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Nata

Client:

LumCAT: 2-1680-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): 0.1010

Power (W): 12.1500

PF: 0.5450

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 1155.07, Efficiency(%): 93.60% , Luminous Efficacy(lm/W): 95.07

Central intensity(cd): 3781.802, Maximum intensity(cd): 3781.802

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.8

[C90/270]Total=24.8

Field angle(10%Imax): [C0/180]Total=65.6

[C90/270]Total=65.6

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.41 C90_270=0.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.60%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.946%

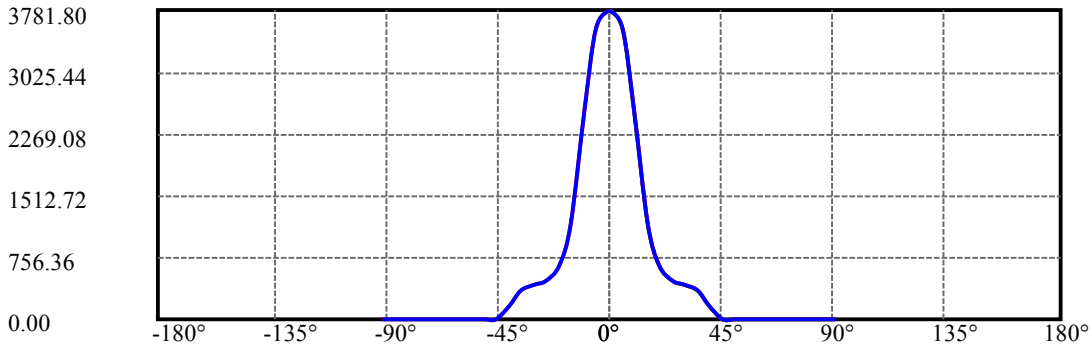
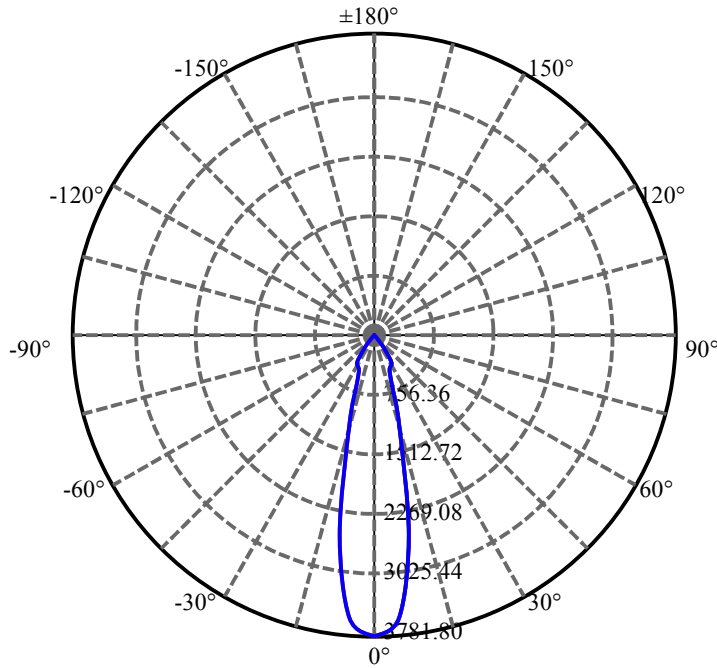
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3781.803	0.000	0	.000%	.000%
5.0	3554.369	87.702	87.702	7.107%	7.593%
10.0	2534.191	217.807	305.509	17.650%	26.449%
15.0	1176.951	220.142	525.651	17.840%	45.508%
20.0	646.619	150.288	675.939	12.179%	58.519%
25.0	472.995	117.427	793.366	9.516%	68.686%
30.0	418.454	112.814	906.179	9.142%	78.452%
35.0	347.085	112.731	1018.91	9.135%	88.212%
40.0	162.737	85.060	1103.97	6.893%	95.576%
45.0	8.469	31.700	1135.67	2.569%	98.321%
50.0	5.423	2.807	1138.477	.227%	98.564%
55.0	4.930	2.251	1140.729	.182%	98.758%
60.0	4.437	2.165	1142.894	.175%	98.946%
65.0	4.141	2.086	1144.979	.169%	99.127%
70.0	3.967	2.053	1147.033	.166%	99.304%
75.0	3.962	2.073	1149.105	.168%	99.484%
80.0	3.788	2.074	1151.179	.168%	99.663%
85.0	3.556	1.995	1153.174	.162%	99.836%
90.0	3.364	1.895	1155.069	.154%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	906.18	73.43%	78.45%
0-40	1103.97	89.46%	95.58%
0-60	1142.89	92.62%	98.95%
0-90	1153.17	93.45%	99.84%
0-120	1153.17	93.45%	99.84%
0-180	1155.07	93.60%	100.00%
60-90	12.45	1.01%	1.08%
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%
0-30.79	924.06	74.88%	80.00%

