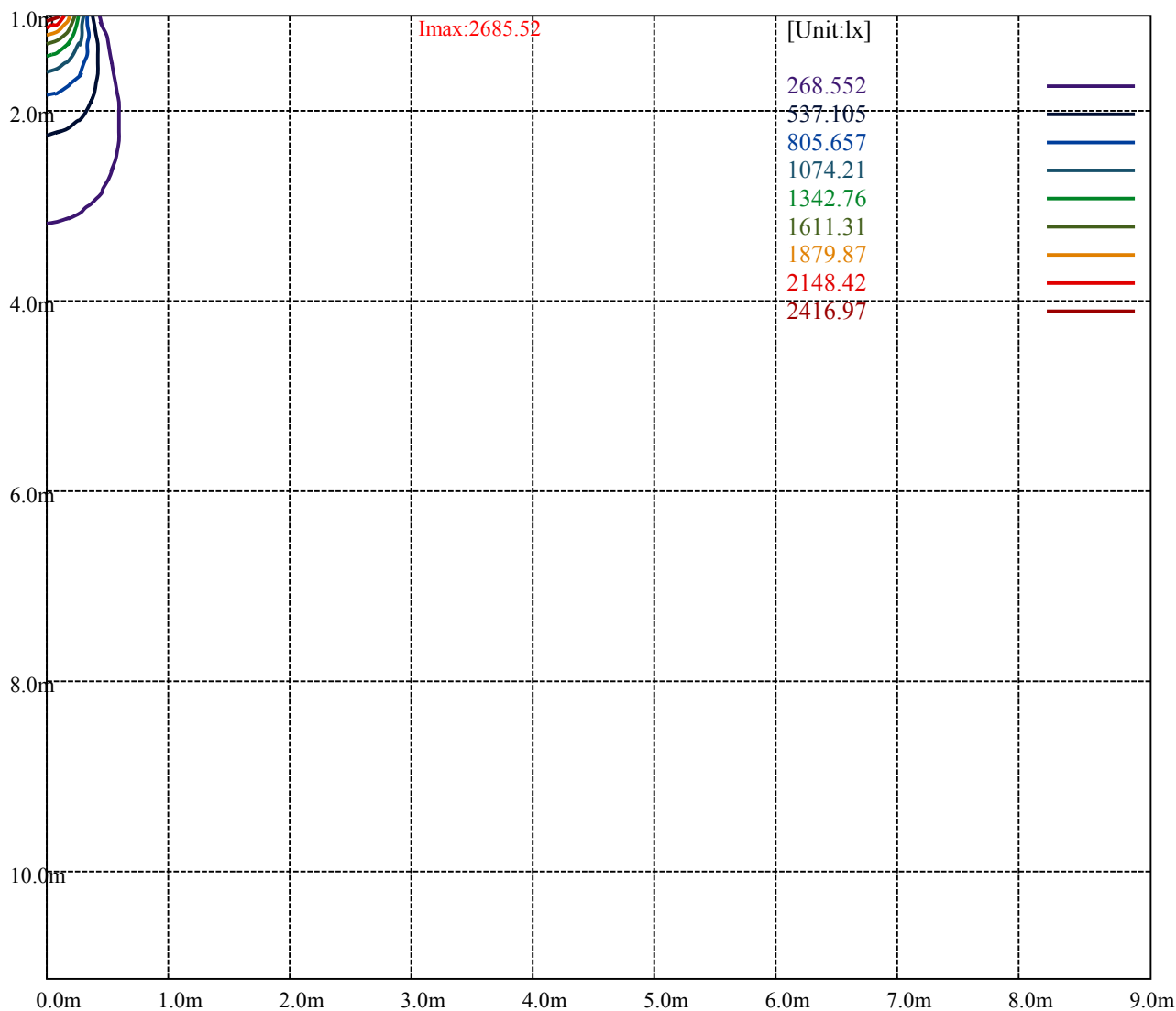
Road

Imax:2685.52

(10%Imax)	268.552	
(20%Imax)	537.105	
(30%Imax)	805.657	
(40%Imax)	1074.21	
(50%Imax)	1342.76	
(60%Imax)	1611.31	
(70%Imax)	1879.87	
(80%Imax)	2148.42	
(90%Imax)	2416.97	



