
Nata

Client:

LumCAT: 1687-M

Luminaire: 92.70.125.00

Report No: NT2018010505

Test No: GC2018010505

LampCAT: BXR-V-DR-1830-H-1000-B-13

Lamp flux(lm): 1472.0

Number of Lamps: 1

Length(mm): 46

Phm Type: C

Voltage(V): 35.3000

Current(A): 0.5000

Power (W): 17.6500

PF: 0.0000

Ballast type: DC

Width(mm): 46

Height(mm): 0

Photometric Results

Lumens(lm): 1304.40, Efficiency(%): 88.61% , Luminous Efficacy(lm/W): 73.90

Central intensity(cd): 3723.327, Maximum intensity(cd): 3723.327

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.2

[C90/270]Total=24.2

Field angle(10%Imax): [C0/180]Total=78.2

[C90/270]Total=78.2

Maximum s/h(1/2): C0_180=0.41 C90_270=0.41

Maximum s/h(1/4): C0_180=0.42 C90_270=0.42

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.04%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.121%

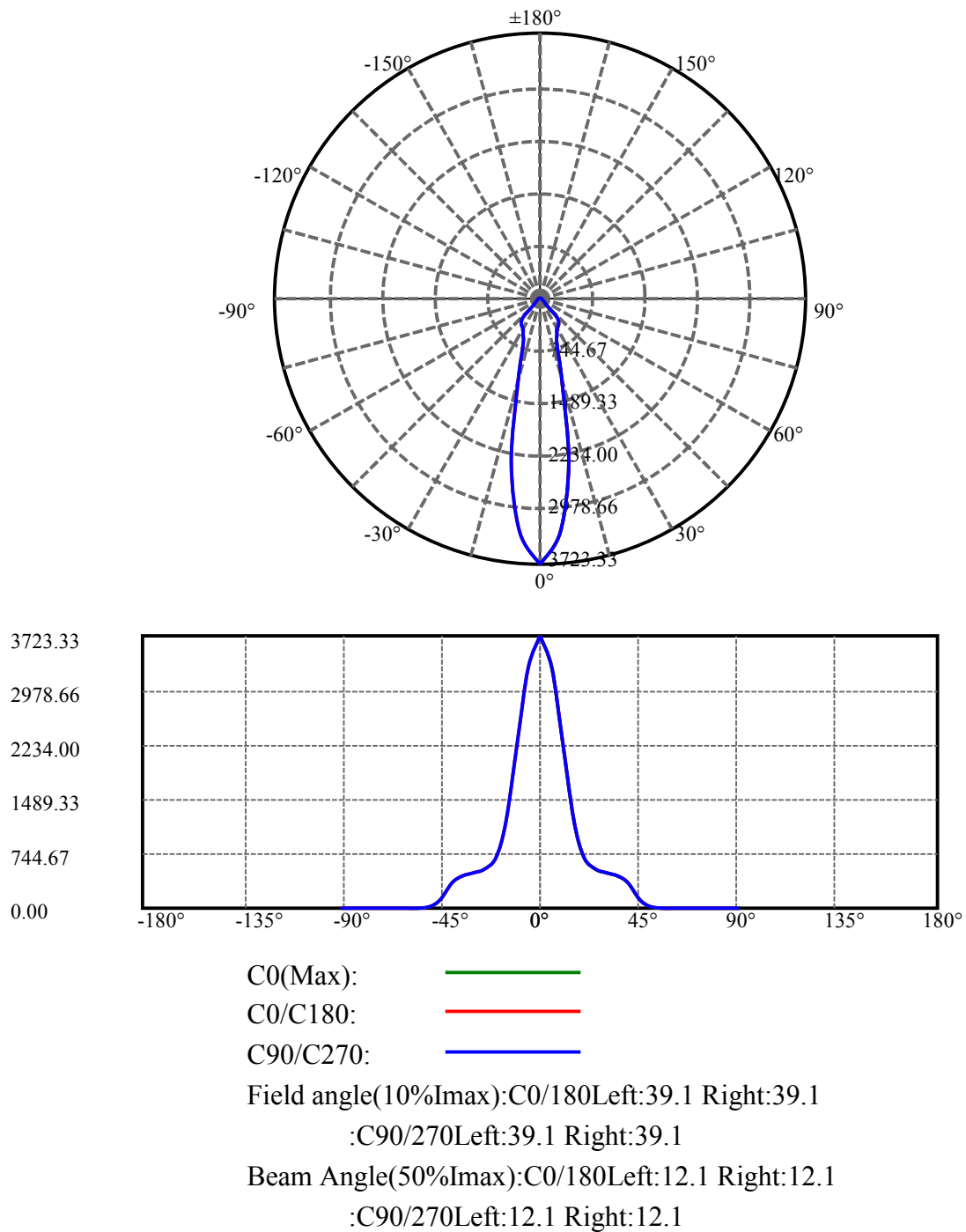
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3723.327	22.266	22.266	1.513%	1.707%
5.0	3286.454	157.005	179.271	10.666%	13.744%
10.0	2333.772	222.136	401.407	15.091%	30.773%
15.0	1205.997	171.093	572.499	11.623%	43.890%
20.0	690.572	129.464	701.964	8.795%	53.815%
25.0	538.507	124.747	826.71	8.475%	63.379%
30.0	482.418	132.216	958.926	8.982%	73.515%
35.0	443.562	139.455	1098.381	9.474%	84.206%
40.0	355.706	125.328	1223.709	8.514%	93.814%
45.0	126.292	48.950	1272.659	3.325%	97.567%
50.0	17.350	7.285	1279.944	.495%	98.125%
55.0	8.596	3.860	1283.804	.262%	98.421%
60.0	7.295	3.463	1287.267	.235%	98.687%
65.0	6.627	3.292	1290.559	.224%	98.939%
70.0	6.180	3.183	1293.742	.216%	99.183%
75.0	5.843	3.094	1296.836	.210%	99.420%
80.0	5.671	3.061	1299.897	.208%	99.655%
85.0	5.540	3.025	1302.922	.206%	99.887%
90.0	5.375	1.473	1304.395	.100%	100.000%