ZONAL LUMEN SUMMARY

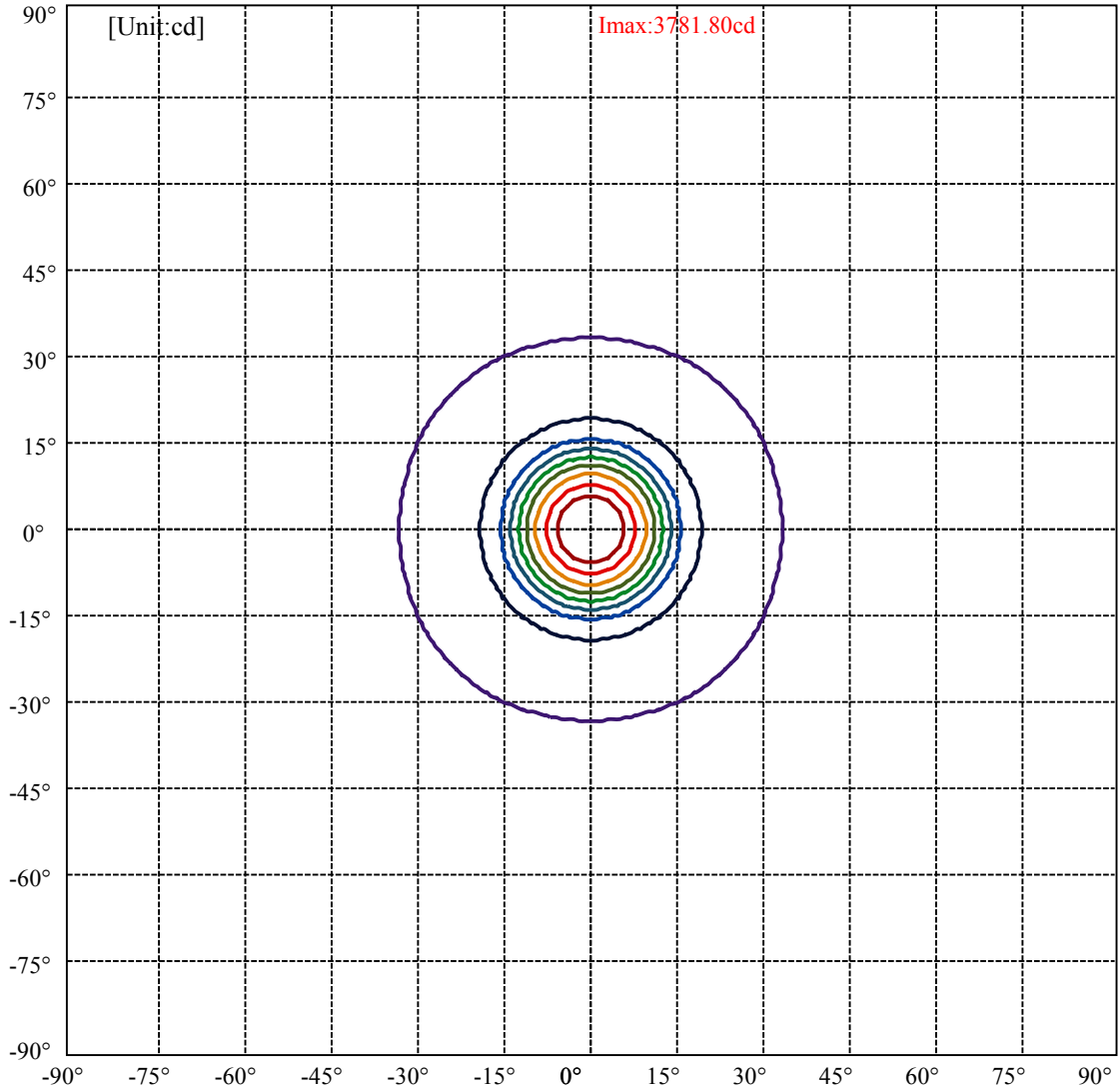
0-10	305.51
10-20	370.43
20-30	230.24
30-40	197.79
40-50	34.51
50-60	4.42
60-70	4.14
70-80	4.15
80-90	2.00
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



