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## NATA

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Client:

LumCAT: 3-1742-N

Luminaire: 92.70.065.00+92.70.061.00

Report No: nt0100

Voltage(V): 33.9300

Test No: GC2020011018

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.3800

Lamp flux(lm): 2436.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1890.68, Efficiency(%): 77.61% , Luminous Efficacy(lm/W): 92.77

Central intensity(cd): 6848.016, Maximum intensity(cd): 6848.016

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=24.0

[C90/270]Total=24.0

Field angle(10%Imax): [C0/180]Total=48.8

[C90/270]Total=48.8

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(%): 77.61%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.195%

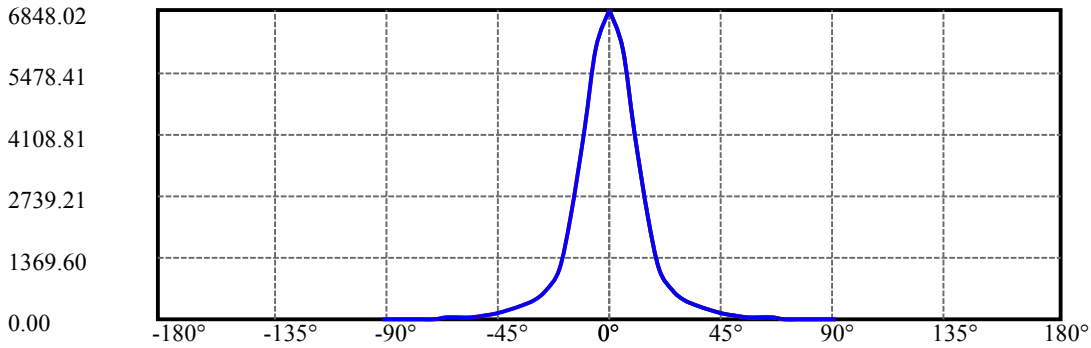
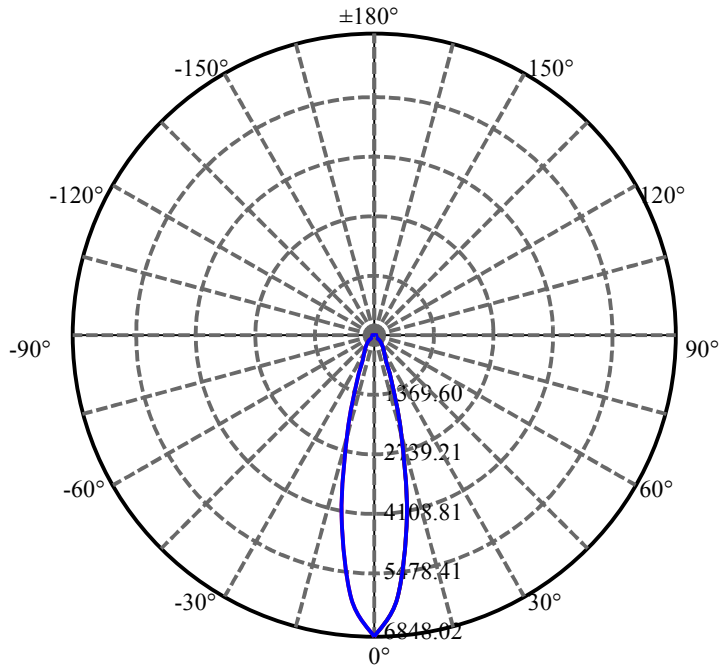
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6848.016	0.000	0	.000%	.000%
5.0	6008.203	153.692	153.692	6.309%	8.129%
10.0	4183.523	364.590	518.283	14.967%	27.412%
15.0	2317.852	385.657	903.94	15.832%	47.810%
20.0	1112.597	282.717	1186.657	11.606%	62.763%
25.0	630.921	182.863	1369.52	7.507%	72.435%
30.0	417.776	132.713	1502.233	5.448%	79.455%
35.0	283.437	103.258	1605.492	4.239%	84.916%
40.0	196.952	80.149	1685.641	3.290%	89.155%
45.0	130.022	60.542	1746.183	2.485%	92.357%
50.0	83.370	43.119	1789.302	1.770%	94.638%
55.0	50.639	29.138	1818.44	1.196%	96.179%
60.0	32.435	19.202	1837.642	.788%	97.195%
65.0	23.815	13.674	1851.317	.561%	97.918%
70.0	19.828	11.051	1862.367	.454%	98.502%
75.0	16.263	9.434	1871.801	.387%	99.001%
80.0	12.987	7.826	1879.627	.321%	99.415%
85.0	9.759	6.181	1885.808	.254%	99.742%
90.0	8.044	4.875	1890.683	.200%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1502.23	61.67%	79.45%
0-40	1685.64	69.20%	89.16%
0-60	1837.64	75.44%	97.19%
0-90	1885.81	77.41%	99.74%
0-120	1885.81	77.41%	99.74%
0-180	1890.68	77.61%	100.00%
60-90	67.37	2.77%	3.56%
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%
0-30.50	1512.55	62.09%	80.00%

