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## NATA

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LumCAT: 4-2267-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.3600
Test No: GC2019123020	Current(A): 0.6000
LampCAT: LUMINUS CXM-14-AC40	Power (W): 20.6000
Lamp flux(lm): 2608.0	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): 2320.50  
Efficiency(%): 88.98%  
Lumens(lm)/Power(W): 112.65  
Central intensity(cd): 4932.422  
Maximum intensity(cd): 4932.422  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=36.0  
                                  [C90/270]Total=36.0  
Field angle(10%Imax): [C0/180]Total=70.6  
                                  [C90/270]Total=70.6  
Maximum s/h(1/2): C0\_180=0.58 C90\_270=0.58  
Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 88.98%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.297%

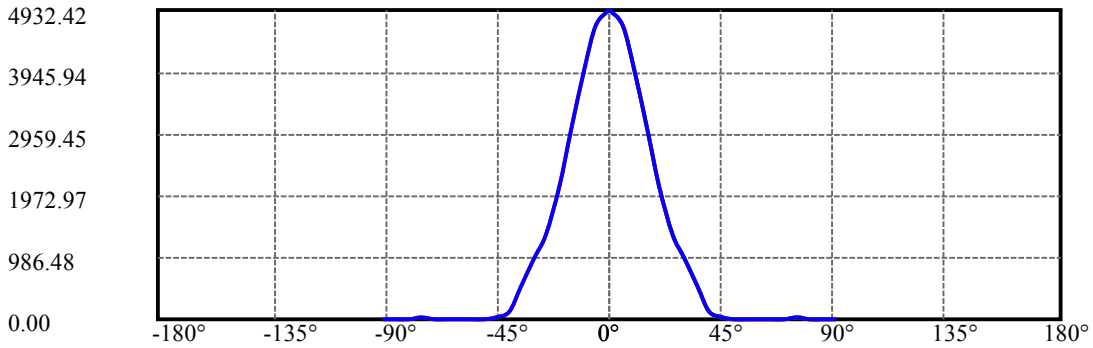
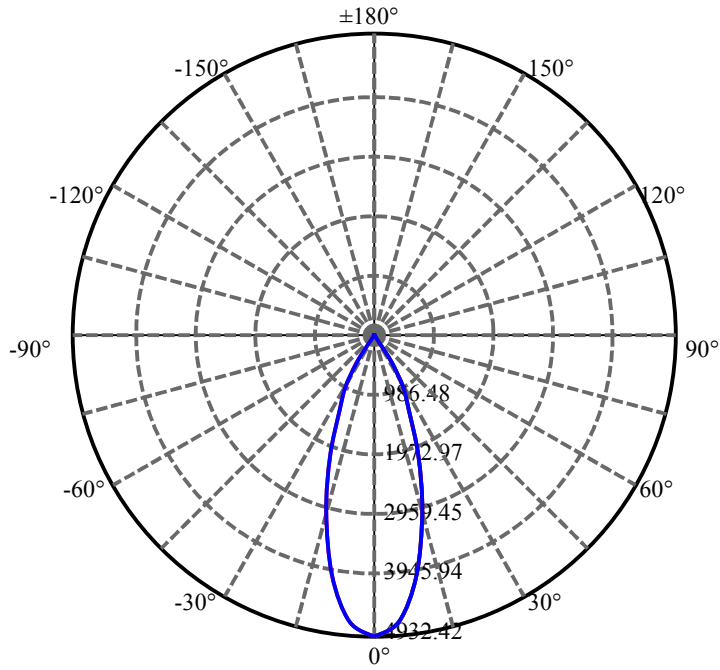
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4932.422	0.000	0	.000%	.000%
5.0	4693.008	115.069	115.069	4.412%	4.959%
10.0	3984.961	310.438	425.508	11.903%	18.337%
15.0	2992.711	413.911	839.418	15.871%	36.174%
20.0	2108.109	420.379	1259.798	16.119%	54.290%
25.0	1347.384	362.418	1622.215	13.896%	69.908%
30.0	968.702	293.103	1915.318	11.239%	82.539%
35.0	519.258	219.113	2134.43	8.402%	91.982%
40.0	108.387	104.718	2239.148	4.015%	96.494%
45.0	18.415	23.478	2262.626	.900%	97.506%
50.0	14.709	6.693	2269.32	.257%	97.795%
55.0	12.811	5.984	2275.304	.229%	98.052%
60.0	11.763	5.680	2280.984	.218%	98.297%
65.0	11.278	5.601	2286.585	.215%	98.539%
70.0	11.531	5.775	2292.361	.221%	98.787%
75.0	16.917	7.436	2299.797	.285%	99.108%
80.0	13.380	8.107	2307.903	.311%	99.457%
85.0	11.067	6.643	2314.546	.255%	99.744%
90.0	10.666	5.951	2320.497	.228%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1915.32	73.44%	82.54%
0-40	2239.15	85.86%	96.49%
0-60	2280.98	87.46%	98.30%
0-90	2314.55	88.75%	99.74%
0-120	2314.55	88.75%	99.74%
0-180	2320.50	88.98%	100.00%
60-90	39.24	1.50%	1.69%
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%
0-28.99	1856.40	71.18%	80.00%