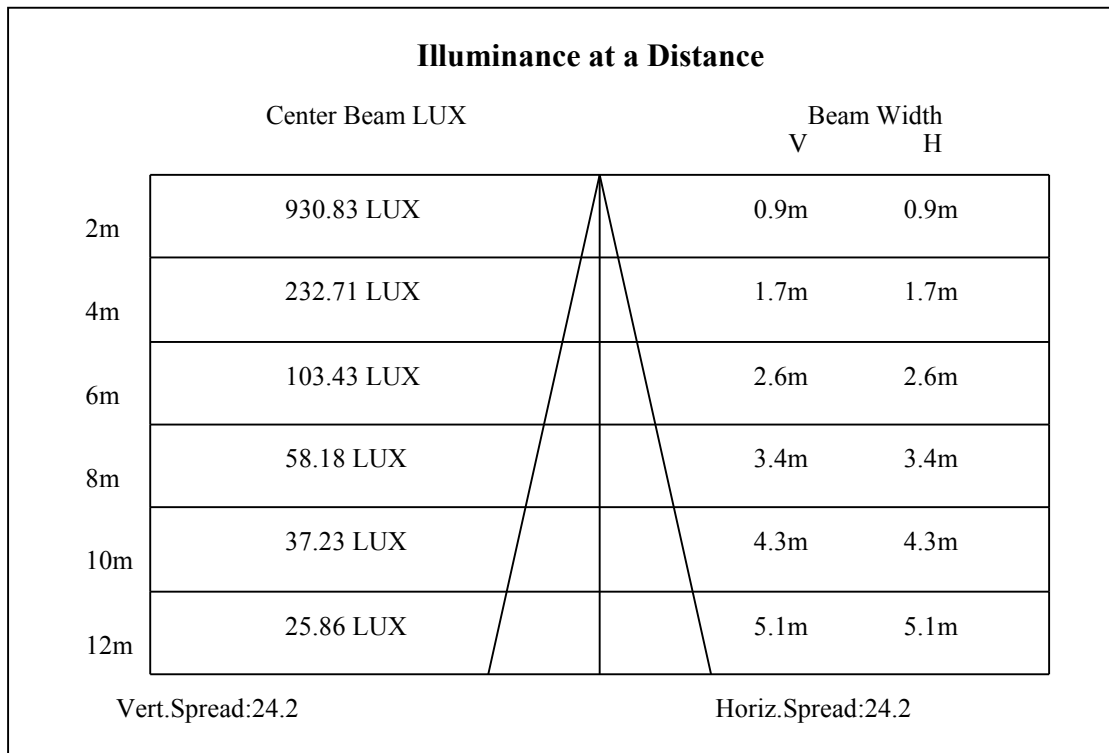
ZONAL LUMEN SUMMARY

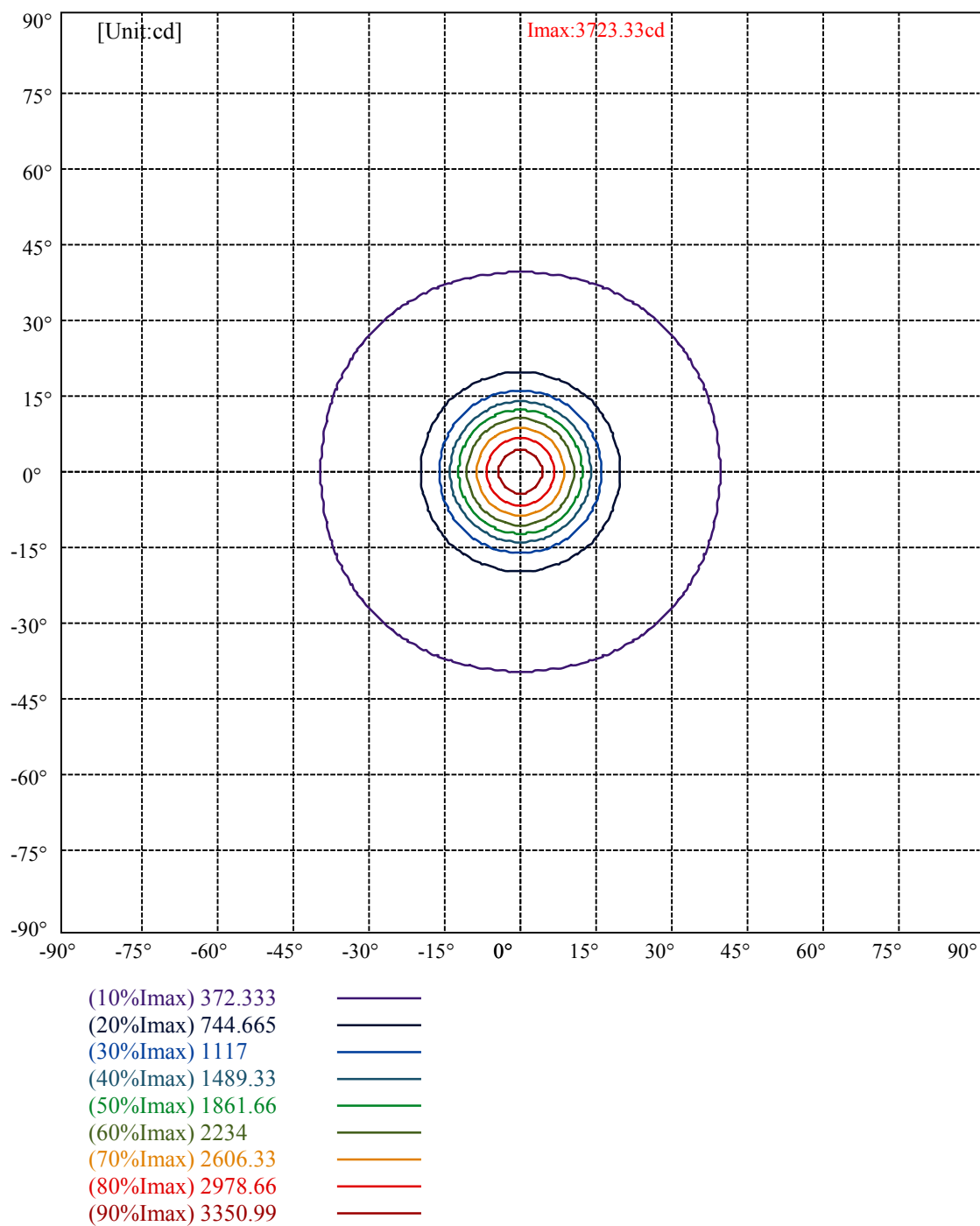
Zone	Lumens	%Lamp	%Fixt
0-30	958.93	65.14%	73.51%
0-40	1223.71	83.13%	93.81%
0-60	1287.27	87.45%	98.69%
0-90	1302.92	88.51%	99.89%
0-120	1302.92	88.51%	99.89%
0-180	1304.40	88.61%	100.00%
60-90	19.12	1.30%	1.47%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-33.03	1043.52	70.89%	80.00%

