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Nata

Client:

LumCAT: CR01D020060BW

Luminaire:

Report No:

Voltage(V): 3.3300

Test No: GC2019070201

Current(A): 0.2220

LampCAT: CREE XPE2

Power (W): 0.6600

Lamp flux(lm): 55.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 20

Width(mm): 20

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 49.93, Efficiency(%): 90.77% , Luminous Efficacy(lm/W): 75.64

Central intensity(cd): 45.914, Maximum intensity(cd): 45.914

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=57.0

[C90/270]Total=57.0

Field angle(10%Imax): [C0/180]Total=103.2

[C90/270]Total=103.2

Maximum s/h(1/2): C0_180=0.86 C90_270=0.86

Maximum s/h(1/4): C0_180=0.89 C90_270=0.89

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.77%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 92.909%

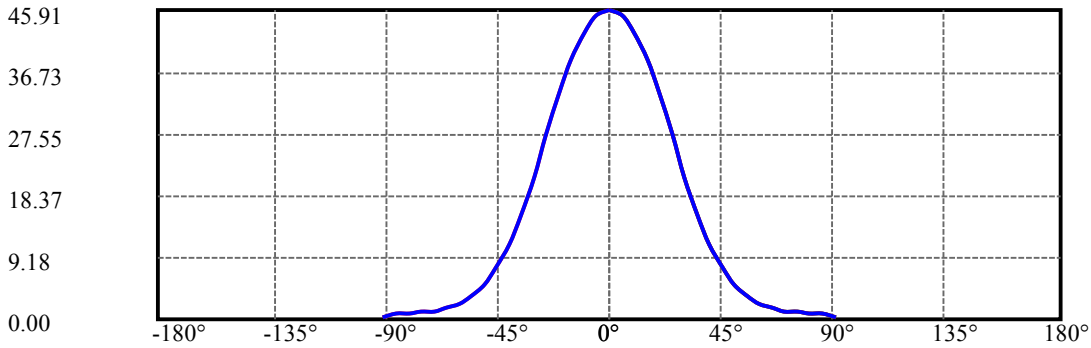
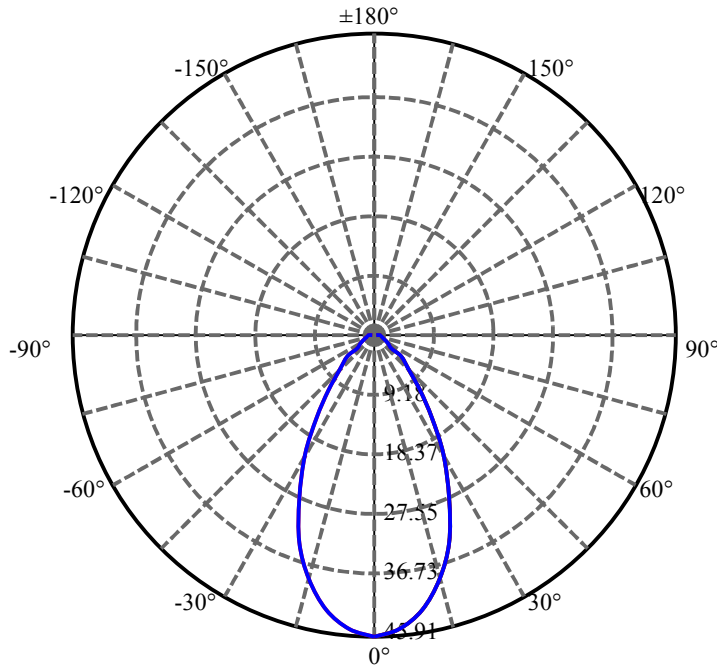
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	45.914	0.000	0	.000%	.000%
5.0	44.958	1.086	1.086	1.975%	2.176%
10.0	42.363	3.124	4.21	5.680%	8.433%
15.0	38.482	4.796	9.006	8.719%	18.039%
20.0	33.623	5.943	14.948	10.805%	29.941%
25.0	27.274	6.387	21.335	11.613%	42.735%
30.0	21.045	6.115	27.45	11.118%	54.983%
35.0	15.265	5.347	32.797	9.721%	65.692%
40.0	11.067	4.393	37.19	7.988%	74.492%
45.0	7.608	3.458	40.648	6.287%	81.418%
50.0	5.154	2.579	43.227	4.689%	86.583%
55.0	3.354	1.850	45.077	3.363%	90.289%
60.0	2.306	1.308	46.385	2.379%	92.909%
65.0	1.617	0.954	47.339	1.734%	94.820%
70.0	1.245	0.725	48.063	1.317%	96.271%
75.0	1.034	0.595	48.659	1.083%	97.464%
80.0	0.935	0.527	49.186	.958%	98.519%
85.0	0.809	0.474	49.659	.861%	99.468%
90.0	0.162	0.266	49.925	.483%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	27.45	49.91%	54.98%
0-40	37.19	67.62%	74.49%
0-60	46.38	84.34%	92.91%
0-90	49.66	90.29%	99.47%
0-120	49.66	90.29%	99.47%
0-180	49.93	90.77%	100.00%
60-90	4.58	8.33%	9.18%
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%
0-43.98	39.94	72.62%	80.00%

