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NATA

Client:

LumCAT: 1546-E

Luminaire: 92.70.043.00

Report No: nt0100

Test No: GC20200115113

LampCAT: LUMINUS CXM-6-AC40

Lamp flux(lm): 850.2

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 34.7900

Current(A): 0.1970

Power (W): 6.8500

PF: 0.0000

Ballast type: DC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 732.40, Efficiency(%): 86.15% , Luminous Efficacy(lm/W): 106.92

Central intensity(cd): 995.766, Maximum intensity(cd): 995.766

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=43.4

[C90/270]Total=43.4

Field angle(10%Imax): [C0/180]Total=88.6

[C90/270]Total=88.6

Maximum s/h(1/2): C0_180=0.67 C90_270=0.67

Maximum s/h(1/4): C0_180=0.75 C90_270=0.75

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.15%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.846%

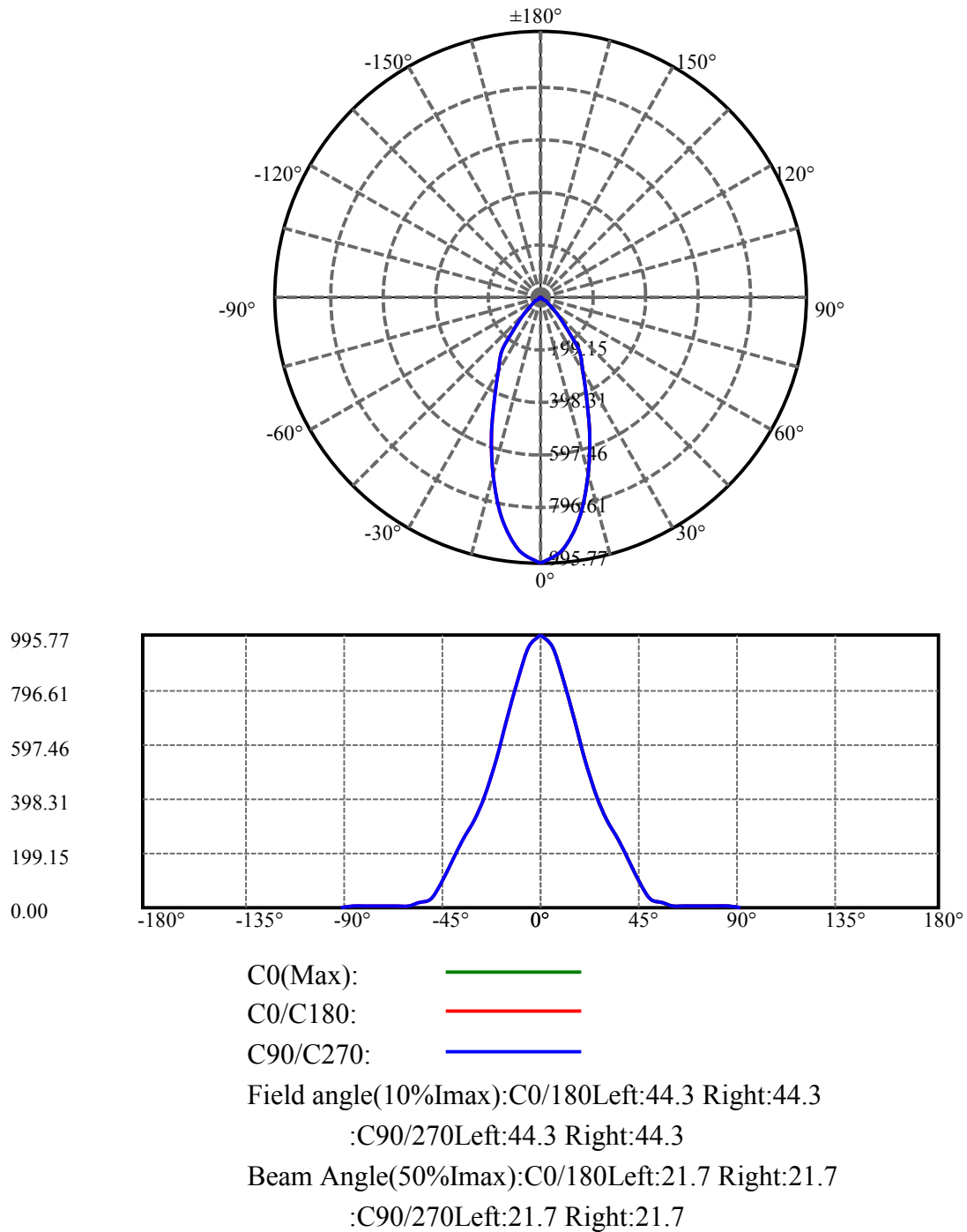
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	995.766	0.000	0	.000%	.000%
5.0	951.694	23.281	23.281	2.738%	3.179%
10.0	839.763	64.086	87.367	7.538%	11.929%
15.0	689.288	90.702	178.07	10.669%	24.313%
20.0	543.656	101.612	279.682	11.952%	38.187%
25.0	409.359	99.954	379.635	11.757%	51.835%
30.0	319.999	92.301	471.936	10.857%	64.437%
35.0	249.504	83.863	555.8	9.864%	75.888%
40.0	172.315	70.377	626.177	8.278%	85.497%
45.0	88.411	48.275	674.452	5.678%	92.088%
50.0	31.528	24.235	698.688	2.851%	95.397%
55.0	20.215	11.251	709.938	1.323%	96.934%
60.0	8.684	6.680	716.618	.786%	97.846%
65.0	6.462	3.682	720.3	.433%	98.348%
70.0	5.463	3.019	723.32	.355%	98.761%
75.0	4.788	2.680	725.999	.315%	99.127%
80.0	4.303	2.433	728.432	.286%	99.459%
85.0	3.663	2.165	730.596	.255%	99.754%
90.0	2.911	1.800	732.396	.212%	100.000%