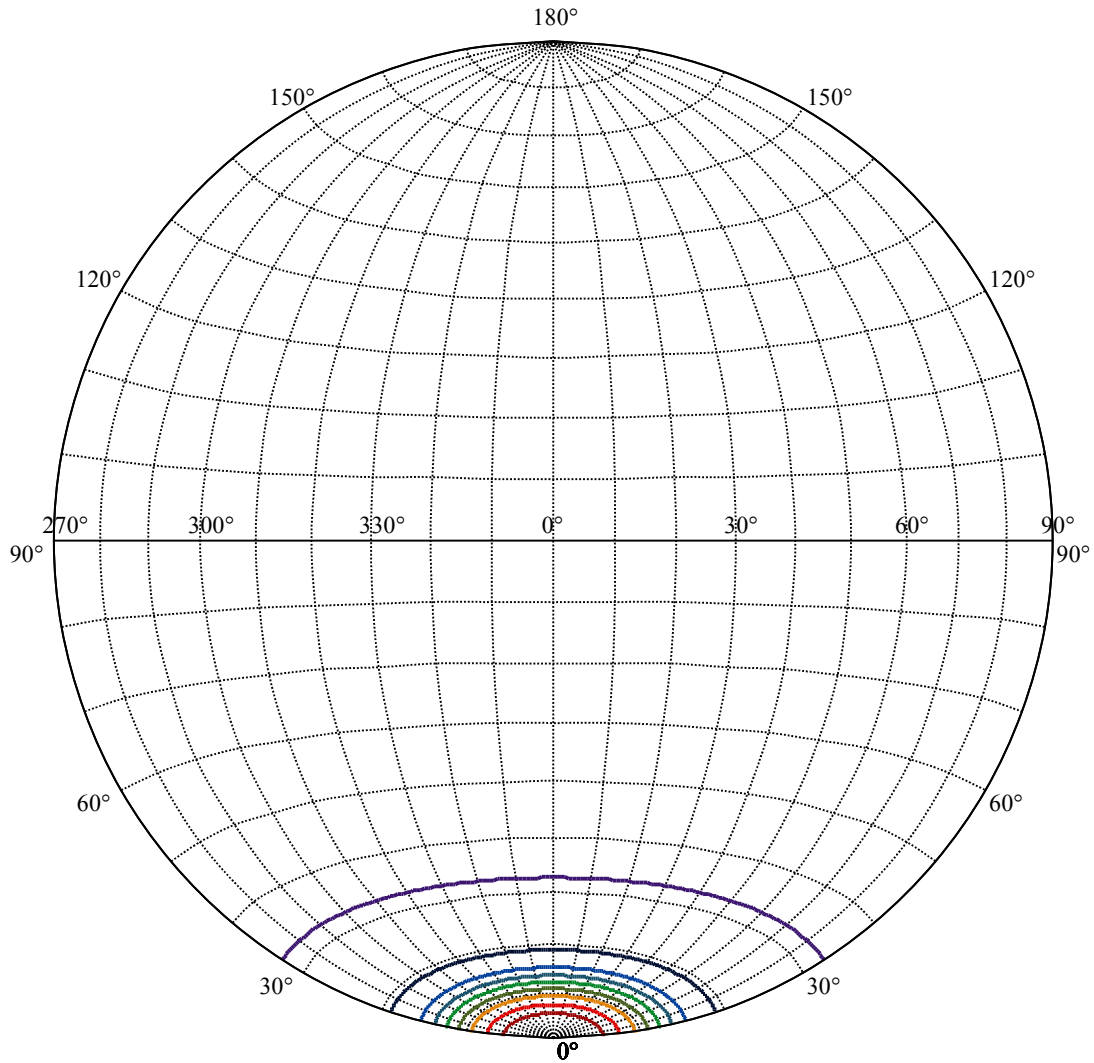
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:32.8 Right:32.8
:C90/270Left:32.8 Right:32.8

Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4
:C90/270Left:12.4 Right:12.4



(10%Imax) 378.18	—
(20%Imax) 756.36	—
(30%Imax) 1134.54	—
(40%Imax) 1512.72	—
(50%Imax) 1890.9	—
(60%Imax) 2269.08	—
(70%Imax) 2647.26	—
(80%Imax) 3025.44	—
(90%Imax) 3403.62	—