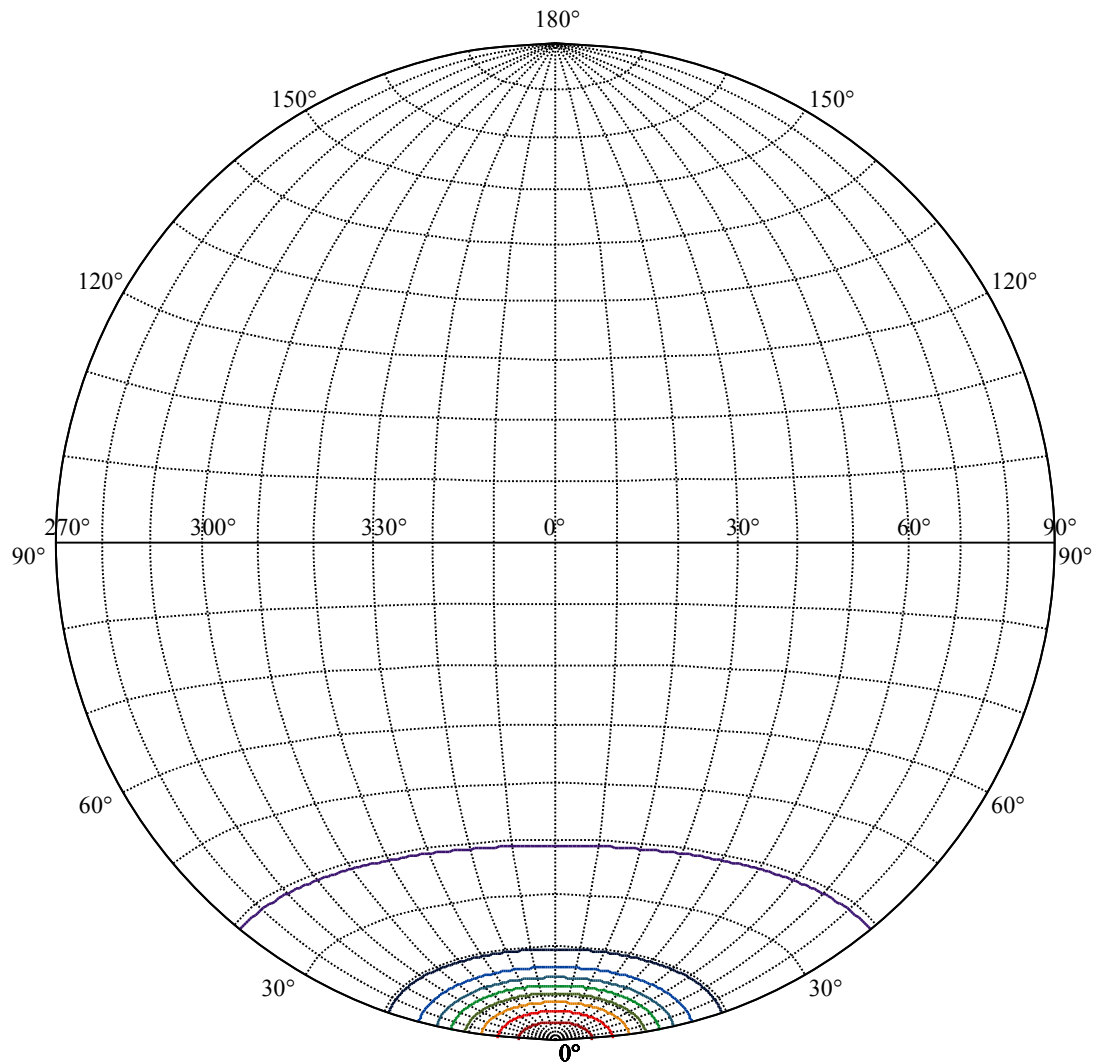
ZONAL LUMEN SUMMARY

0-10	401.41
10-20	300.56
20-30	256.96
30-40	264.78
40-50	56.23
50-60	7.32
60-70	6.48