ZONAL LUMEN SUMMARY

0-10	4.21
10-20	10.74
20-30	12.50
30-40	9.74
40-50	6.04
50-60	3.16
60-70	1.68
70-80	1.12
80-90	0.47
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: —————

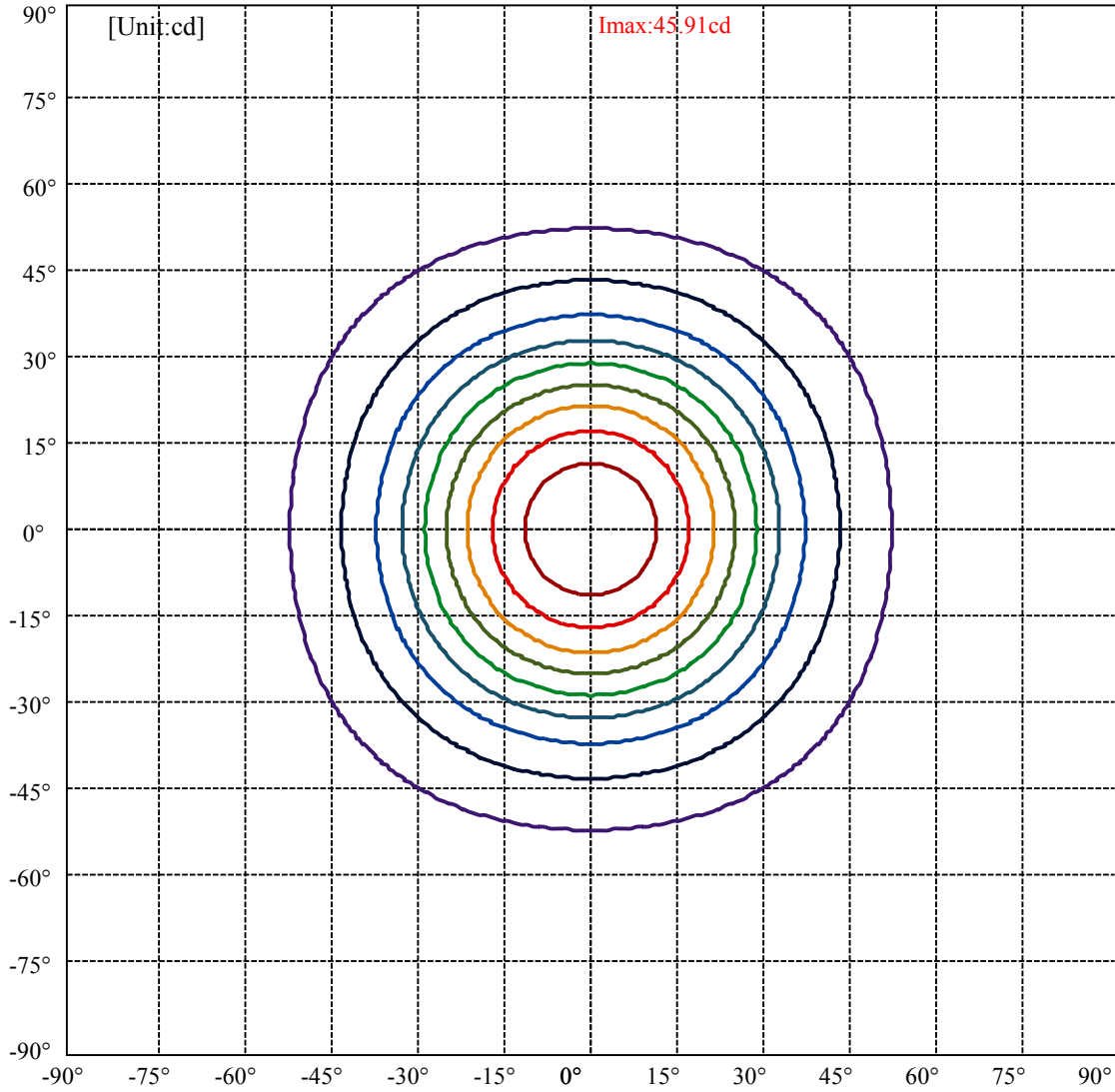
C90/C270: —————

Field angle(10%Imax):C0/180Left:51.6 Right:51.6

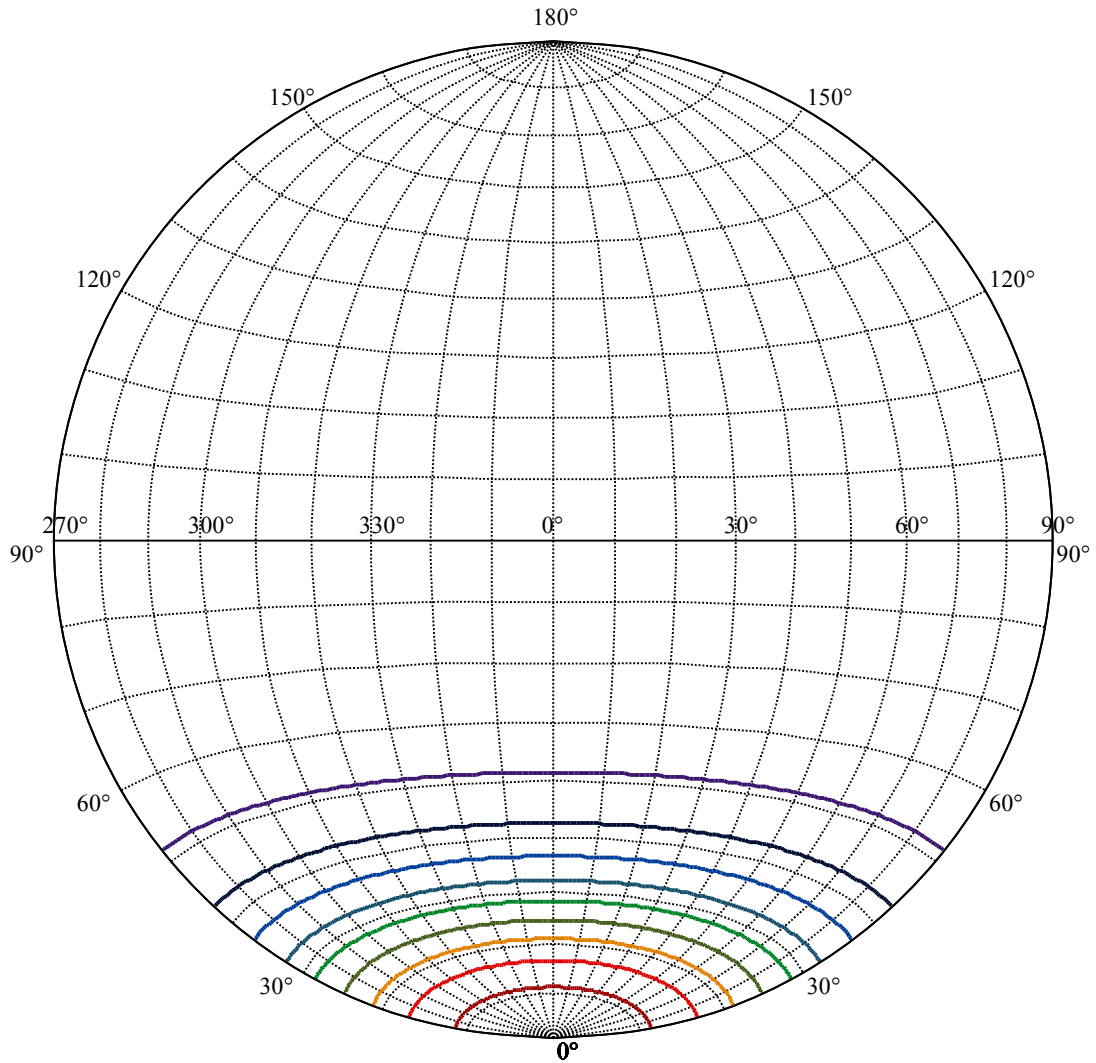
:C90/270Left:51.6 Right:51.6

Beam Angle(50%Imax):C0/180Left:28.5 Right:28.5

:C90/270Left:28.5 Right:28.5



(10%Imax) 4.59141	—
(20%Imax) 9.18281	—
(30%Imax) 13.7742	—
(40%Imax) 18.3656	—
(50%Imax) 22.957	—
(60%Imax) 27.5484	—
(70%Imax) 32.1398	—
(80%Imax) 36.7313	—
(90%Imax) 41.3227	—