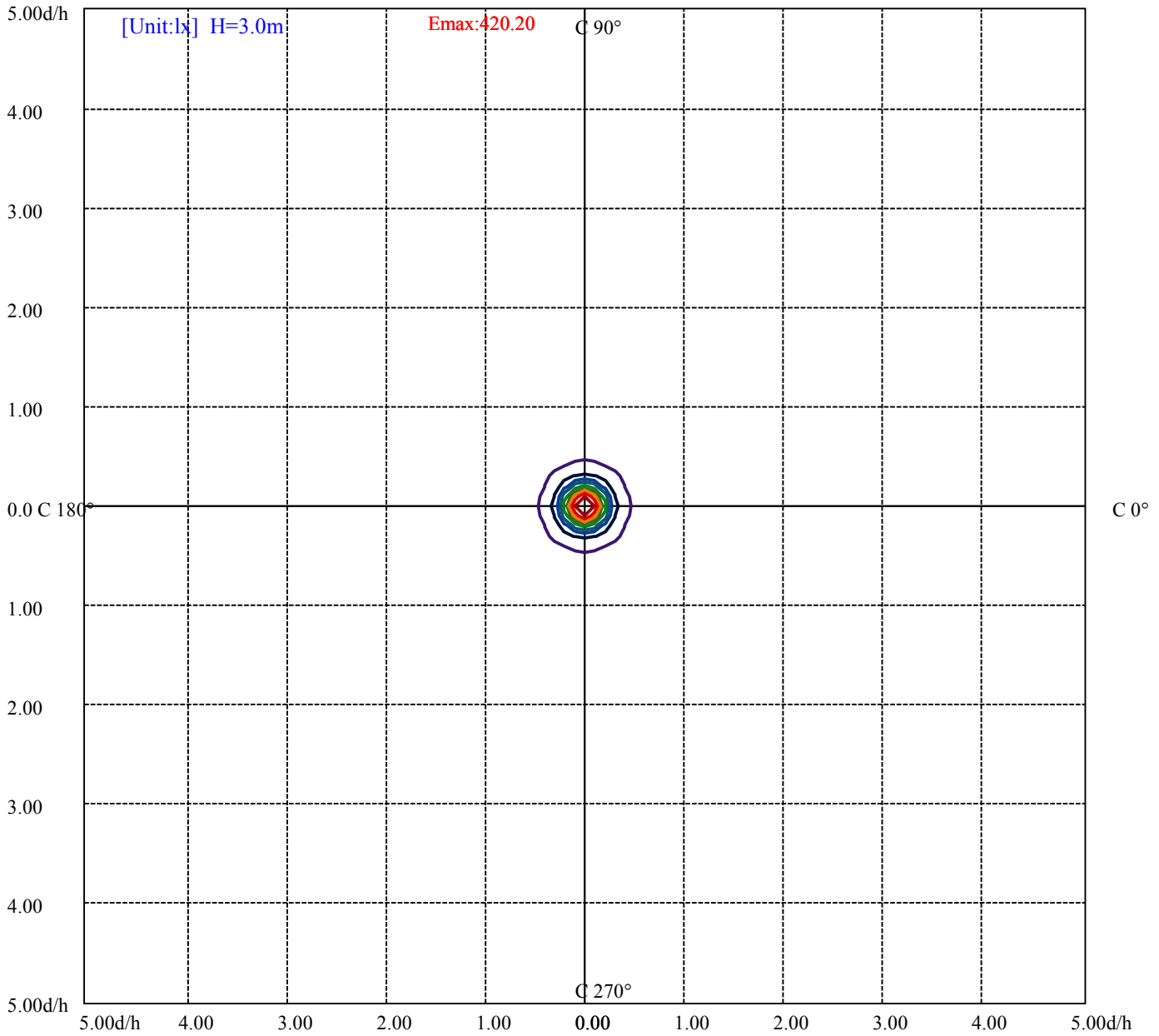
House

[Unit:cd]