(10%Emax)	29.83911	—
(20%Emax)	59.67822	—
(30%Emax)	89.51733	—
(40%Emax)	119.3567	—
(50%Emax)	149.1956	—
(60%Emax)	179.0345	—
(70%Emax)	208.8733	—
(80%Emax)	238.7133	—
(90%Emax)	268.5522	—



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

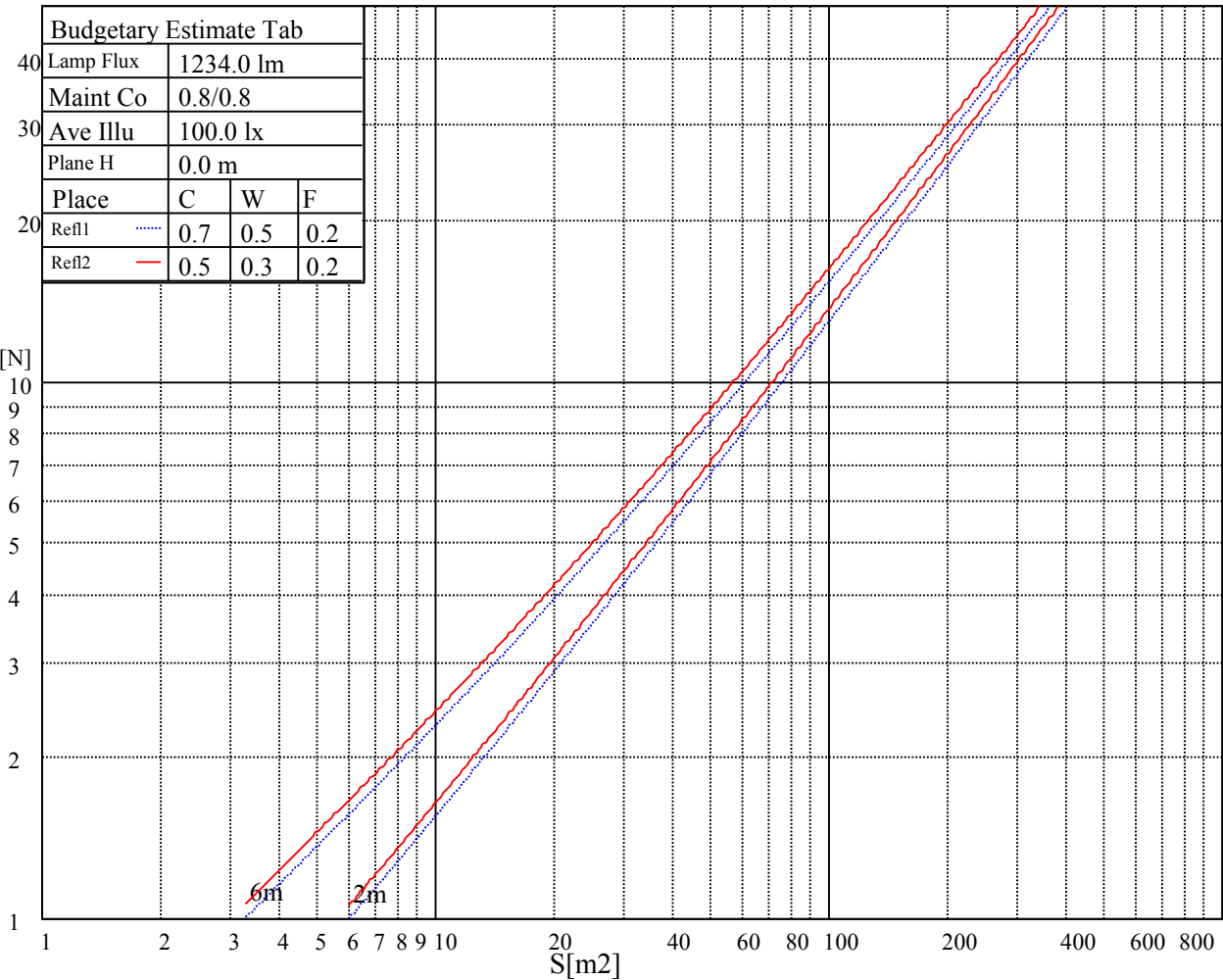
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