House

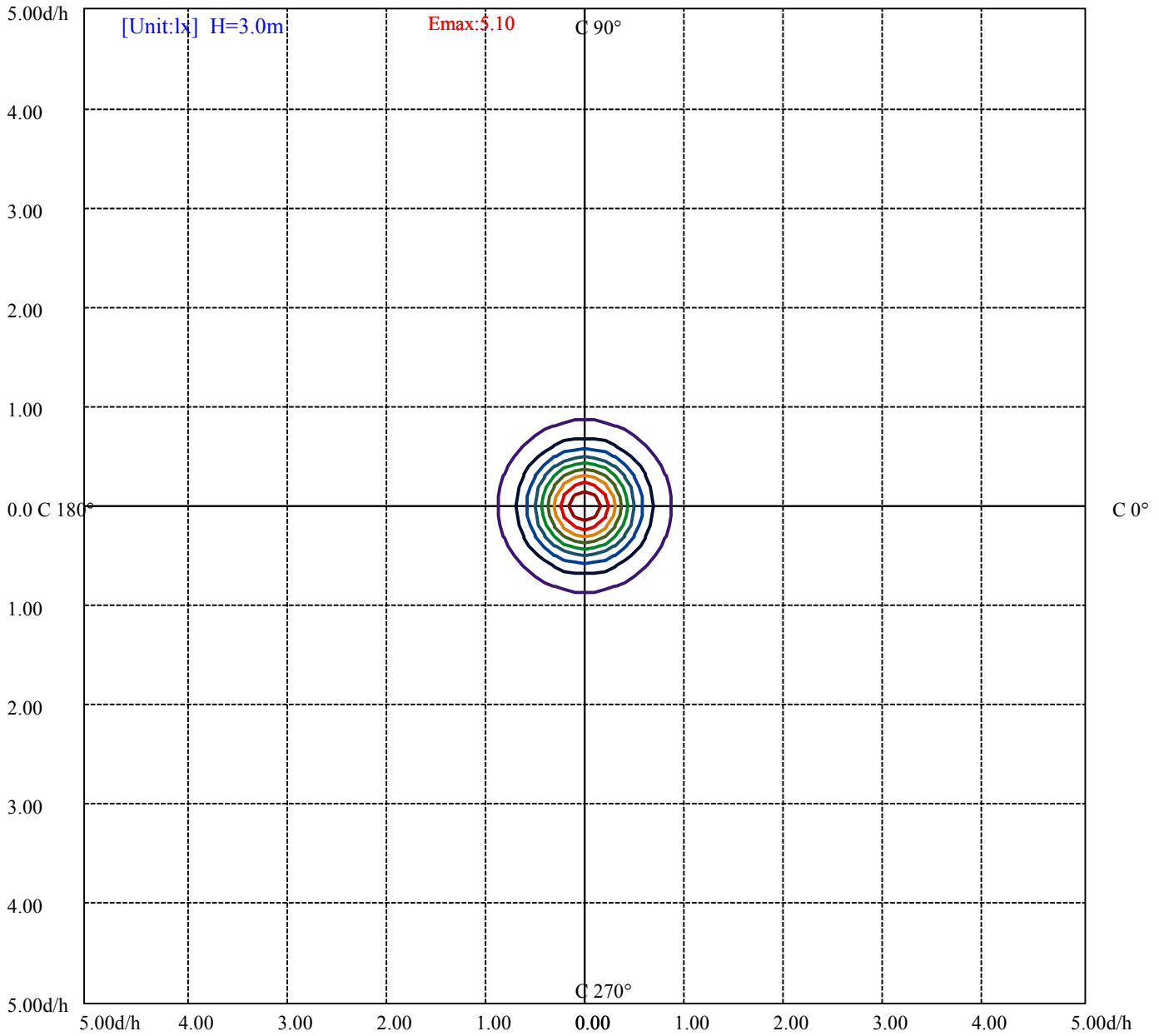
[Unit:cd]