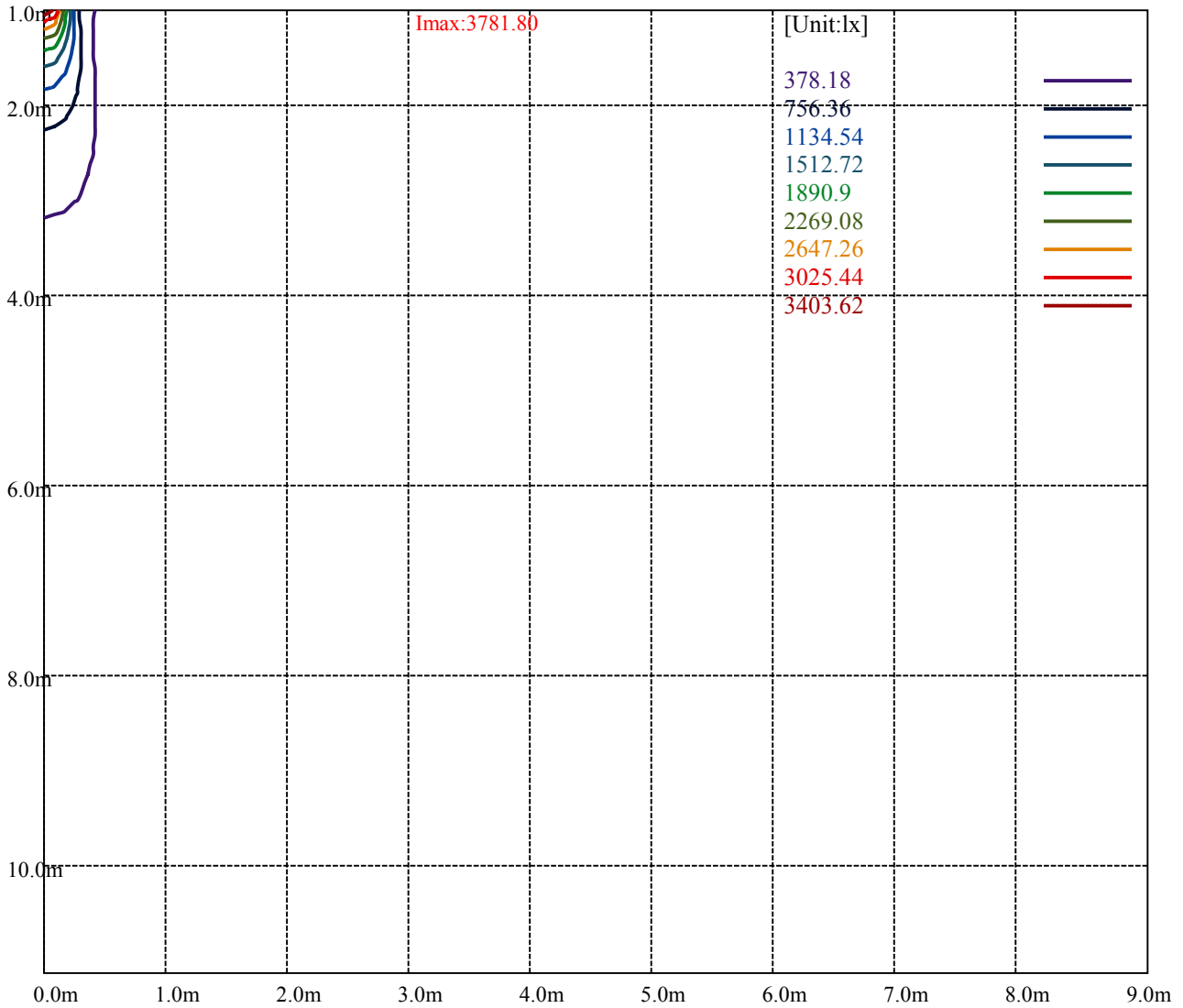
Road

Imax:3781.80

(10%Imax) 378.18	—
(20%Imax) 756.36	—
(30%Imax) 1134.54	—
(40%Imax) 1512.72	—
(50%Imax) 1890.9	—
(60%Imax) 2269.08	—
(70%Imax) 2647.26	—
(80%Imax) 3025.44	—
(90%Imax) 3403.62	—



- (10%Emax) 42.02
- (20%Emax) 84.03989
- (30%Emax) 126.06
- (40%Emax) 168.08
- (50%Emax) 210.1
- (60%Emax) 252.12
- (70%Emax) 294.14
- (80%Emax) 336.16
- (90%Emax) 378.18