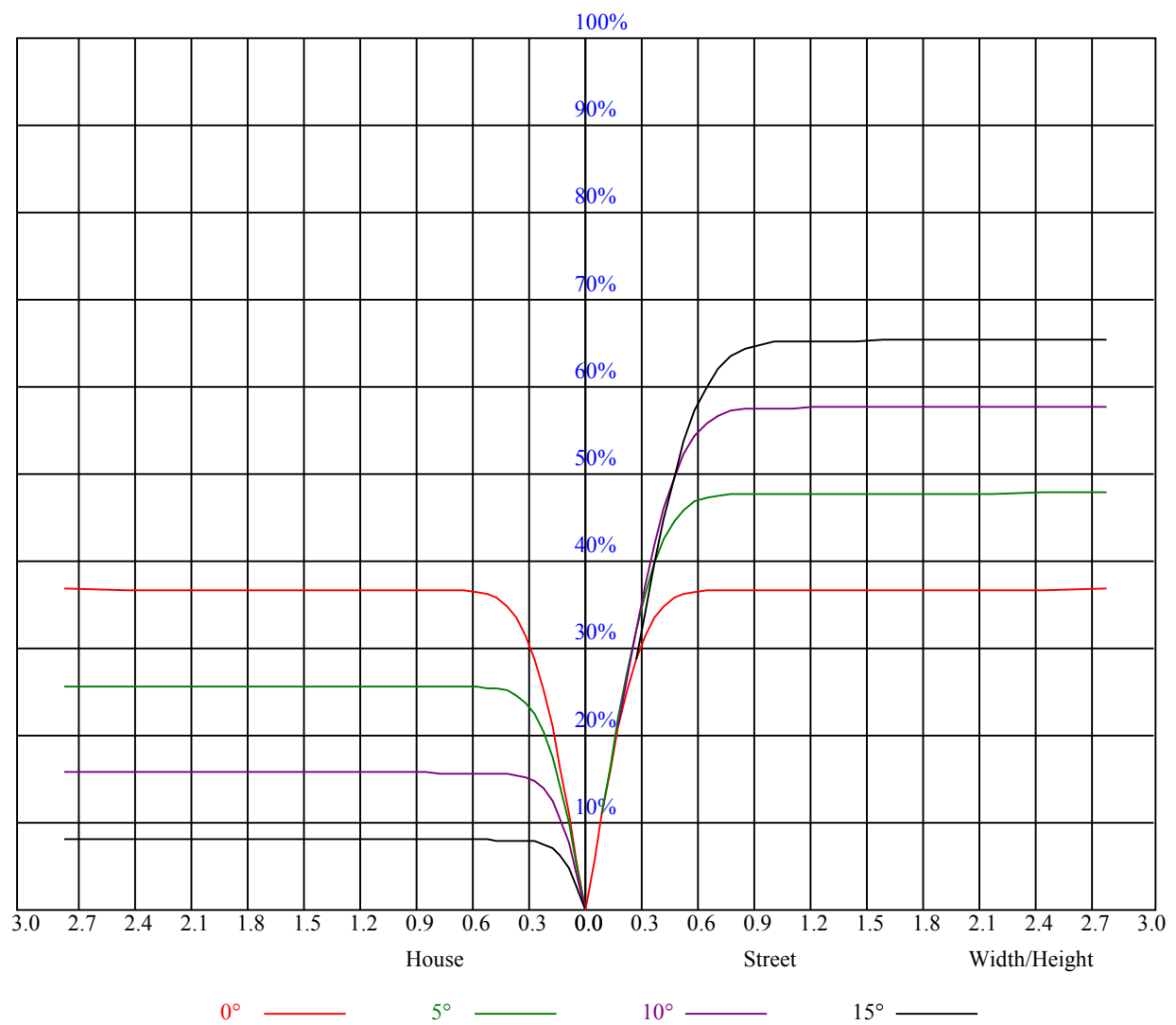
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