Road

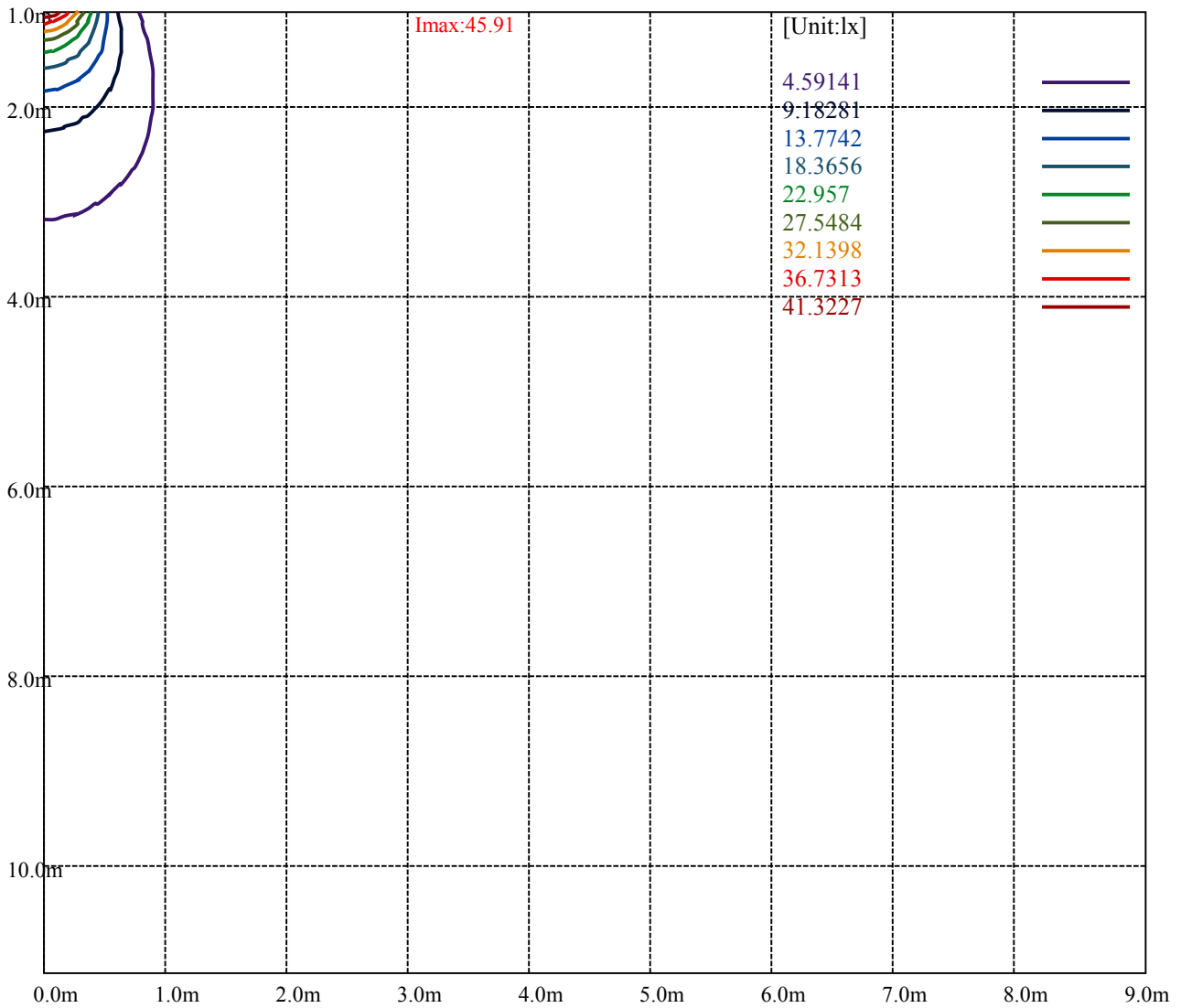
Imax:45.91

- (10%Imax) 4.59141
- (20%Imax) 9.18281
- (30%Imax) 13.7742
- (40%Imax) 18.3656
- (50%Imax) 22.957
- (60%Imax) 27.5484
- (70%Imax) 32.1398
- (80%Imax) 36.7313
- (90%Imax) 41.3227





- (10%Emax) 0.5101556
- (20%Emax) 1.020312
- (30%Emax) 1.530467
- (40%Emax) 2.040622
- (50%Emax) 2.550778
- (60%Emax) 3.060933
- (70%Emax) 3.571089
- (80%Emax) 4.081244
- (90%Emax) 4.5914



Luminance Table

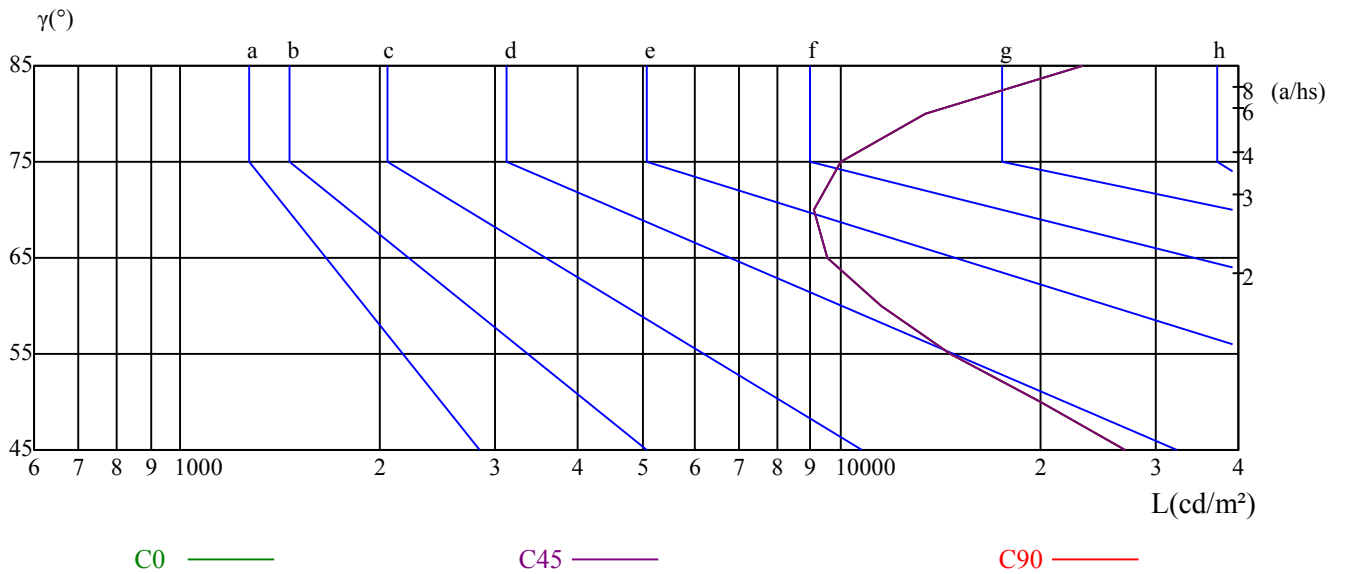
γ	45	50	55	60	65	70	75	80	85
C0	26898	20045	14618	11531	9566	9097	9984	13463	23194
C45	26898	20045	14618	11531	9566	9097	9984	13463	23194
C90	26898	20045	14618	11531	9566	9097	9984	13463	23194