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

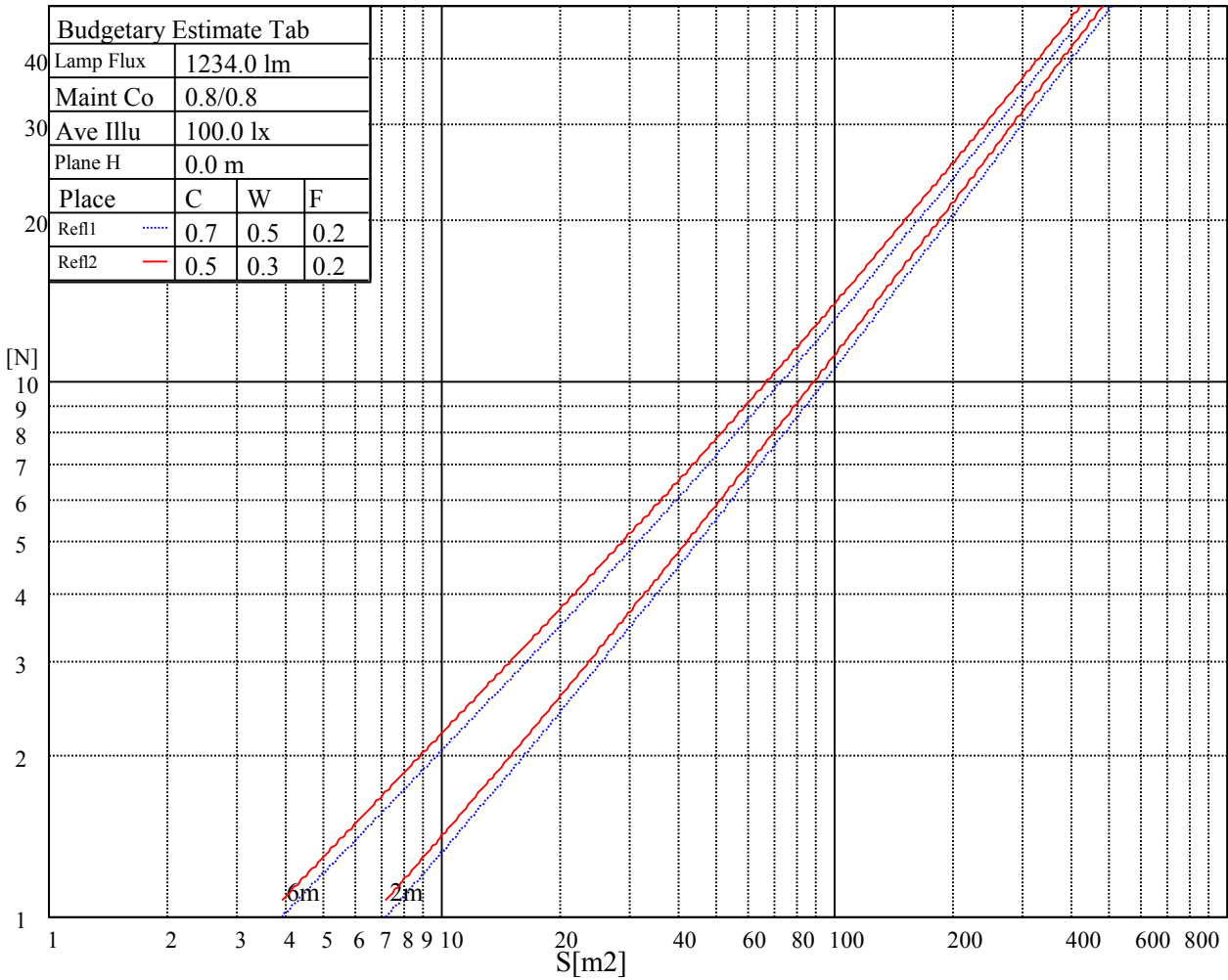
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