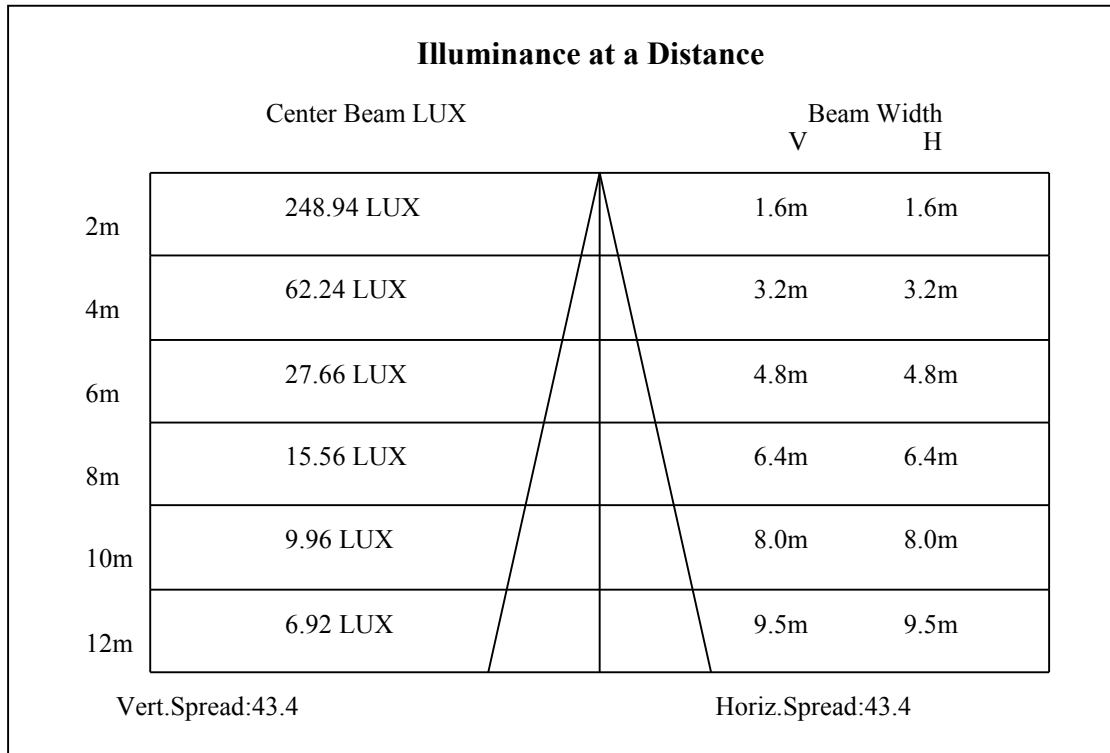
ZONAL LUMEN SUMMARY

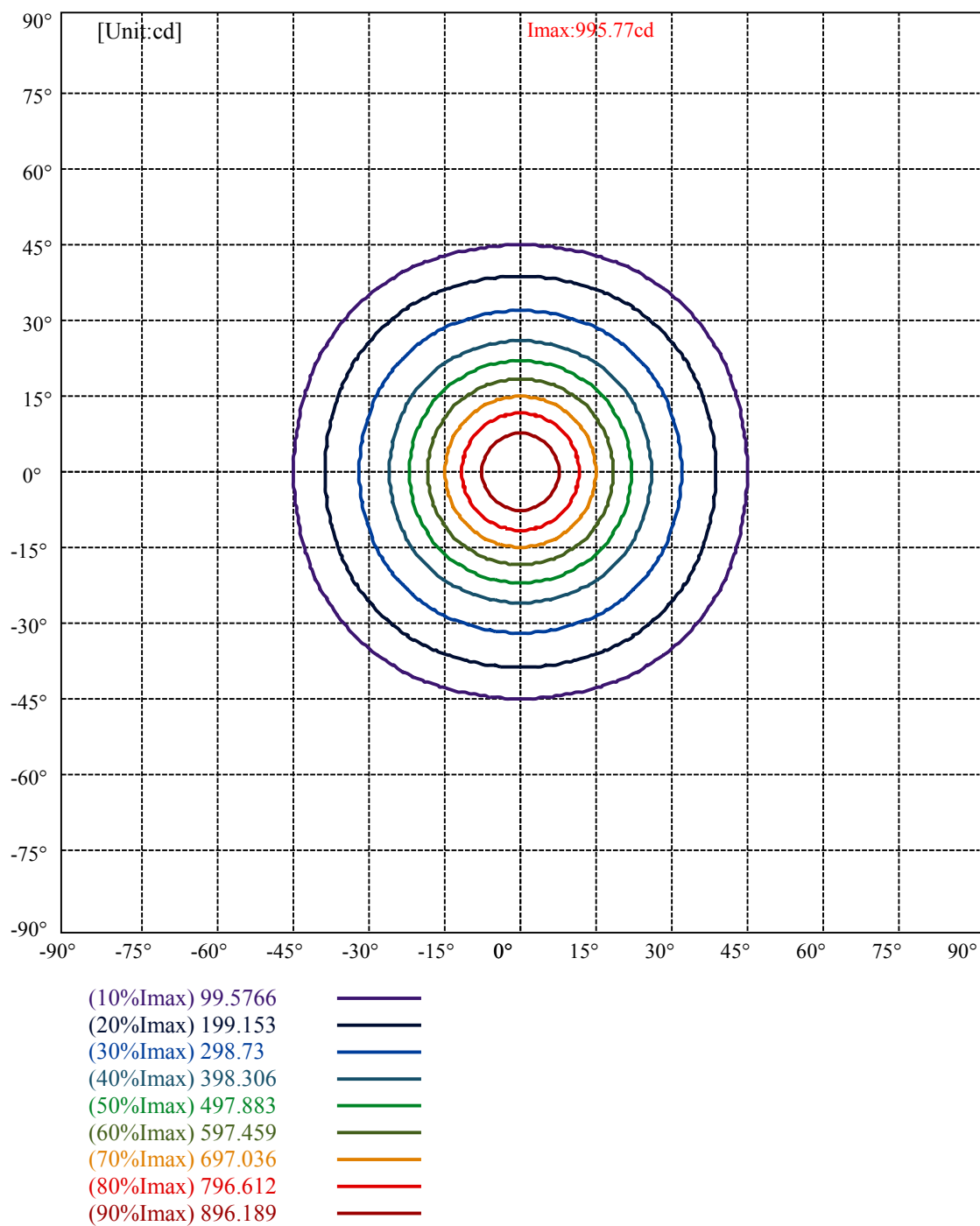
Zone	Lumens	%Lamp	%Fixt
0-30	471.94	55.51%	64.44%
0-40	626.18	73.65%	85.50%
0-60	716.62	84.29%	97.85%
0-90	730.60	85.94%	99.75%
0-120	730.60	85.94%	99.75%
0-180	732.40	86.15%	100.00%
60-90	20.66	2.43%	2.82%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.14	585.92	68.92%	80.00%