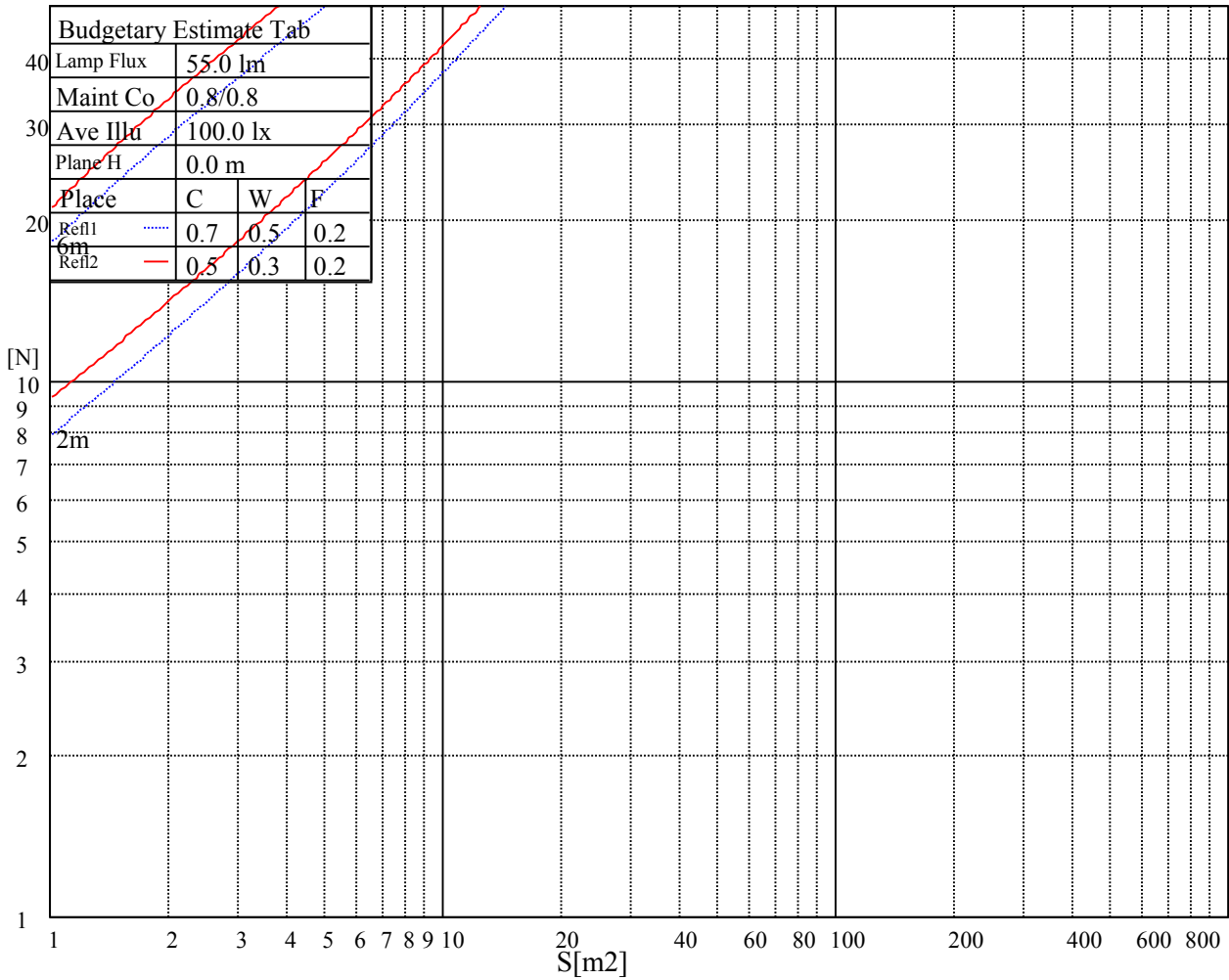
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9566	9566	9566	9984	9984	9984	23194	23194	23194