70-80	6.15
80-90	3.03
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









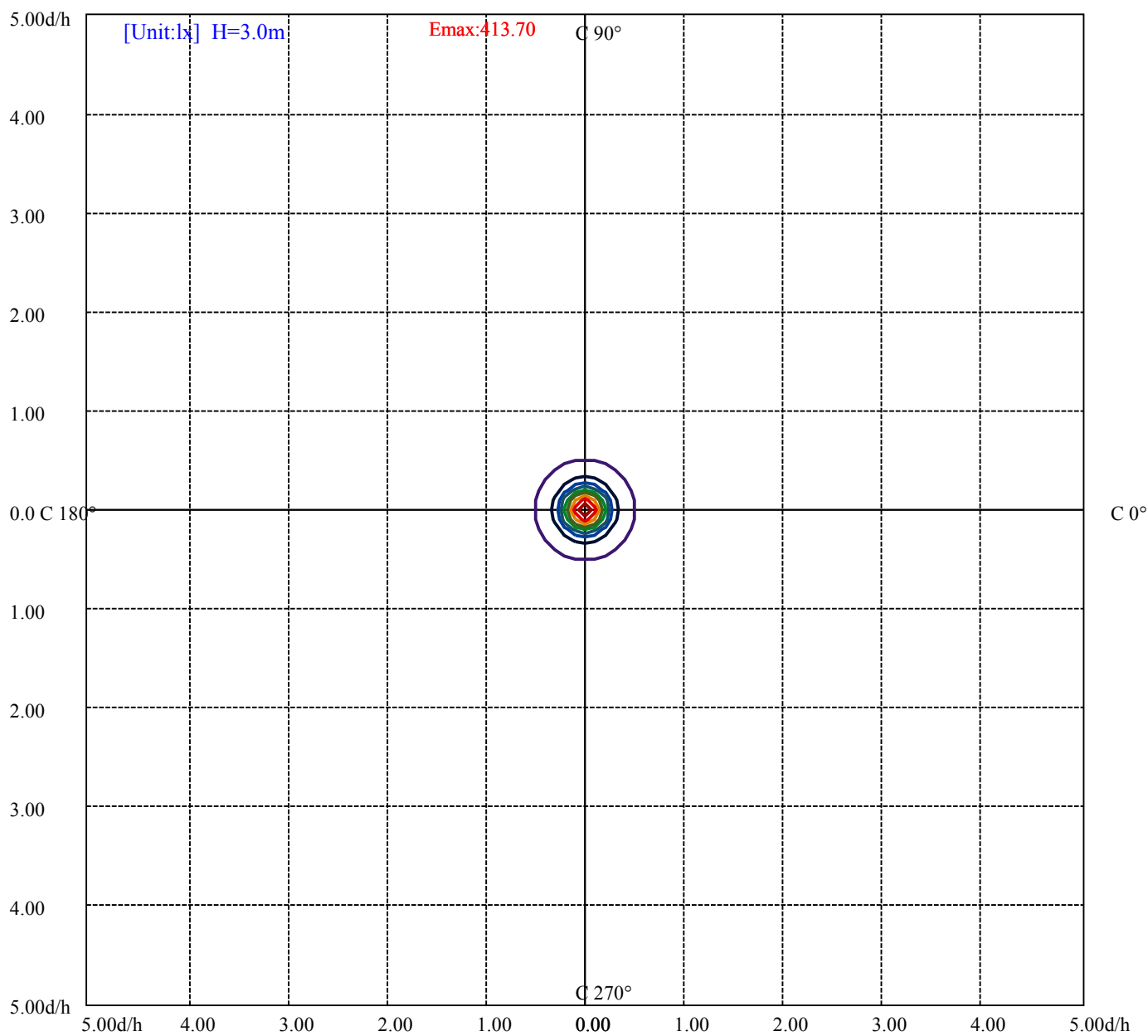
House

[Unit:cd]