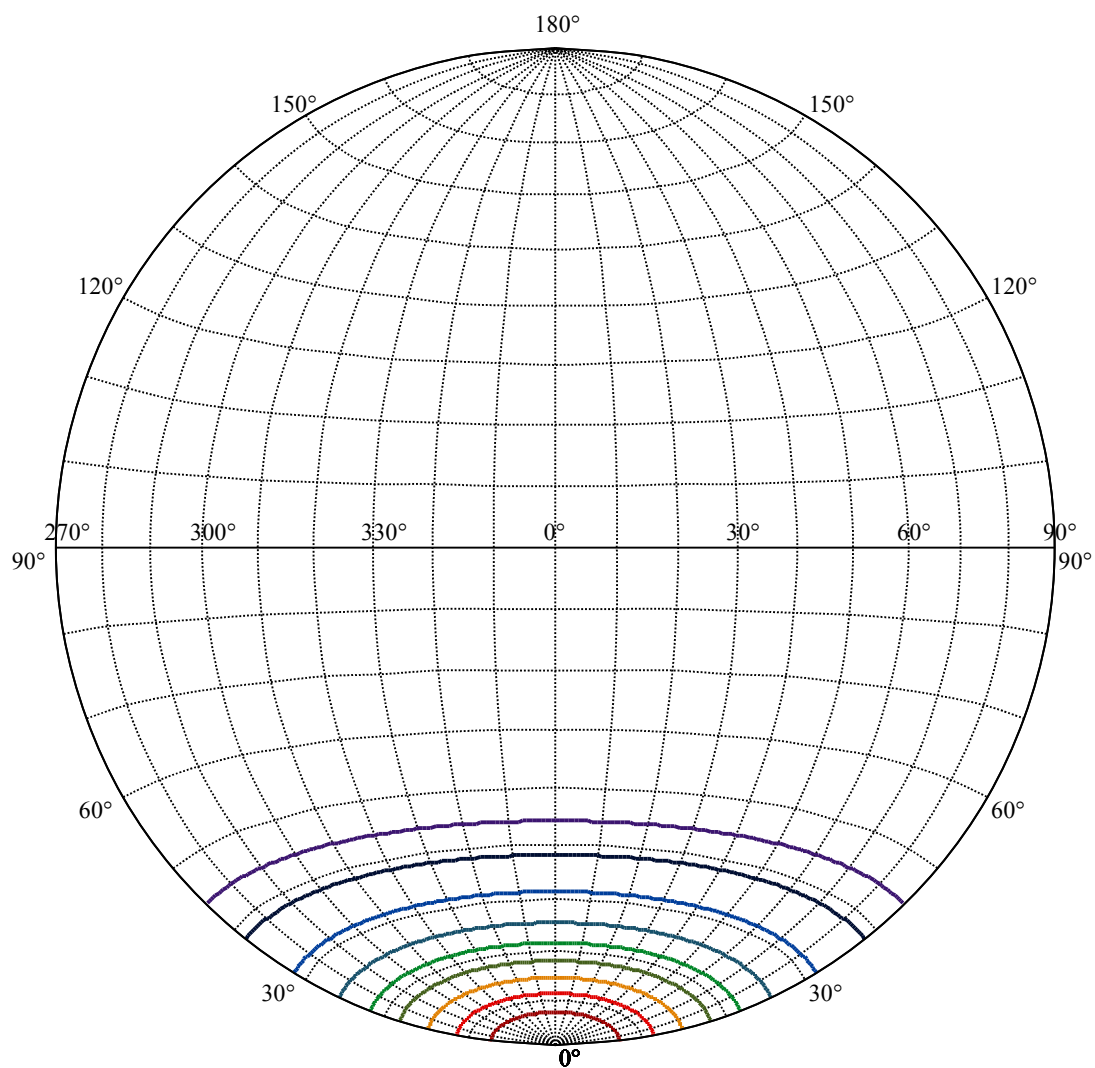
ZONAL LUMEN SUMMARY

0-10	87.37
10-20	192.31
20-30	192.25
30-40	154.24
40-50	72.51
50-60	17.93
60-70	6.70
70-80	5.11
80-90	2.16
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:995.77