ZONAL LUMEN SUMMARY

0-10	518.28
10-20	668.37
20-30	315.58
30-40	183.41
40-50	103.66
50-60	48.34
60-70	24.73
70-80	17.26
80-90	6.18
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: —————

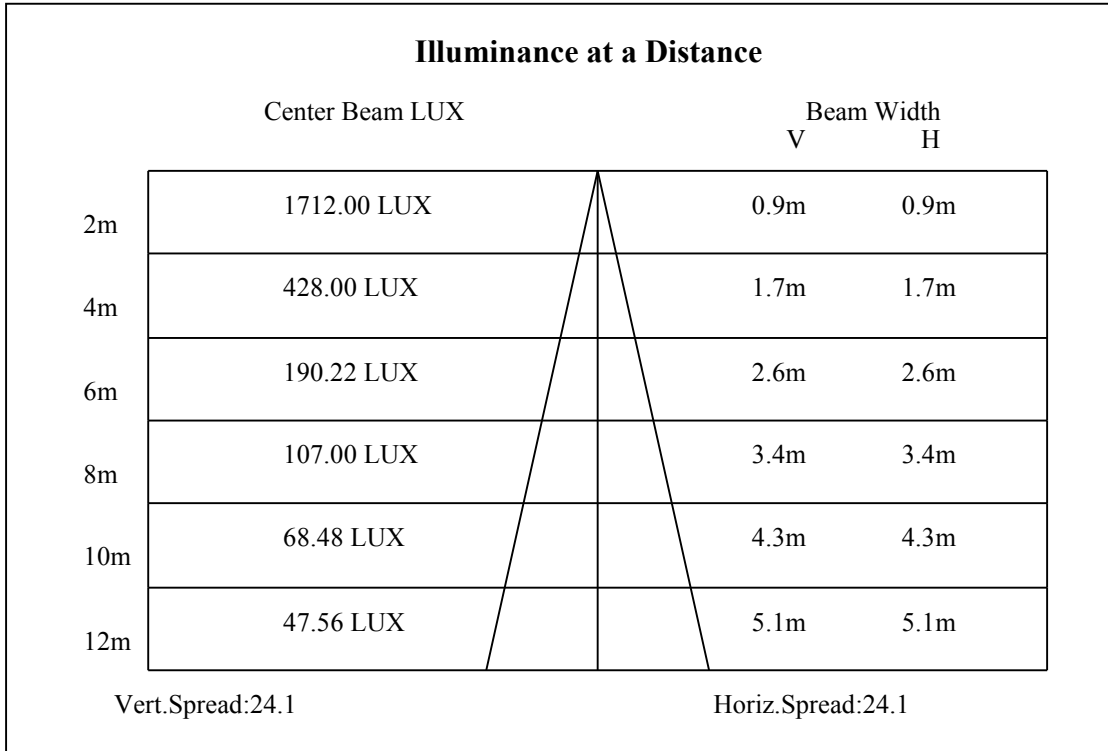