Glare Table

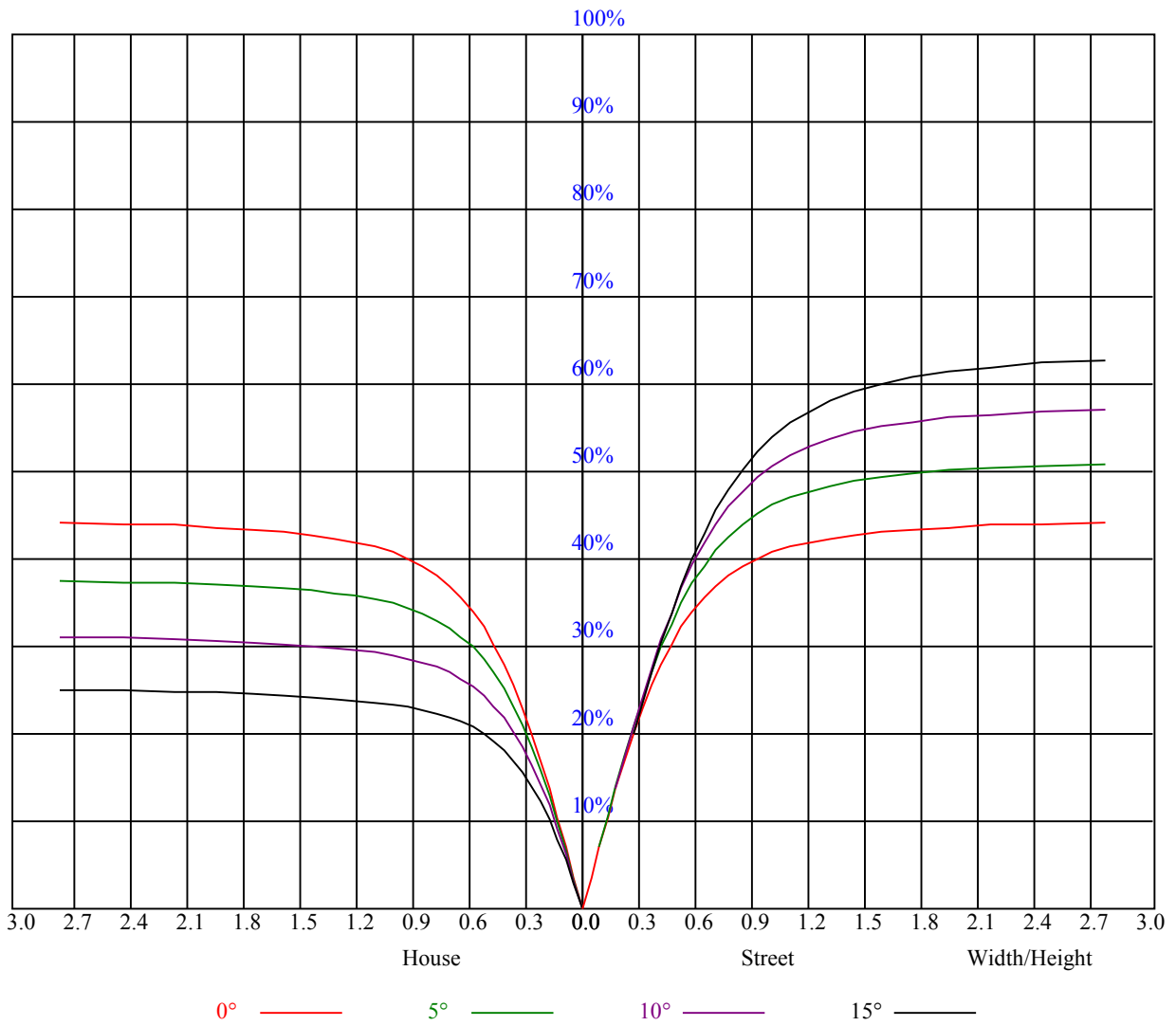
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