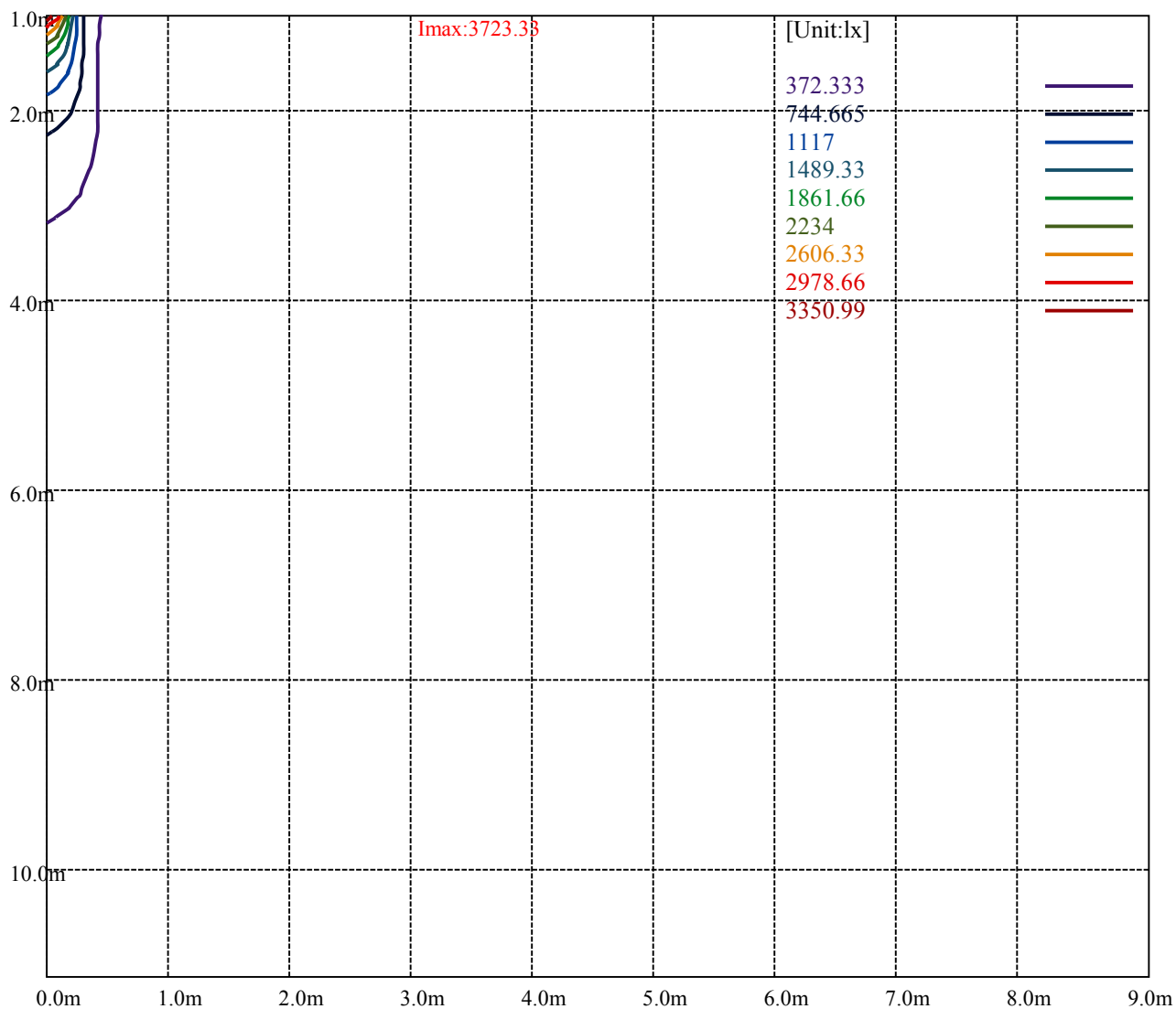
Road

Imax:3723.33

(10%Imax)	372.333	—
(20%Imax)	744.665	—
(30%Imax)	1117	—
(40%Imax)	1489.33	—
(50%Imax)	1861.66	—
(60%Imax)	2234	—
(70%Imax)	2606.33	—
(80%Imax)	2978.66	—
(90%Imax)	3350.99	—



(10%Emax)	41.37011	—
(20%Emax)	82.74033	—
(30%Emax)	124.11	—
(40%Emax)	165.4811	—
(50%Emax)	206.8511	—
(60%Emax)	248.2211	—
(70%Emax)	289.5911	—
(80%Emax)	330.9611	—
(90%Emax)	372.3311	—