C90/C270: —————

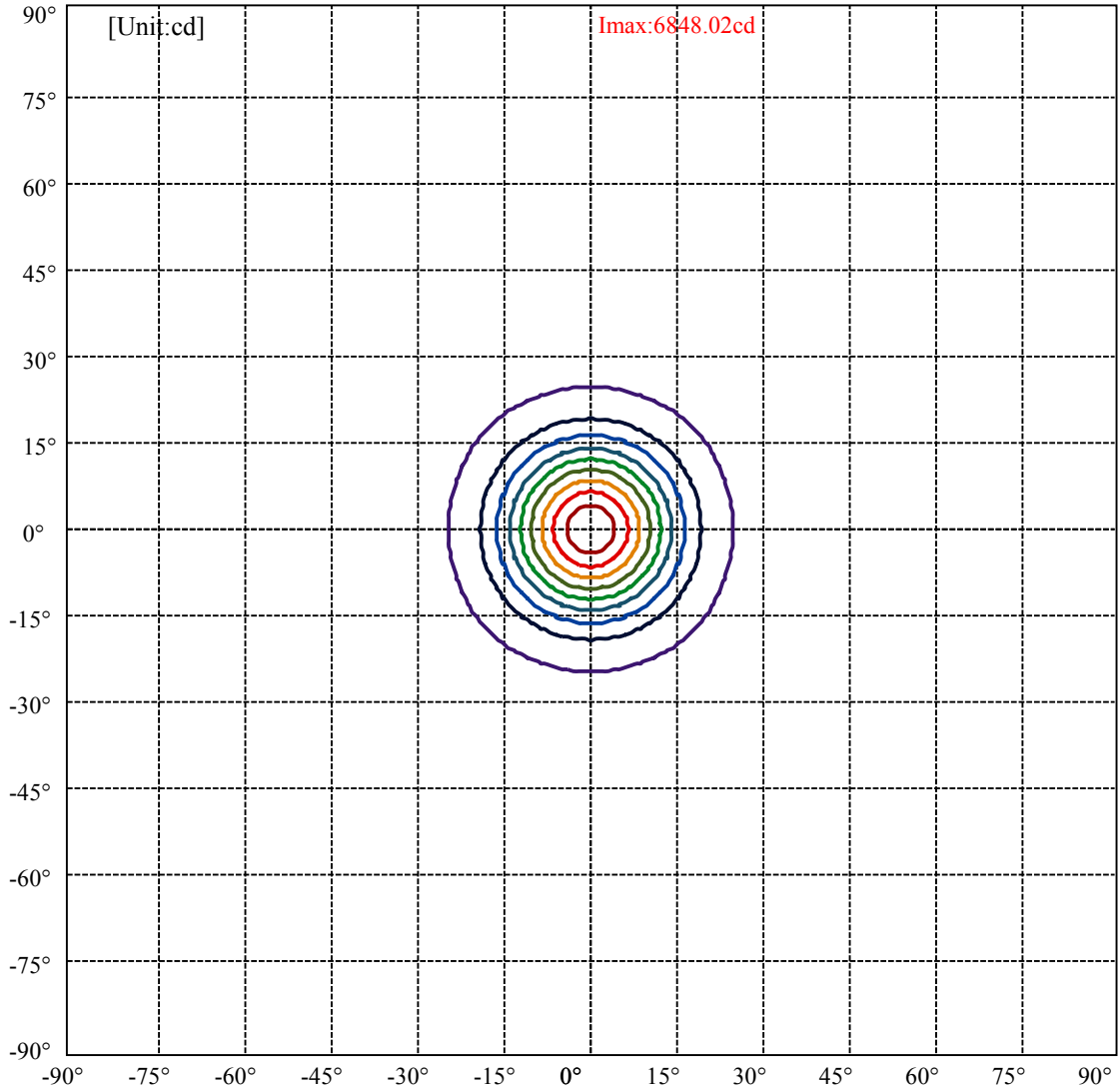
Field angle(10%Imax):C0/180Left:24.4 Right:24.4

:C90/270Left:24.4 Right:24.4

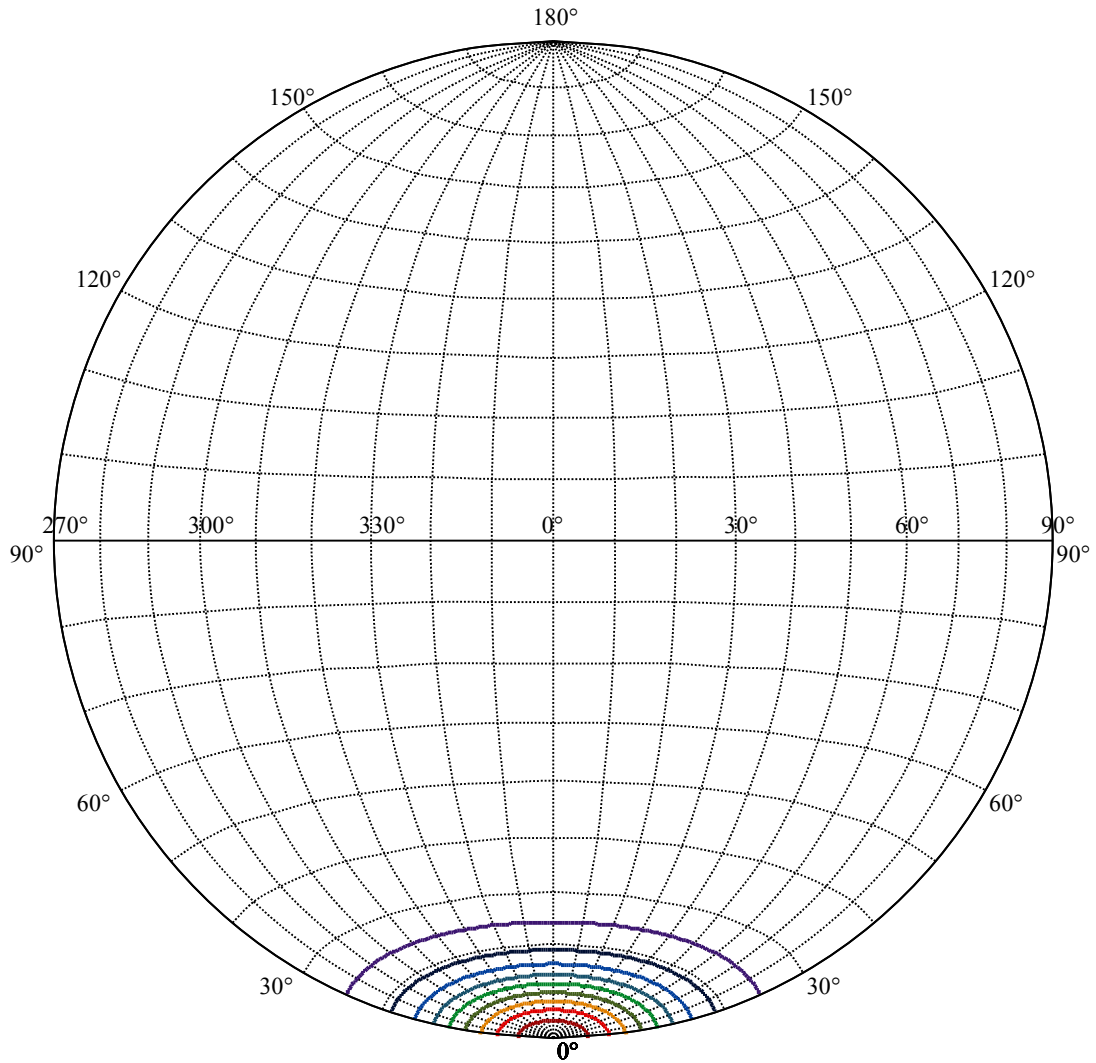
Beam Angle(50%Imax):C0/180Left:12.0 Right:12.0