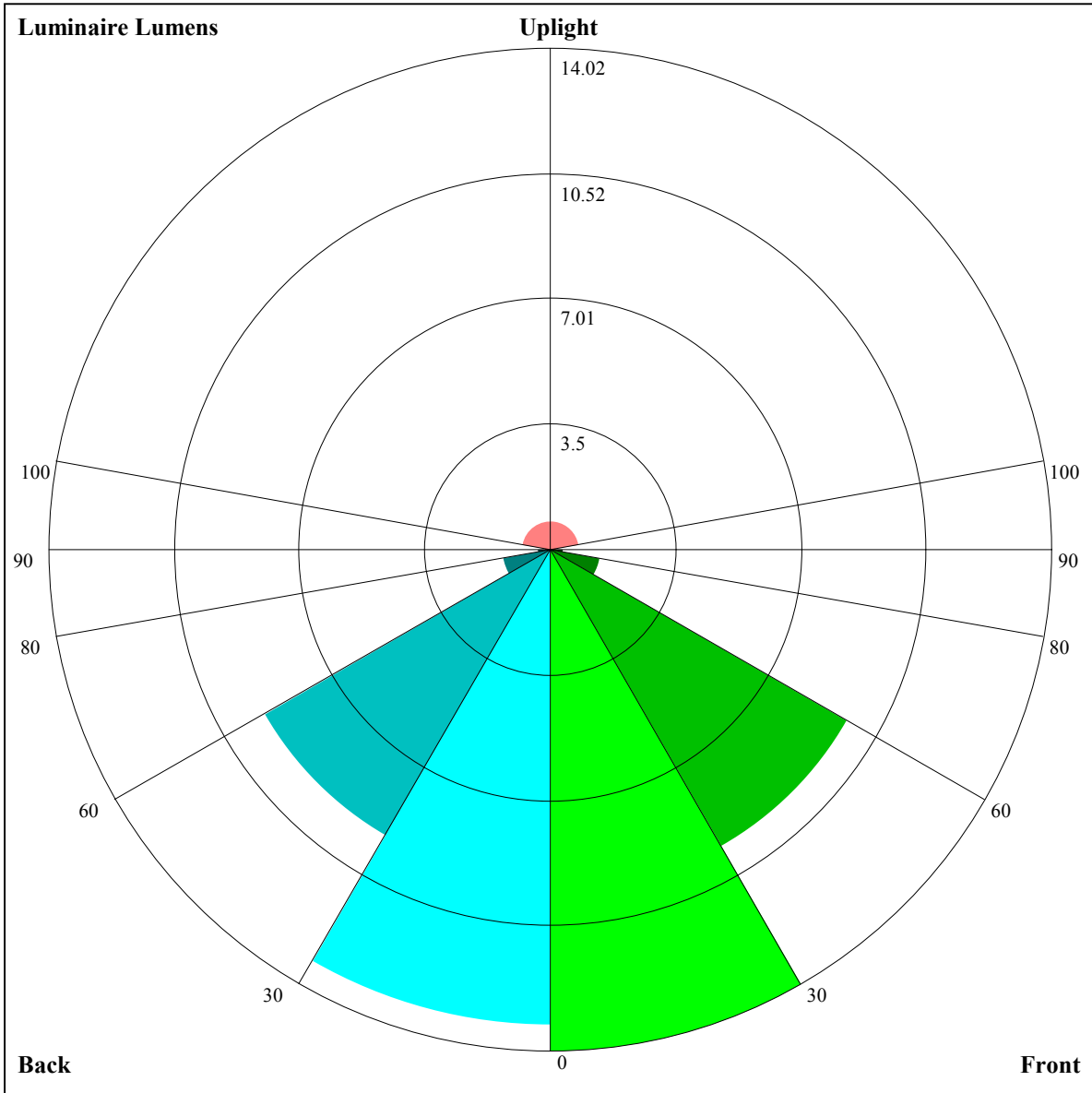
Luminance Limiting Curve





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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	0.98	0.95	0.93	0.96	0.94	0.91	0.92	0.90	0.88	0.89	0.87	0.86	0.86	0.84	0.83	0.81
2	0.89	0.85	0.81	0.88	0.84	0.80	0.85	0.81	0.78	0.82	0.79	0.77	0.79	0.77	0.75	0.73
3	0.82	0.76	0.72	0.81	0.75	0.71	0.78	0.74	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.66
4	0.75	0.69	0.65	0.74	0.69	0.64	0.72	0.67	0.63	0.70	0.66	0.63	0.68	0.65	0.62	0.60
5	0.70	0.63	0.59	0.69	0.63	0.58	0.67	0.62	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.55
6	0.64	0.58	0.54	0.64	0.58	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.55	0.52	0.51
7	0.60	0.54	0.49	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.48	0.47
8	0.56	0.50	0.46	0.55	0.50	0.45	0.54	0.49	0.45	0.53	0.49	0.45	0.52	0.48	0.45	0.43
9	0.53	0.46	0.42	0.52	0.46	0.42	0.51	0.46	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.40
10	0.49	0.43	0.39	0.49	0.43	0.39	0.48	0.43	0.39	0.47	0.43	0.39	0.47	0.42	0.39	0.38





Luminaire Lumens:

FL=14.02,FM=9.6,FH=1.43,FVH=0.38

BL=13.3,BM=9.24,BH=1.37,BVH=0.36

UL=0.18,UH=0.84

BUG Rating:B0-U1-G0

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	45.90	46.74	45.45	41.74	36.45	29.19	22.39	16.20	11.70
45.0	45.79	46.35	44.83	40.78	36.06	29.31	22.56	16.71	12.26
90.0	45.84	44.94	42.02	38.08	33.30	27.17	21.04	15.41	11.31
135.0	46.13	44.38	41.29	37.69	33.19	27.17	21.99	16.26	11.93
180.0	45.90	43.43	40.05	35.83	31.22	25.76	19.80	14.34	10.46
225.0	45.79	43.59	40.11	36.00	31.73	25.31	19.35	13.84	9.96
270.0	45.84	44.78	42.24	38.70	33.64	27.28	20.98	15.02	10.58
315.0	46.13	45.45	42.92	39.04	33.41	27.00	20.25	14.34	10.35
360.0	45.90	46.74	45.45	41.74	36.45	29.19	22.39	16.20	11.70
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	8.27	5.57	3.66	2.53	1.80	1.41	1.18	1.07	0.84
45.0	8.38	5.79	3.71	2.53	1.69	1.29	1.01	0.90	0.79
90.0	7.76	5.23	3.43	2.31	1.58	1.18	1.01	0.90	0.79
135.0	8.38	5.68	3.66	2.42	1.63	1.24	0.96	0.90	0.79
180.0	7.14	4.78	3.04	2.14	1.52	1.24	1.07	0.96	0.79
225.0	6.75	4.56	3.04	2.08	1.52	1.18	0.96	0.90	0.79
270.0	7.20	4.95	3.26	2.25	1.69	1.24	1.07	0.90	0.84
315.0	6.98	4.67	3.04	2.19	1.52	1.18	1.01	0.96	0.84
360.0	8.27	5.57	3.66	2.53	1.80	1.41	1.18	1.07	0.84
C/γ(°)	90.0								
0.0	0.23								
45.0	0.17								
90.0	0.11								
135.0	0.17								
180.0	0.11								
225.0	0.17								
270.0	0.17								
315.0	0.17								
360.0	0.23								