(10%Imax) 99.5766

(20%Imax) 199.153

(30%Imax) 298.73

(40%Imax) 398.306

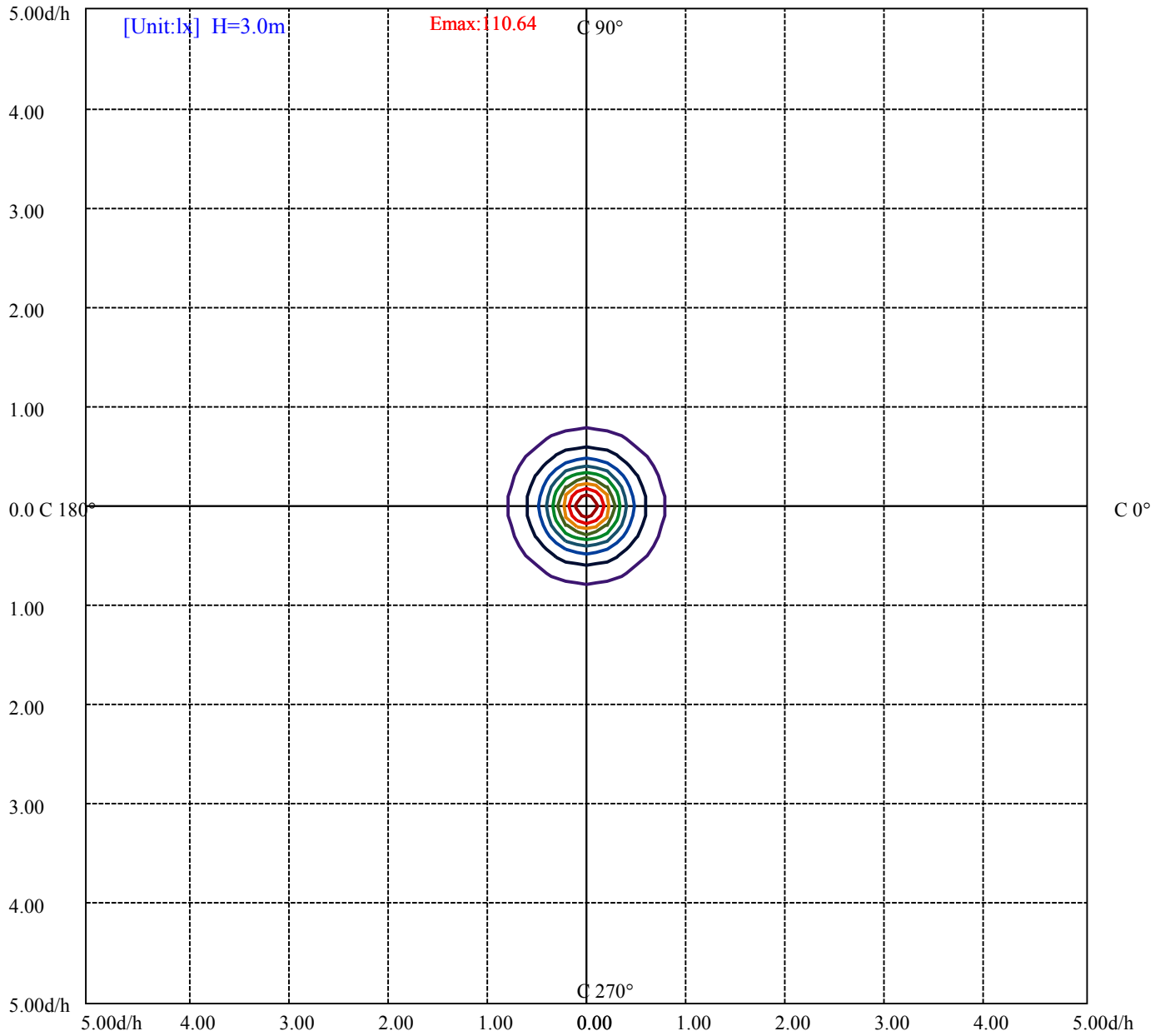
(50%Imax) 497.883

(60%Imax) 597.459

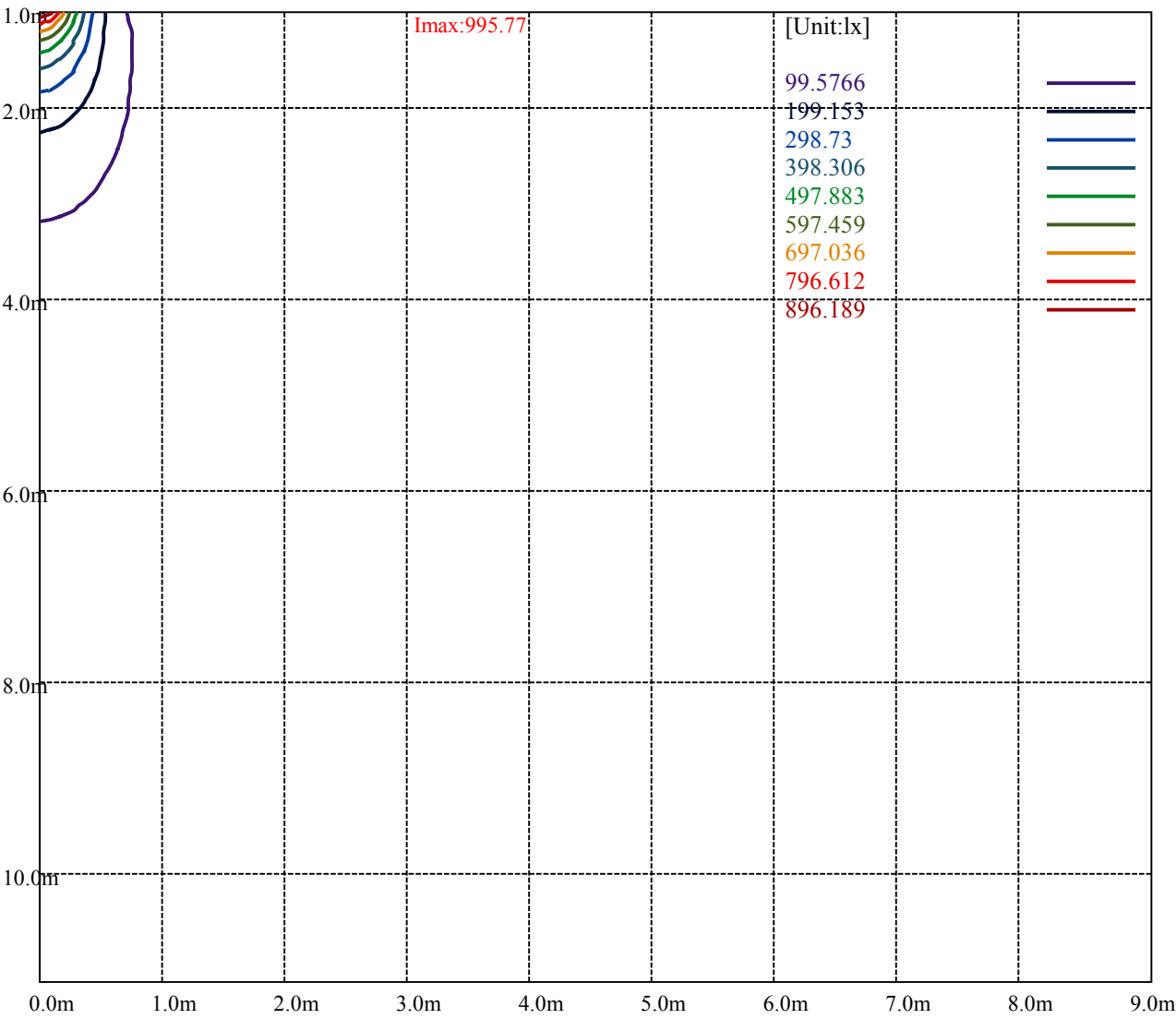
(70%Imax) 697.036

(80%Imax) 796.612

(90%Imax) 896.189



(10%Emax)	11.06404	—
(20%Emax)	22.12811	—
(30%Emax)	33.19211	—
(40%Emax)	44.25622	—