:C90/270Left:12.0 Right:12.0





(10%Imax) 684.802	—
(20%Imax) 1369.6	—
(30%Imax) 2054.4	—
(40%Imax) 2739.21	—
(50%Imax) 3424.01	—
(60%Imax) 4108.81	—
(70%Imax) 4793.61	—
(80%Imax) 5478.41	—
(90%Imax) 6163.21	—



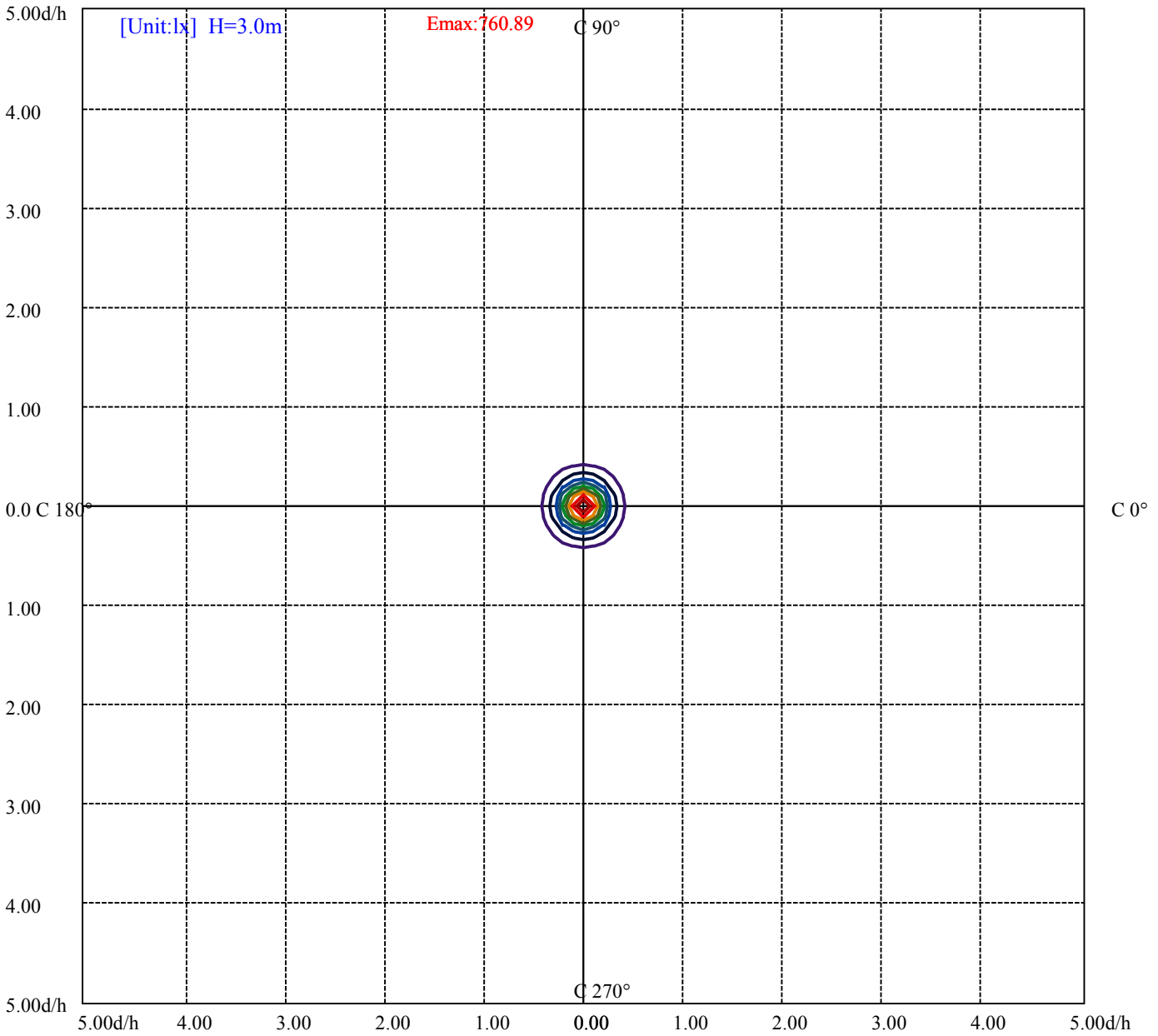
House

[Unit:cd]