Luminance Table

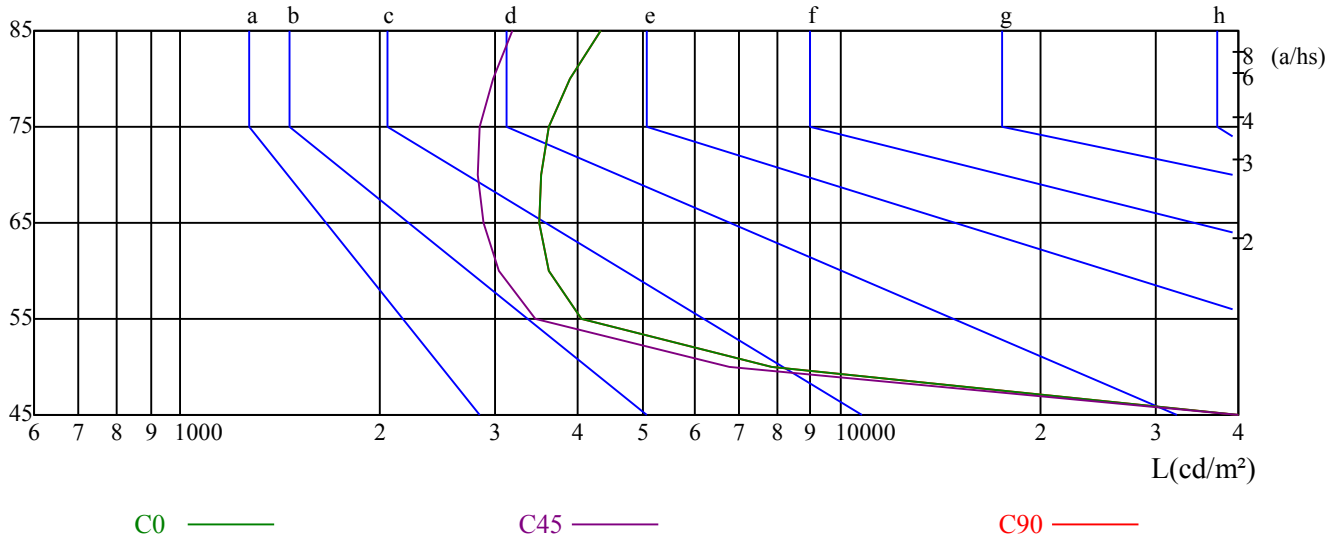
γ	45	50	55	60	65	70	75	80	85
C0	55467	7865	4058	3622	3498	3509	3620	3898	4314
C45	48570	6787	3448	3027	2870	2821	2842	2977	3184
C90	55467	7865	4058	3622	3498	3509	3620	3898	4314

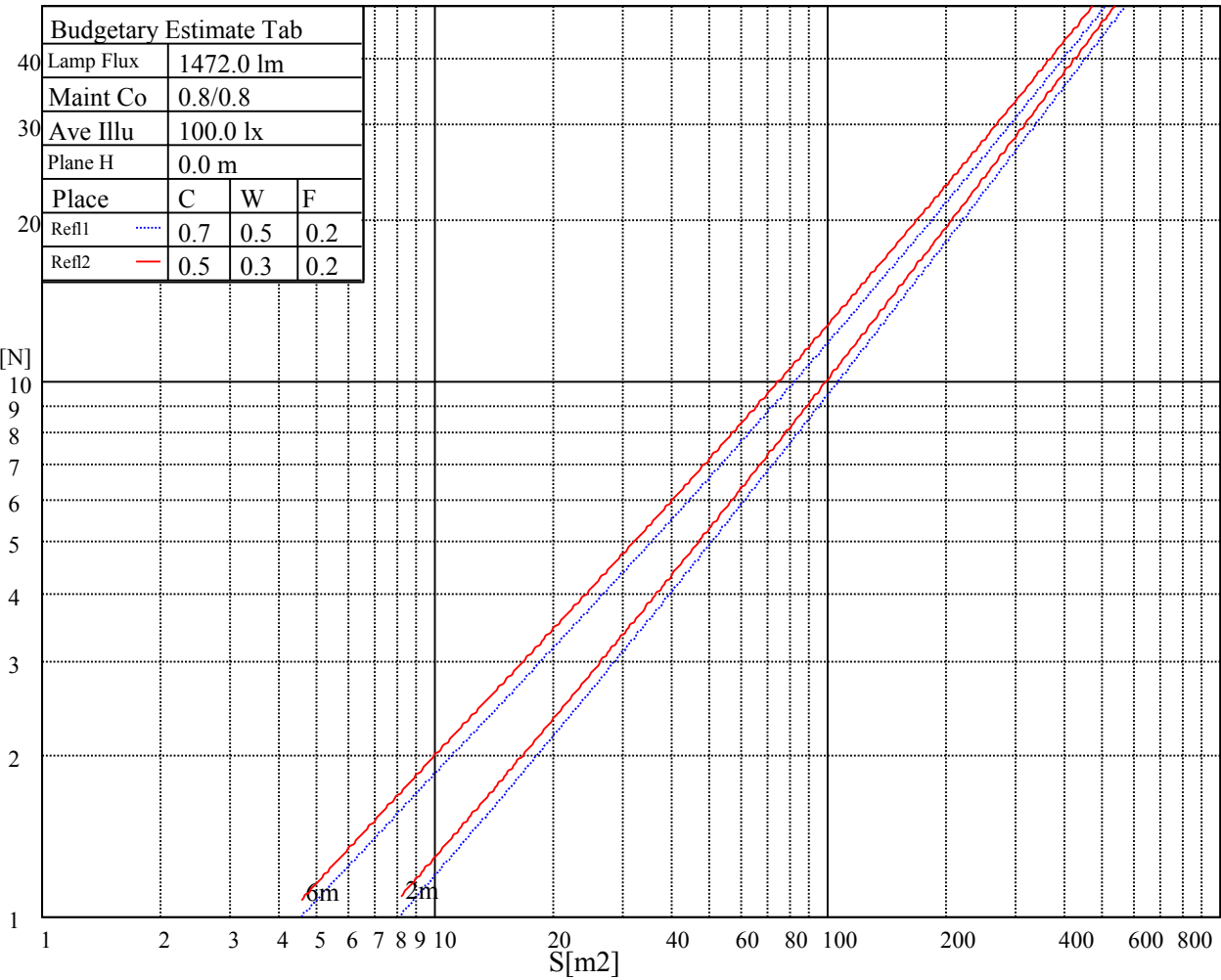
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7411	7411	7411	10669	10669	10669	30040	30040	30040