(50%Emax)	55.32022	—
(60%Emax)	66.38433	—
(70%Emax)	77.44833	—
(80%Emax)	88.51234	—
(90%Emax)	99.57645	—



Luminance Table

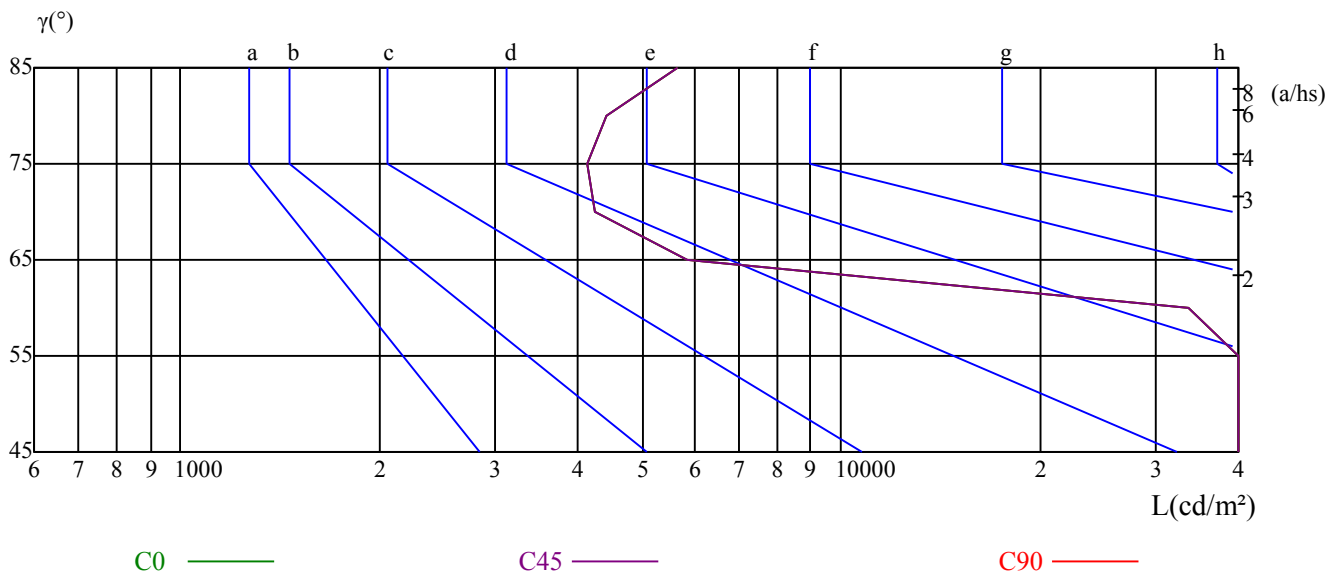
γ	45	50	55	60	65	70	75	80	85
C0	46650	52836	53885	33658	5848	4245	4131	4405	5640
C45	46650	52836	53885	33658	5848	4245	4131	4405	5640
C90	46650	52836	53885	33658	5848	4245	4131	4405	5640