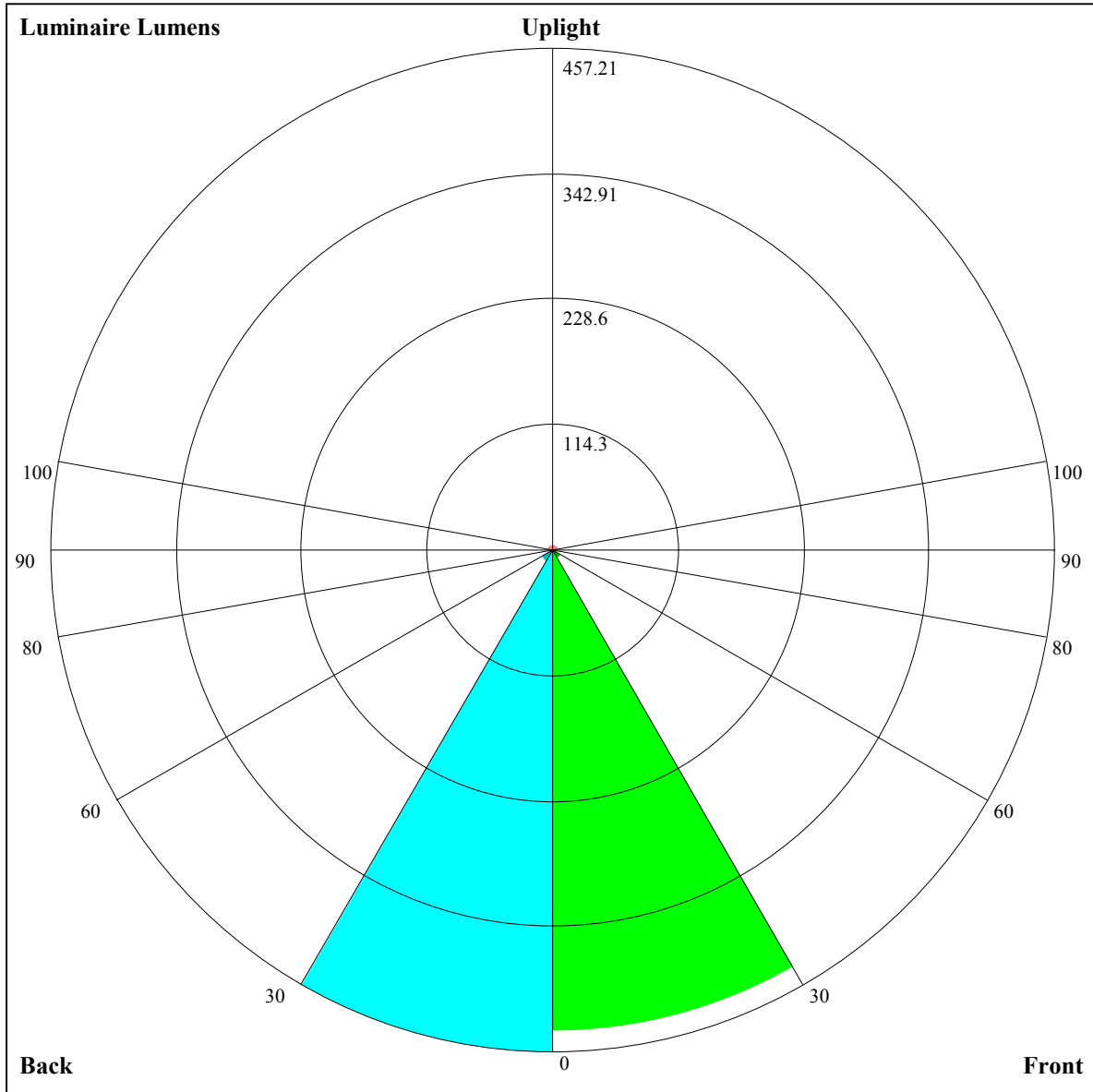
Luminance Limiting Curve





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	0.89	0.89	0.89	0.87	0.87	0.87	0.83	0.83	0.83	0.79	0.79	0.79	0.76	0.76	0.76	0.75
1	0.84	0.82	0.81	0.82	0.81	0.80	0.79	0.78	0.77	0.77	0.76	0.75	0.74	0.73	0.73	0.72
2	0.80	0.77	0.75	0.79	0.76	0.75	0.76	0.74	0.73	0.74	0.73	0.71	0.72	0.71	0.70	0.69
3	0.76	0.73	0.71	0.75	0.73	0.71	0.73	0.71	0.69	0.72	0.70	0.68	0.70	0.69	0.67	0.66
4	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.69	0.67	0.66	0.68	0.66	0.65	0.64
5	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.67	0.65	0.63	0.66	0.64	0.63	0.62
6	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.64	0.62	0.60	0.60
7	0.65	0.62	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.59	0.62	0.60	0.58	0.58
8	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.57	0.60	0.58	0.56	0.56
9	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.59	0.56	0.55	0.54
10	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.57	0.55	0.53	0.52





Luminaire Lumens:

FL=438.69,FM=8.1,FH=1.22,FVH=0.62

BL=457.21,BM=11.48,BH=1.25,BVH=0.64

UL=1.34,UH=6.35

BUG Rating:B1-U1-G0

Nata 1-0920-M

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	2684.48	2528.10	2188.89	1598.18	763.57	225.98	9.51	3.53	2.55		