Road

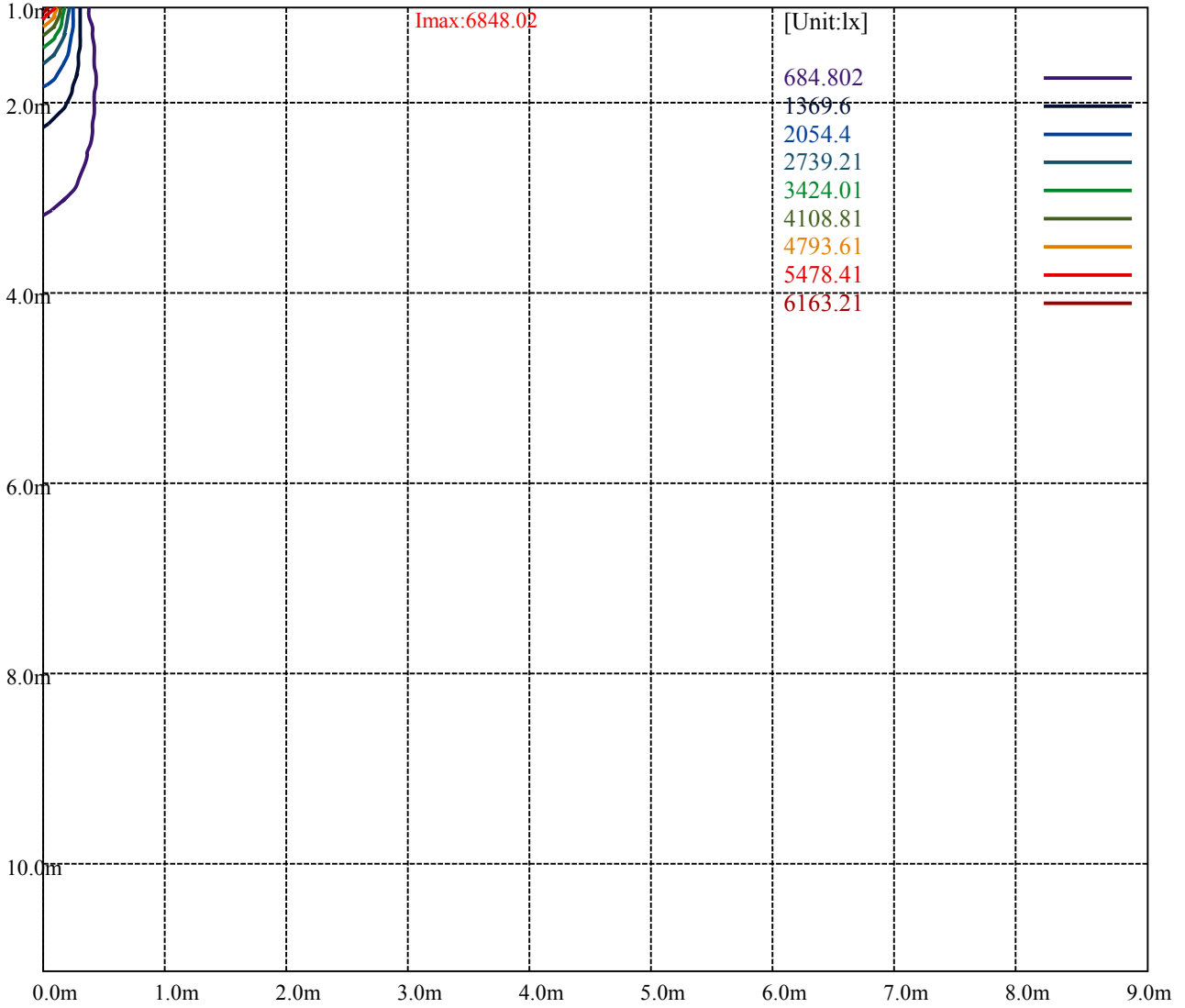
Imax:6848.02

(10%Imax) 684.802	—
(20%Imax) 1369.6	—
(30%Imax) 2054.4	—
(40%Imax) 2739.21	—
(50%Imax) 3424.01	—
(60%Imax) 4108.81	—
(70%Imax) 4793.61	—
(80%Imax) 5478.41	—
(90%Imax) 6163.21	—



(10%Emax) 76.08878	—
(20%Emax) 152.1778	—
(30%Emax) 228.2667	—
(40%Emax) 304.3556	—
(50%Emax) 380.4445	—
(60%Emax) 456.5322	—
(70%Emax) 532.6211	—
(80%Emax) 608.71	—
(90%Emax) 684.7989	—