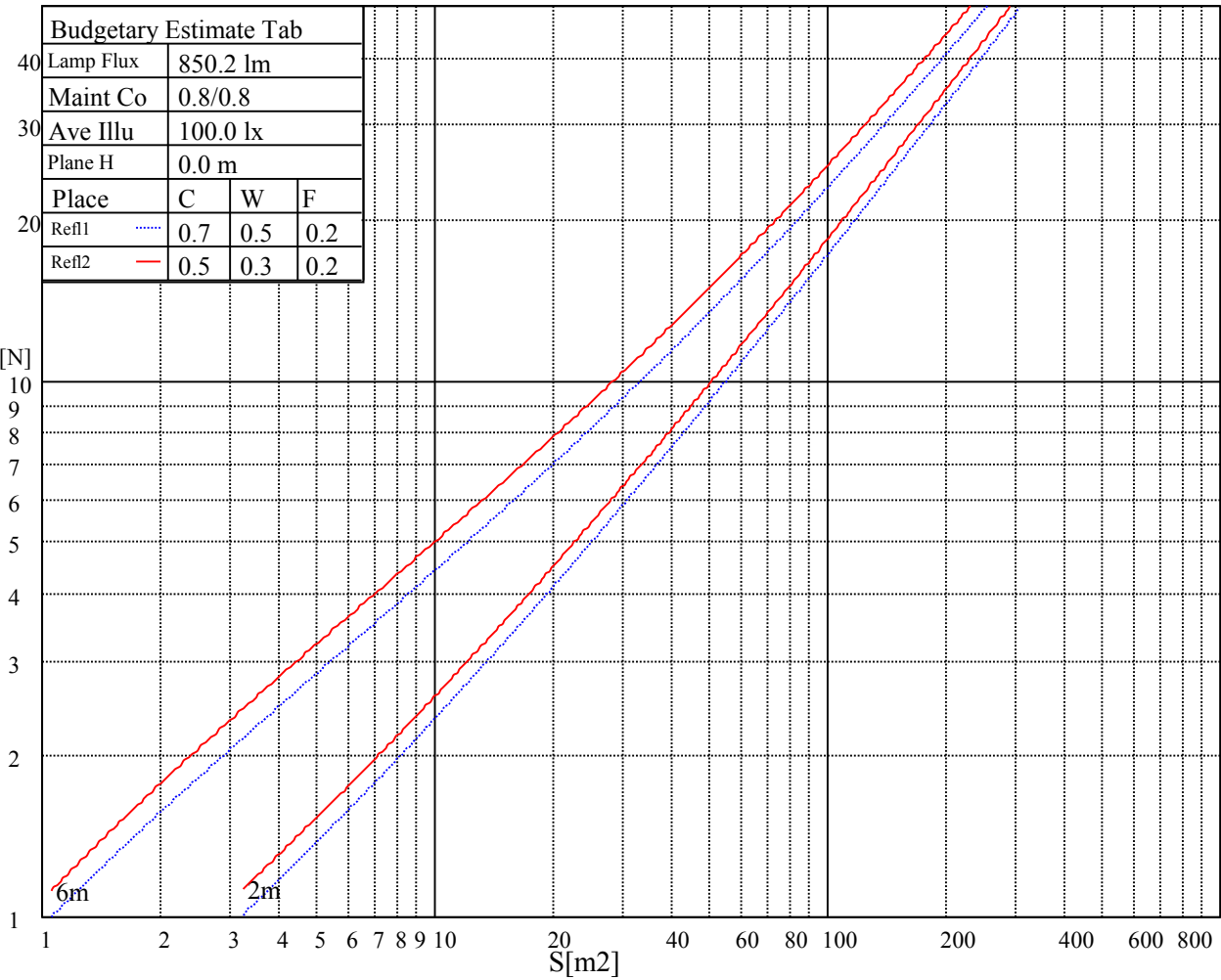
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5848	5848	5848	4131	4131	4131	5640	5640	5640