45.0	2702.11	2579.14	2246.90	1737.39	1100.27	281.71	15.22	4.22	2.69		
90.0	2654.78	2387.03	1953.16	1187.51	631.22	58.93	5.89	3.43	2.51		
135.0	2700.72	2554.55	2235.30	1723.47	949.46	271.04	15.73	4.45	2.97		
180.0	2684.48	2612.09	2347.13	1940.63	1172.19	493.31	246.91	5.43	3.11		
225.0	2702.11	2602.81	2281.70	1787.04	780.37	425.75	21.48	4.55	2.69		
270.0	2654.78	2700.26	2529.49	2143.42	1563.38	898.42	322.09	9.00	3.62		
315.0	2700.72	2597.71	2348.06	1787.50	803.15	446.26	35.92	4.36	2.78		
360.0	2684.48	2528.10	2188.89	1598.18	763.57	225.98	9.51	3.53	2.55		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	2.00	1.62	1.39	1.30	1.25	1.21	1.11	1.11	1.07		
45.0	2.13	1.72	1.44	1.30	1.21	1.16	1.16	1.16	1.16		
90.0	2.00	1.62	1.44	1.35	1.21	1.21	1.16	1.16	1.25		
135.0	2.32	1.95	1.62	1.44	1.35	1.25	1.16	1.16	1.16		
180.0	2.37	1.90	1.62	1.44	1.30	1.21	1.21	1.21	1.16		
225.0	2.09	1.72	1.48	1.25	1.21	1.16	1.16	1.07	1.07		
270.0	2.55	1.90	1.58	1.39	1.25	1.21	1.21	1.11	1.16		
315.0	2.09	1.72	1.39	1.30	1.21	1.11	1.07	1.07	1.07		
360.0	2.00	1.62	1.39	1.30	1.25	1.21	1.11	1.11	1.07		
C/γ(°)	90.0										
0.0	1.11										
45.0	1.25										
90.0	1.16										
135.0	1.25										
180.0	1.62										
225.0	1.16										
270.0	1.11										
315.0	1.11										
360.0	1.11										