Luminance Table

$\gamma$	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

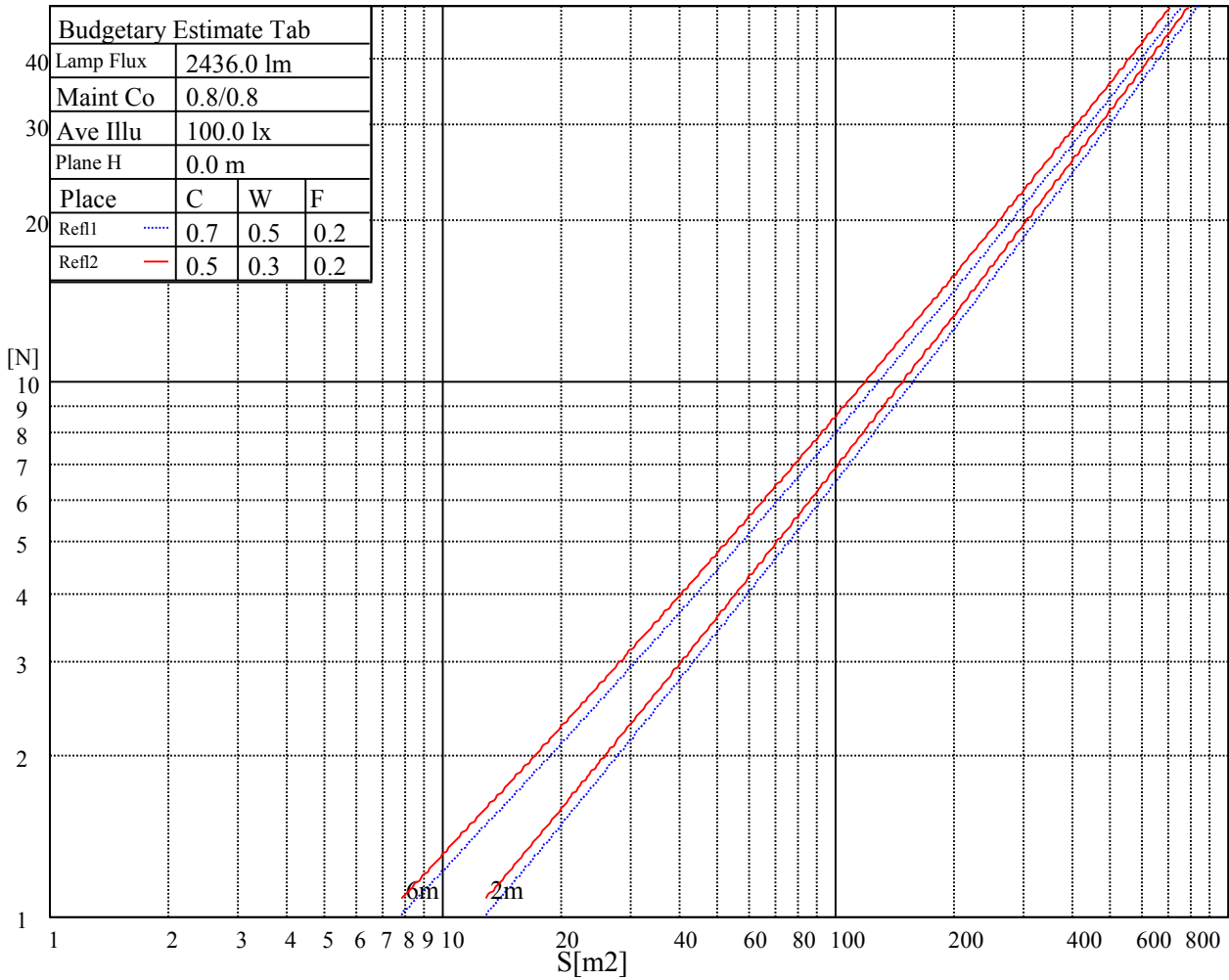
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