Glare Table

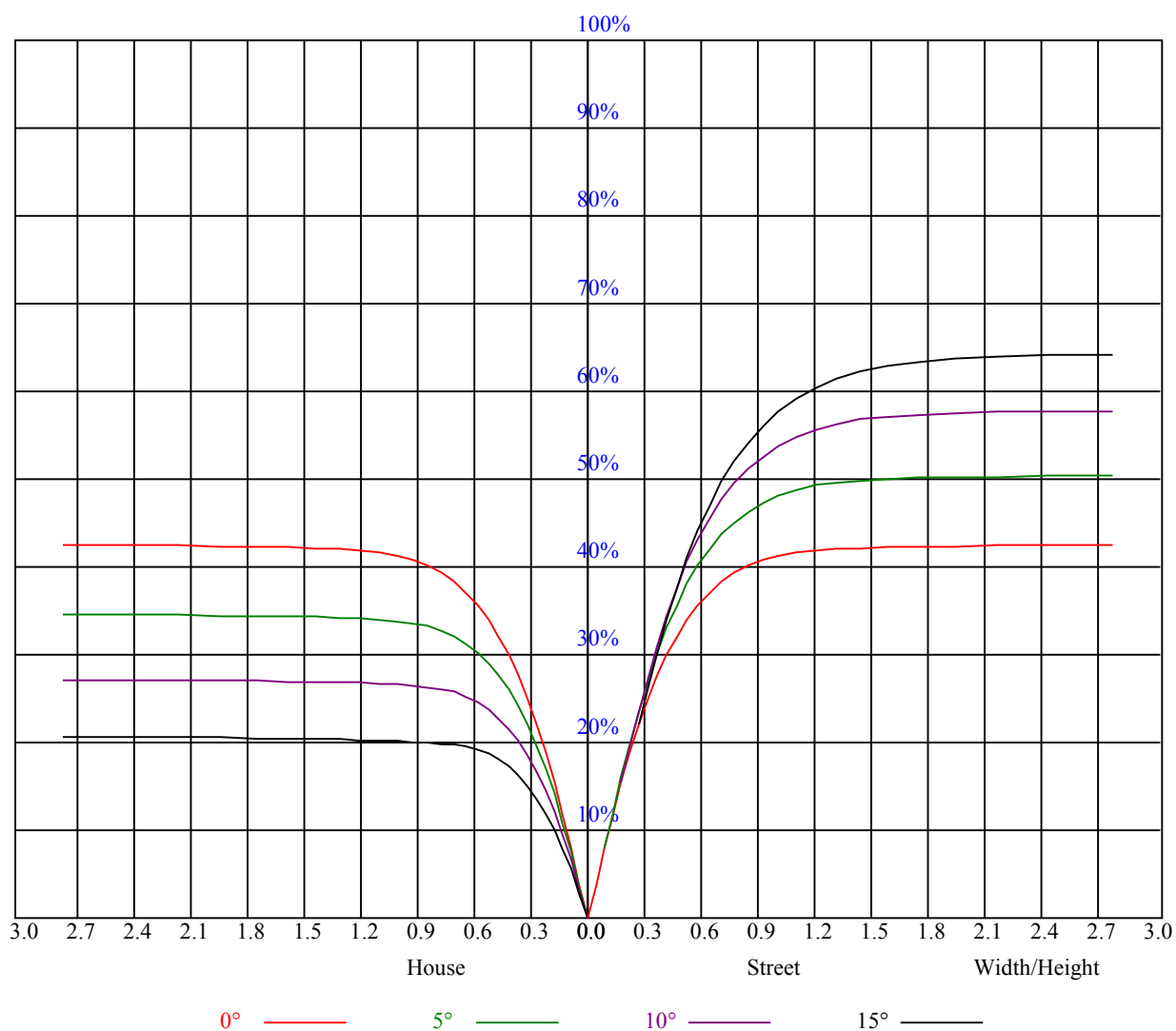
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