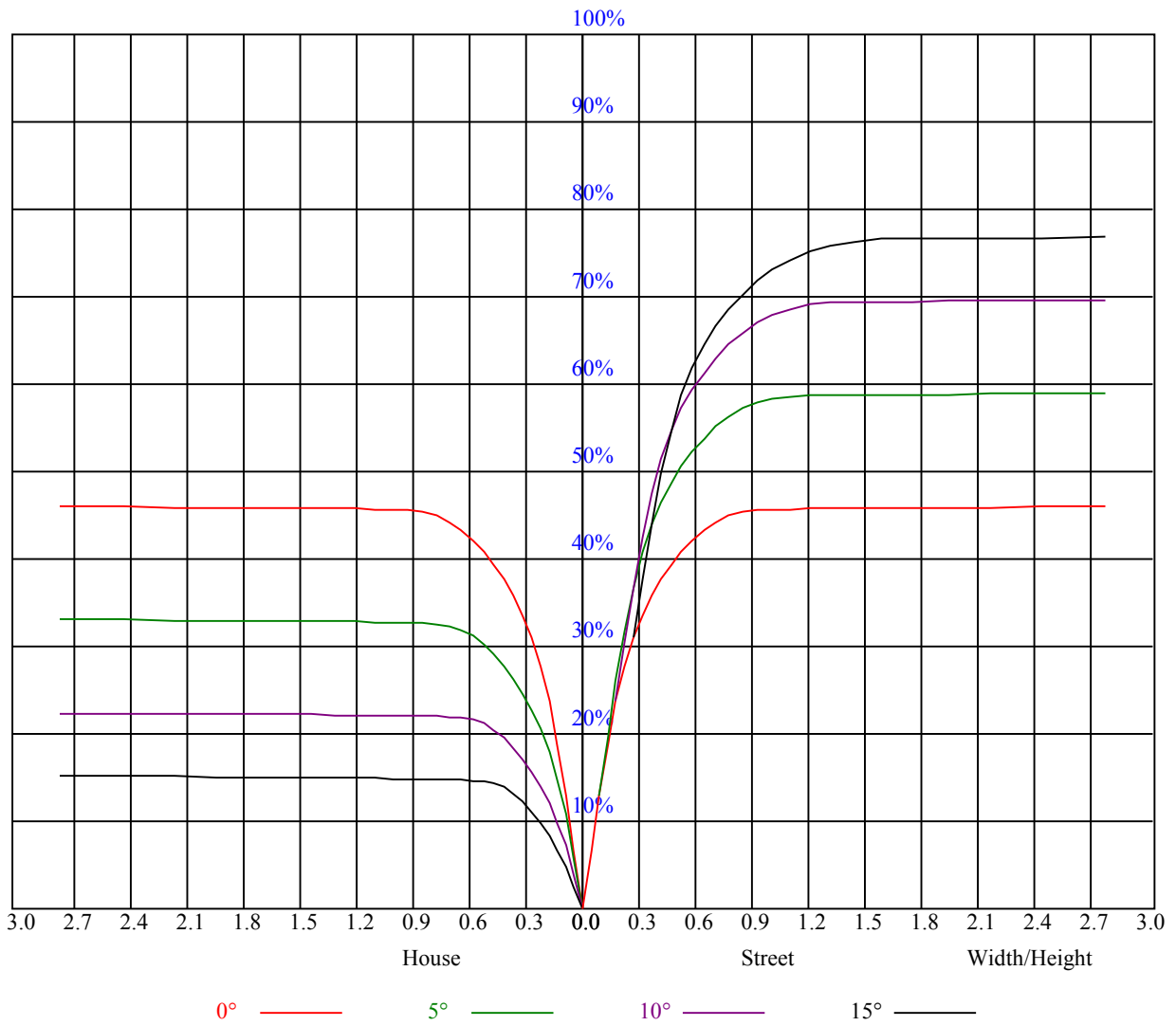
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