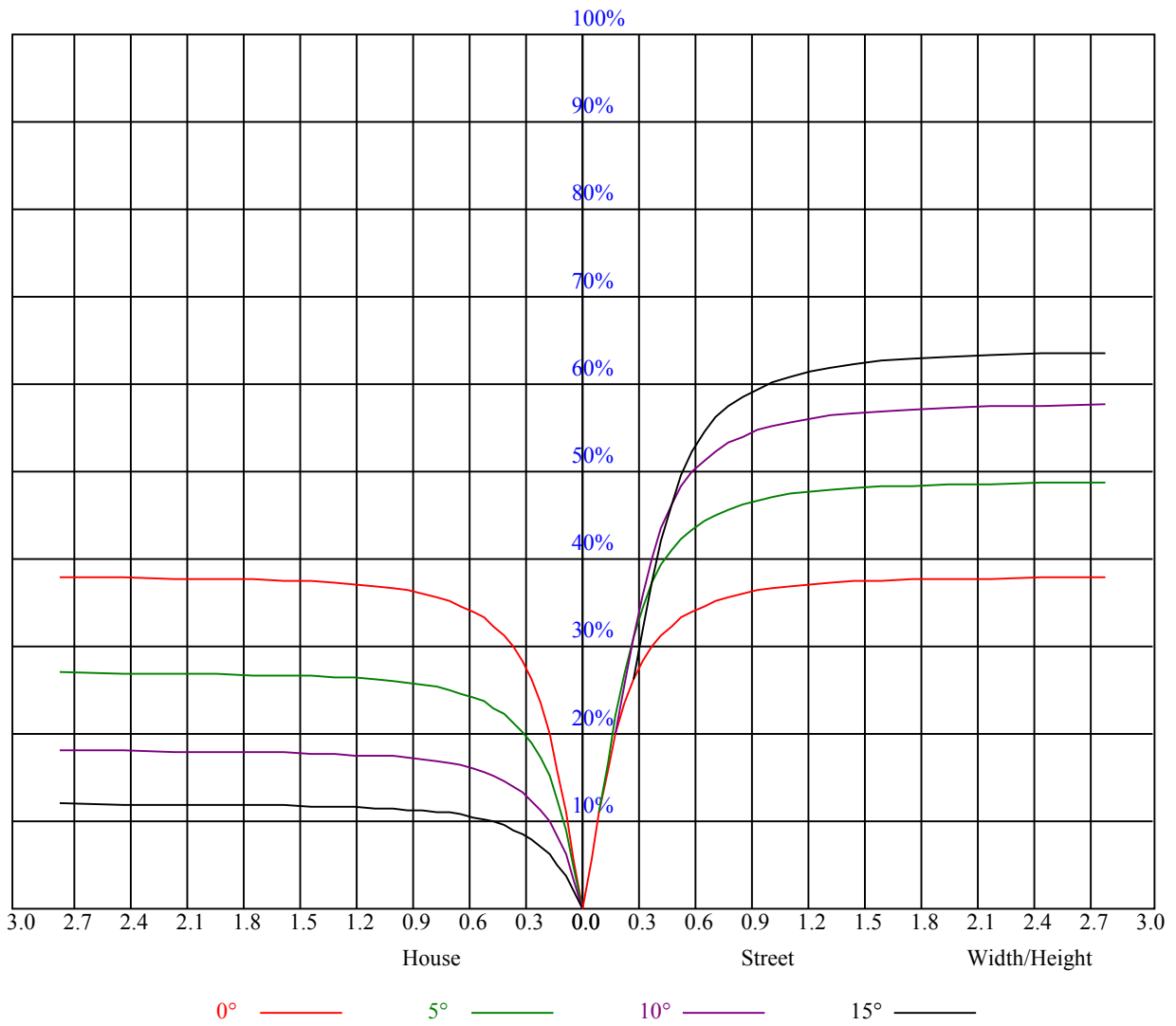
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