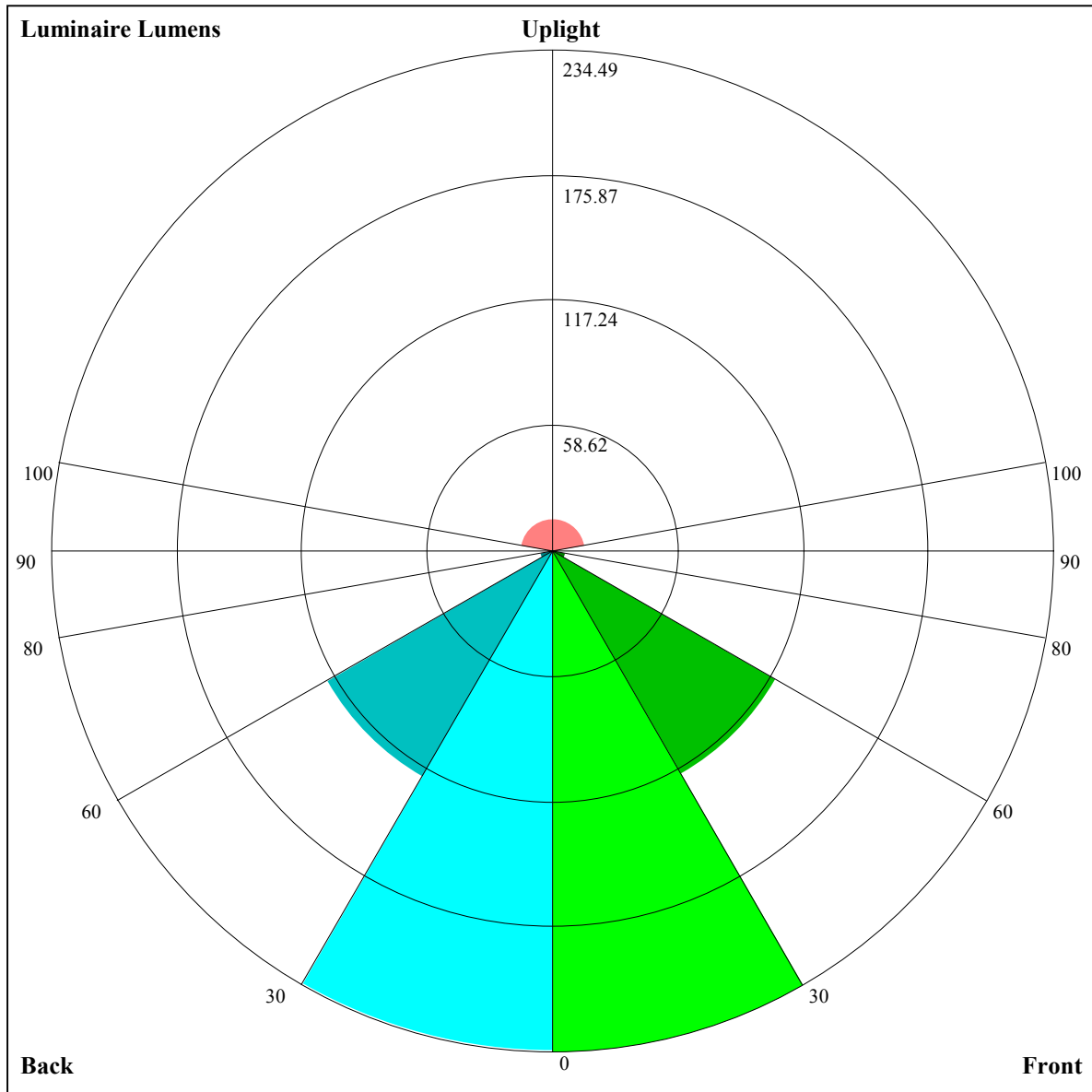
Luminance Limiting Curve





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	1.03	1.03	1.03	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.95	0.92	0.90	0.93	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.88	0.84	0.81	0.86	0.83	0.80	0.83	0.81	0.78	0.81	0.79	0.77	0.78	0.77	0.75	0.73
3	0.81	0.77	0.73	0.80	0.76	0.73	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.68
4	0.76	0.71	0.67	0.75	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.64	0.63
5	0.71	0.65	0.62	0.70	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.65	0.62	0.60	0.58
6	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.54
7	0.62	0.57	0.53	0.62	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.51
8	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.47
9	0.55	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.49	0.46	0.45
10	0.52	0.47	0.44	0.52	0.47	0.44	0.51	0.47	0.43	0.50	0.46	0.43	0.50	0.46	0.43	0.42





Luminaire Lumens:

FL=234.49,FM=120.19,FH=6.05,FVH=2.04

BL=233.78,BM=121.84,BH=5.82,BVH=1.93

UL=3.18,UH=15.11

BUG Rating:B1-U2-G0

NATA 1546-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	999.06	950.85	856.91	699.69	558.51	423.73	333.23	259.26	176.23		
45.0	995.01	952.20	842.23	702.34	558.45	419.79	325.91	248.96	168.41		
90.0	994.28	946.74	815.63	665.44	517.89	385.71	297.62	216.17	143.21		
135.0	994.73	966.15	851.23	706.61	556.88	415.74	325.46	252.45	172.74		
180.0	999.06	955.80	840.60	684.00	533.03	405.28	319.78	257.96	180.62		
225.0	995.01	953.49	835.43	675.73	537.08	403.14	318.66	258.81	184.61		
270.0	994.28	958.78	850.56	706.61	559.86	422.61	330.53	262.58	185.18		
315.0	994.73	929.53	825.53	673.88	527.57	398.87	308.81	239.85	167.51		
360.0	999.06	950.85	856.91	699.69	558.51	423.73	333.23	259.26	176.23		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	89.49	33.19	24.86	9.51	6.53	5.51	4.73	4.28	3.77		
45.0	81.96	30.71	22.89	8.16	6.47	5.51	5.06	4.61	3.71		
90.0	64.01	23.85	17.38	8.04	6.47	5.46	4.78	4.22	3.60		
135.0	88.76	28.74	15.41	8.10	6.47	5.51	4.73	4.16	3.54		
180.0	95.63	30.60	17.16	8.16	6.30	5.29	4.50	3.94	3.43		
225.0	101.81	31.05	18.90	7.99	6.19	5.23	4.44	3.88	3.49		
270.0	103.11	42.08	22.61	11.19	6.64	5.57	4.84	4.50	3.77		
315.0	82.52	32.01	22.50	8.33	6.64	5.63	5.23	4.84	3.99		
360.0	89.49	33.19	24.86	9.51	6.53	5.51	4.73	4.28	3.77		
C/γ(°)	90.0										
0.0	2.93										
45.0	2.93										
90.0	2.93										
135.0	2.87										
180.0	2.87										
225.0	2.93										
270.0	2.93										
315.0	2.93										
360.0	2.93										