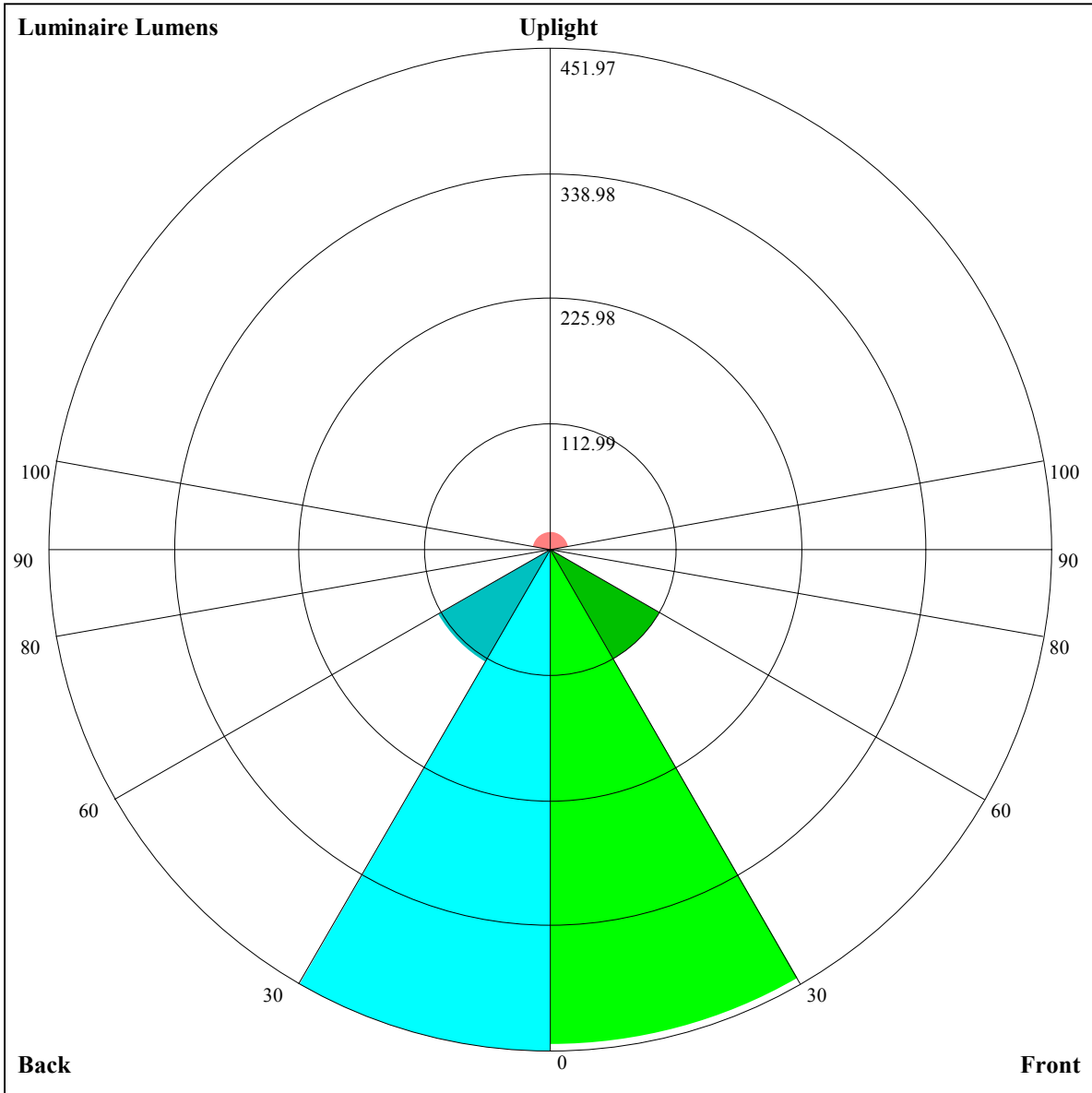
Luminance Limiting Curve





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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.04	1.02	1.00	1.02	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.98	0.95	0.92	0.97	0.94	0.91	0.94	0.91	0.89	0.91	0.89	0.87	0.88	0.87	0.85	0.84
3	0.93	0.89	0.86	0.92	0.88	0.85	0.89	0.86	0.84	0.87	0.84	0.82	0.85	0.83	0.81	0.80
4	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.82	0.79	0.77	0.76
5	0.84	0.79	0.76	0.83	0.79	0.75	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.72
6	0.80	0.75	0.72	0.79	0.75	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.69
7	0.76	0.72	0.68	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.66
8	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.63
9	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58





Luminaire Lumens:

FL=446.23,FM=113.76,FH=4,FVH=1.9

BL=451.97,BM=118.11,BH=4.28,BVH=2

UL=3.67,UH=17.47

BUG Rating:B1-U2-G0

Nata 2-1680-M

Intensity data(cd)

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3780.53	3496.54	2390.28	789.32	597.35	466.26	415.91	335.59	68.44
45.0	3779.60	3721.13	2659.89	1487.27	686.35	479.39	421.39	381.95	278.93
90.0	3785.17	3252.92	2011.63	827.70	520.51	440.88	400.41	224.59	16.75
135.0	3781.92	3647.81	2642.72	1303.05	632.06	468.26	414.43	353.18	253.41
180.0	3780.53	3684.94	2704.43	1455.72	656.19	472.43	421.39	386.12	246.45
225.0	3779.60	3338.77	2272.88	831.50	591.69	463.24	414.10	327.65	78.70
270.0	3785.17	3713.24	3118.35	1890.52	843.66	516.98	440.41	401.90	267.33
315.0	3781.92	3579.60	2473.34	830.53	645.15	476.52	419.58	365.70	91.88
360.0	3780.53	3496.54	2390.28	789.32	597.35	466.26	415.91	335.59	68.44
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.29	5.24	4.64	4.04	3.71	3.43	3.25	3.16	3.16
45.0	10.35	5.43	4.87	4.18	3.85	3.53	3.34	3.20	3.16
90.0	5.80	4.87	4.36	3.85	3.53	3.29	3.20	3.11	3.11
135.0	7.98	5.10	4.50	3.90	3.62	3.39	3.29	3.16	3.11
180.0	7.98	5.71	5.34	5.01	4.64	4.50	4.78	4.50	3.99
225.0	7.05	5.80	5.48	5.06	4.78	4.64	4.78	4.32	3.99
270.0	15.03	5.85	5.29	4.97	4.64	4.55	4.69	4.64	3.99
315.0	6.26	5.38	4.97	4.50	4.36	4.41	4.36	4.22	3.94
360.0	7.29	5.24	4.64	4.04	3.71	3.43	3.25	3.16	3.16
C/ γ (°)	90.0								
0.0	3.20								
45.0	3.11								
90.0	3.11								
135.0	3.16								
180.0	3.62								
225.0	3.67								
270.0	3.53								
315.0	3.53								
360.0	3.20								