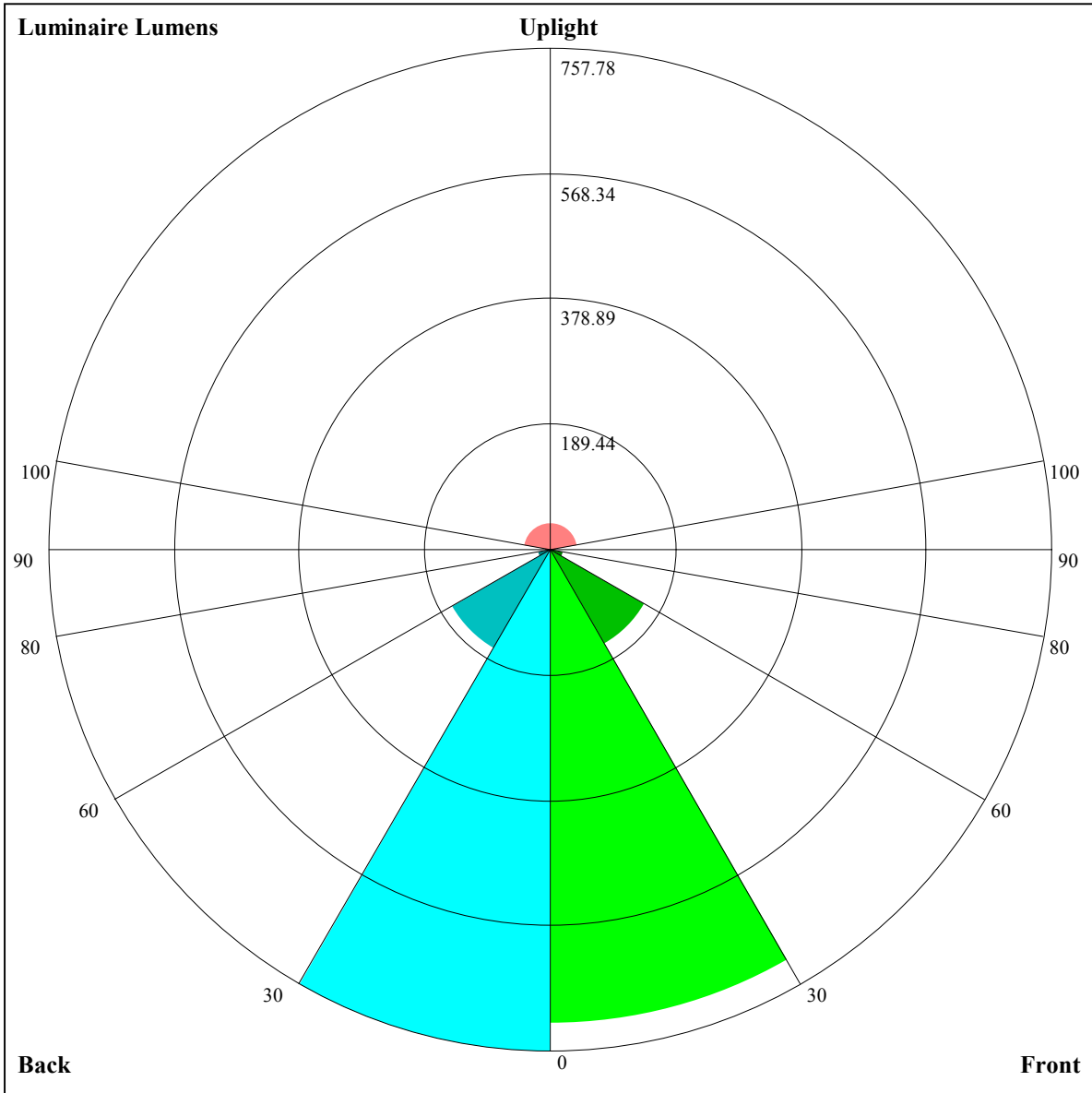
Luminance Limiting Curve





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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.79	0.79	0.79	0.78
1	0.86	0.84	0.83	0.85	0.83	0.81	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.74	0.73
2	0.81	0.78	0.76	0.80	0.77	0.75	0.77	0.75	0.73	0.75	0.73	0.72	0.73	0.71	0.70	0.69
3	0.76	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.65
4	0.72	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.68	0.66	0.64	0.67	0.65	0.63	0.62
5	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.64	0.62	0.60	0.59
6	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.57
7	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54
8	0.60	0.56	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.52
9	0.58	0.54	0.52	0.58	0.54	0.52	0.57	0.54	0.51	0.56	0.53	0.51	0.56	0.53	0.51	0.50
10	0.56	0.52	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.55	0.52	0.49	0.54	0.51	0.49	0.48





Luminaire Lumens:

FL=715.91,FM=163.35,FH=20.62,FVH=5.41

BL=757.78,BM=171.45,BH=21.42,BVH=5.65

UL=8.78,UH=41.76

BUG Rating:B2-U2-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	6868.13	5782.50	4025.25	2189.25	1063.69	621.00	406.13	289.13	189.96
45.0	6860.81	6222.94	4426.31	2502.56	1255.50	675.56	441.56	288.00	202.78
90.0	6879.94	6166.13	4388.06	2476.69	1101.43	670.44	440.27	294.58	206.27
135.0	6783.19	6545.25	4914.00	2882.25	1435.50	739.69	484.31	322.31	223.26
180.0	6868.13	6197.06	4150.13	2396.81	1094.06	626.06	417.26	279.51	199.91
225.0	6860.81	5892.75	4036.50	2184.75	1023.64	579.94	394.48	262.24	188.55
270.0	6879.94	5961.94	4035.94	2130.75	1050.75	596.81	397.13	288.00	189.56
315.0	6783.19	5297.06	3492.00	1779.75	876.21	537.86	361.07	243.73	175.33
360.0	6868.13	5782.50	4025.25	2189.25	1063.69	621.00	406.13	289.13	189.96

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	124.59	78.02	49.50	30.83	22.95	19.13	15.64	12.49	9.23
45.0	133.20	84.94	52.93	33.75	24.19	20.31	16.59	13.28	9.84
90.0	136.35	89.16	54.17	34.26	24.53	20.64	16.88	13.39	10.29
135.0	154.52	99.90	59.68	38.08	25.65	21.26	17.55	14.34	10.80
180.0	135.56	86.51	51.53	33.30	24.02	19.91	16.37	13.22	10.07
225.0	120.38	79.88	48.15	30.71	23.46	19.46	16.03	12.88	9.73
270.0	124.20	79.48	47.64	30.60	23.68	19.58	15.98	12.77	9.22
315.0	111.38	69.08	41.51	27.96	22.05	18.34	15.08	11.53	8.89
360.0	124.59	78.02	49.50	30.83	22.95	19.13	15.64	12.49	9.23

C/γ(°)	90.0
0.0	7.99
45.0	8.10
90.0	8.04
135.0	8.16
180.0	7.93
225.0	8.10
270.0	8.04
315.0	7.99
360.0	7.99