Glare Table

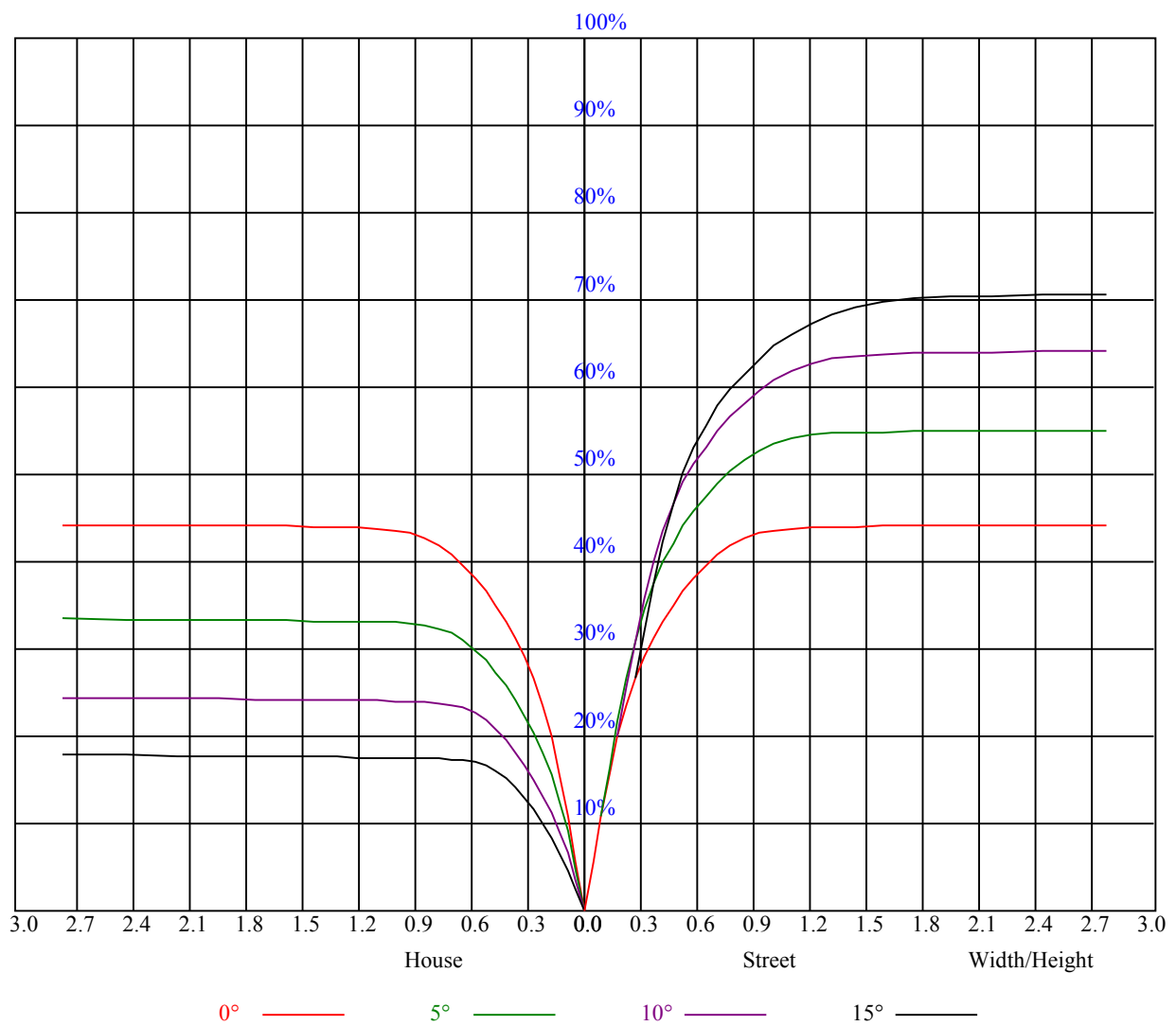
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

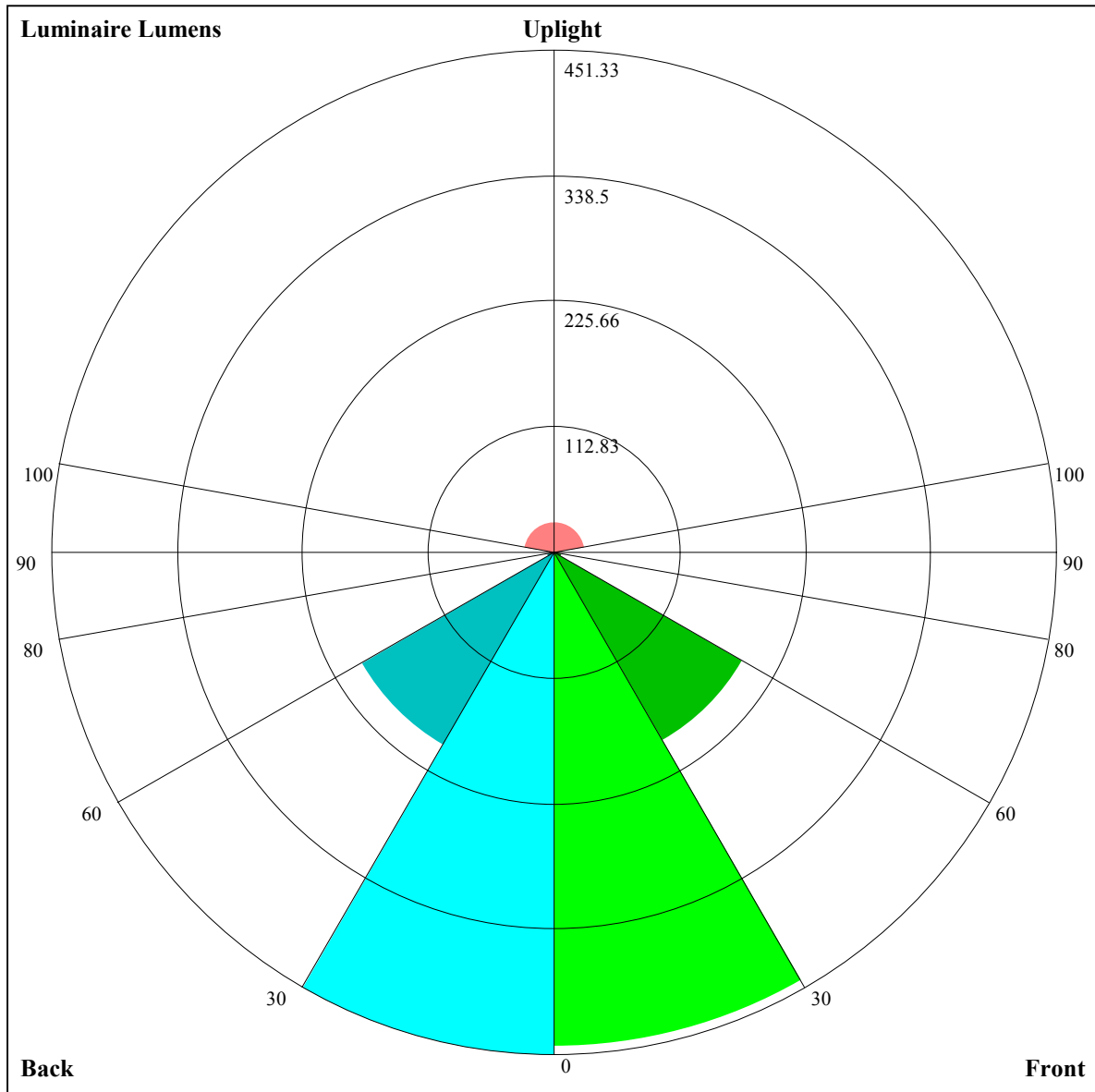
Luminance Limiting Curve

 $\gamma(^{\circ})$ 



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	1.05	1.05	1.05	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	0.93	0.96	0.94	0.92	0.93	0.91	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.82
2	0.92	0.89	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.78
3	0.87	0.83	0.79	0.86	0.82	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.73
4	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
5	0.78	0.73	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.66
6	0.74	0.69	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.63
7	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
8	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
9	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.55
10	0.62	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53





Luminaire Lumens:

FL=444.64,FM=195.14,FH=6.41,FVH=3

BL=451.33,BM=200.4,BH=6.42,BVH=3.02

UL=5.86,UH=27.91

BUG Rating:B1-U2-G0

Nata 1687-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	3735.03	3298.98	2387.25	1314.20	689.86	546.71	487.80	448.71	373.83		
45.0	3734.48	3280.81	2288.69	1199.68	690.41	534.05	477.89	437.15	356.77		
90.0	3719.61	3262.09	2222.63	1090.83	667.83	535.37	479.32	441.06	343.22		
135.0	3704.19	3406.34	2551.31	1484.32	750.97	550.01	491.65	449.26	380.44		
180.0	3735.03	3231.26	2267.22	1087.42	672.68	527.77	473.21	433.95	337.11		
225.0	3734.48	3326.51	2342.65	1027.35	697.07	543.85	487.52	448.38	364.25		
270.0	3719.61	3343.58	2426.34	1369.25	722.34	545.61	486.15	452.01	377.14		
315.0	3704.19	3142.07	2184.09	1074.92	633.42	524.69	475.80	437.97	312.89		
360.0	3735.03	3298.98	2387.25	1314.20	689.86	546.71	487.80	448.71	373.83		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	140.34	18.33	9.19	7.43	6.72	6.28	5.95	5.78	5.62		
45.0	115.73	15.42	8.20	7.27	6.61	6.17	5.84	5.62	5.51		
90.0	100.31	15.53	8.64	7.05	6.44	6.06	5.73	5.56	5.45		
135.0	169.13	20.10	8.53	7.27	6.55	6.11	5.78	5.67	5.56		
180.0	135.60	17.62	8.26	7.32	6.66	6.28	6.00	5.84	5.73		
225.0	124.81	17.45	9.14	7.32	6.66	6.22	5.84	5.67	5.51		
270.0	134.06	19.60	8.59	7.43	6.77	6.22	5.84	5.62	5.51		
315.0	90.35	14.76	8.20	7.27	6.61	6.11	5.78	5.62	5.45		
360.0	140.34	18.33	9.19	7.43	6.72	6.28	5.95	5.78	5.62		
C/γ(°)	90.0										
0.0	5.34										
45.0	5.40										
90.0	5.40										
135.0	5.34										
180.0	5.34										
225.0	5.40										
270.0	5.40										
315.0	5.40										
360.0	5.34										