ZONAL LUMEN SUMMARY

0-10	425.51
10-20	834.29
20-30	655.52
30-40	323.83
40-50	30.17
50-60	11.66
60-70	11.38
70-80	15.54
80-90	6.64
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

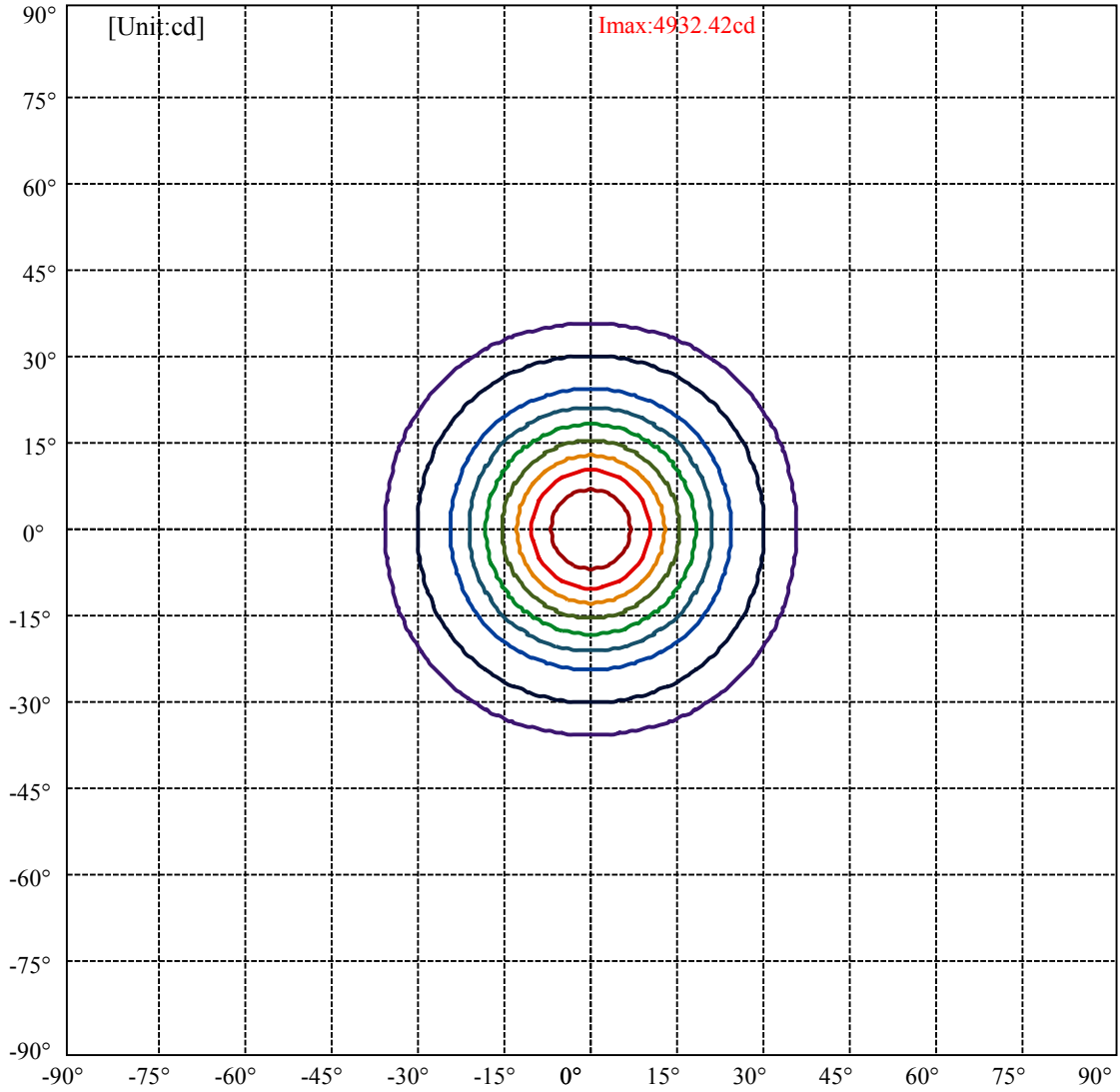


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

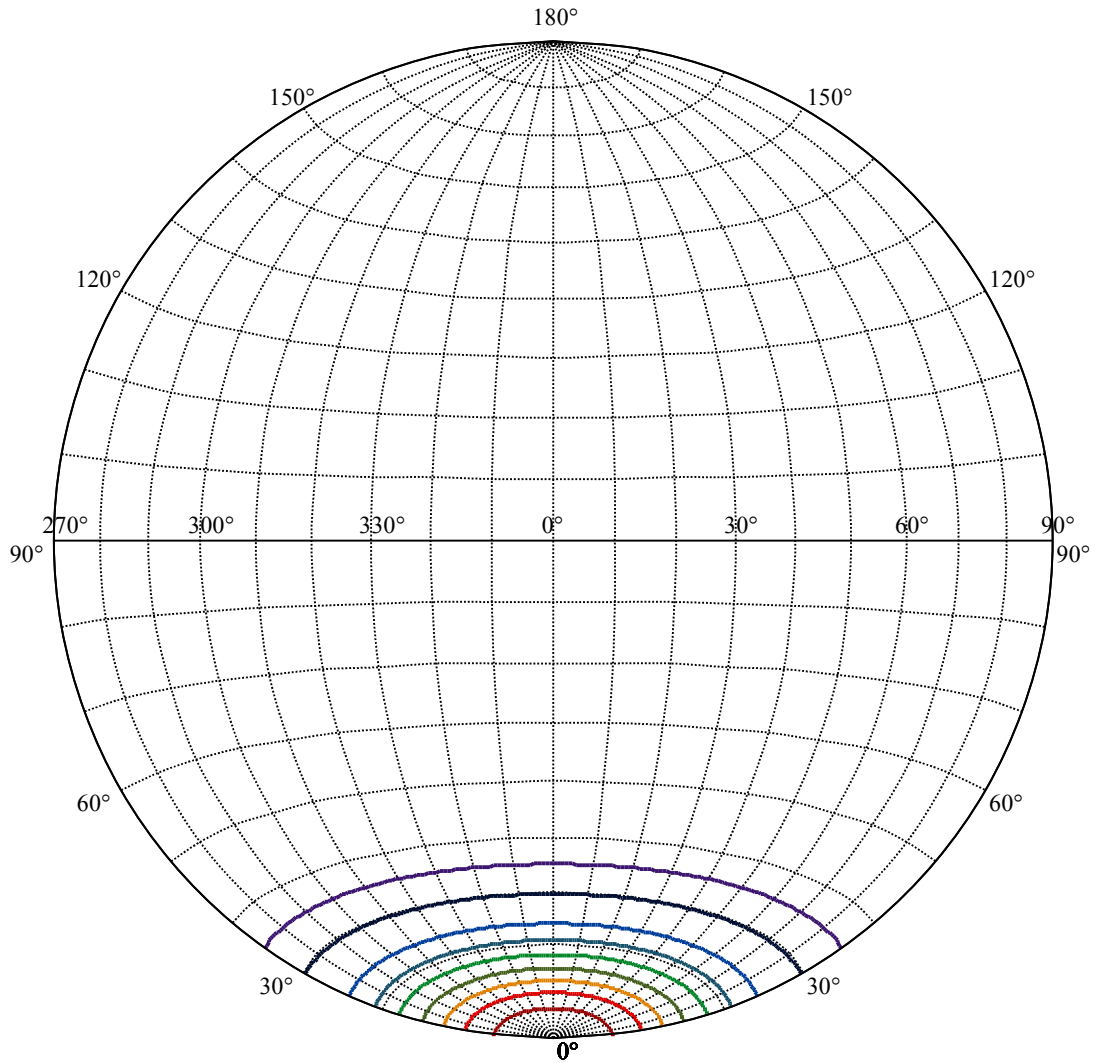
Field angle(10%Imax):C0/180Left:35.3 Right:35.3  
:C90/270Left:35.3 Right:35.3

Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0  
:C90/270Left:18.0 Right:18.0





(10%Imax) 493.242	—
(20%Imax) 986.484	—
(30%Imax) 1479.73	—
(40%Imax) 1972.97	—
(50%Imax) 2466.21	—
(60%Imax) 2959.45	—
(70%Imax) 3452.7	—
(80%Imax) 3945.94	—
(90%Imax) 4439.18	—



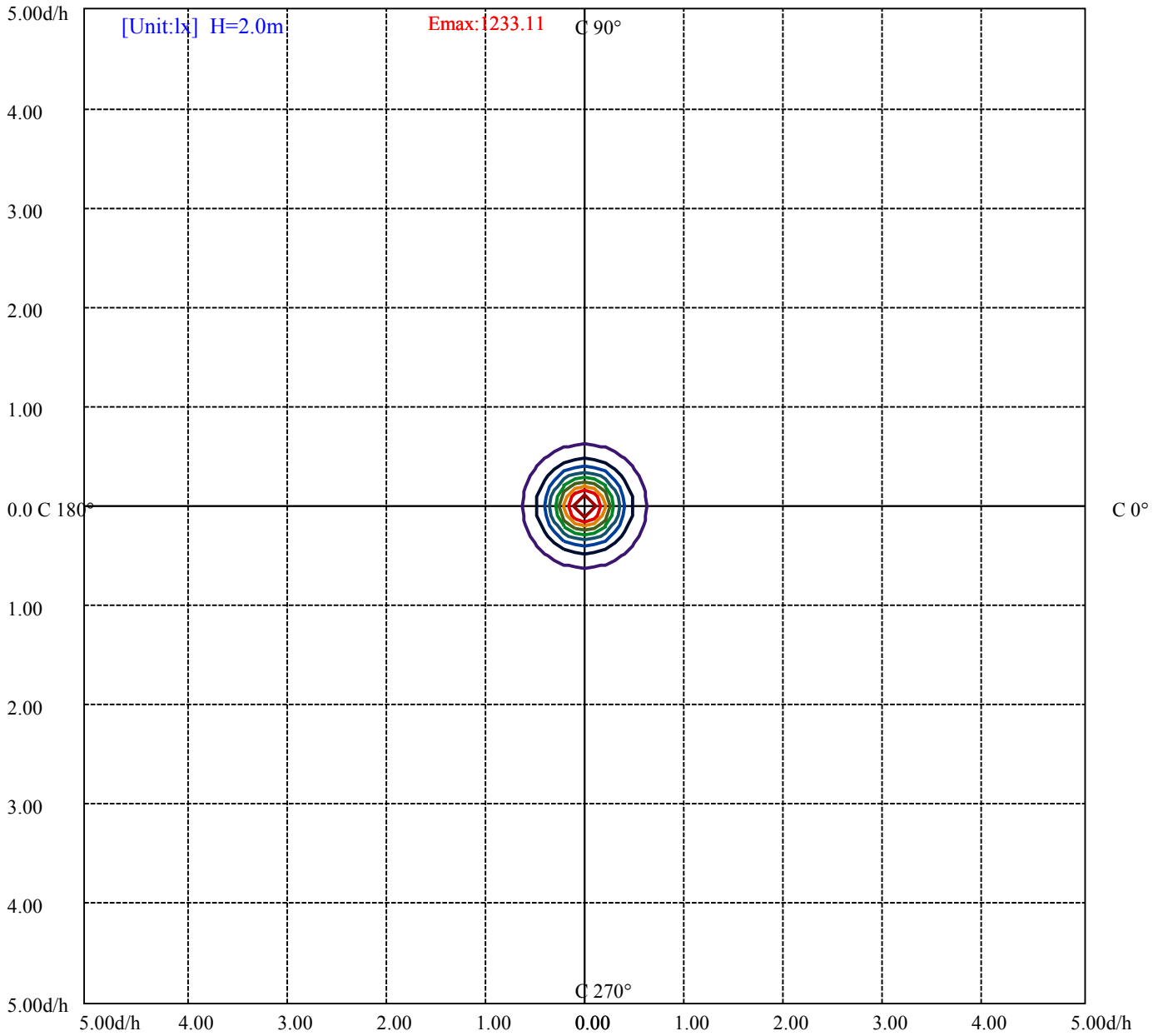
House

[Unit:cd]

Road

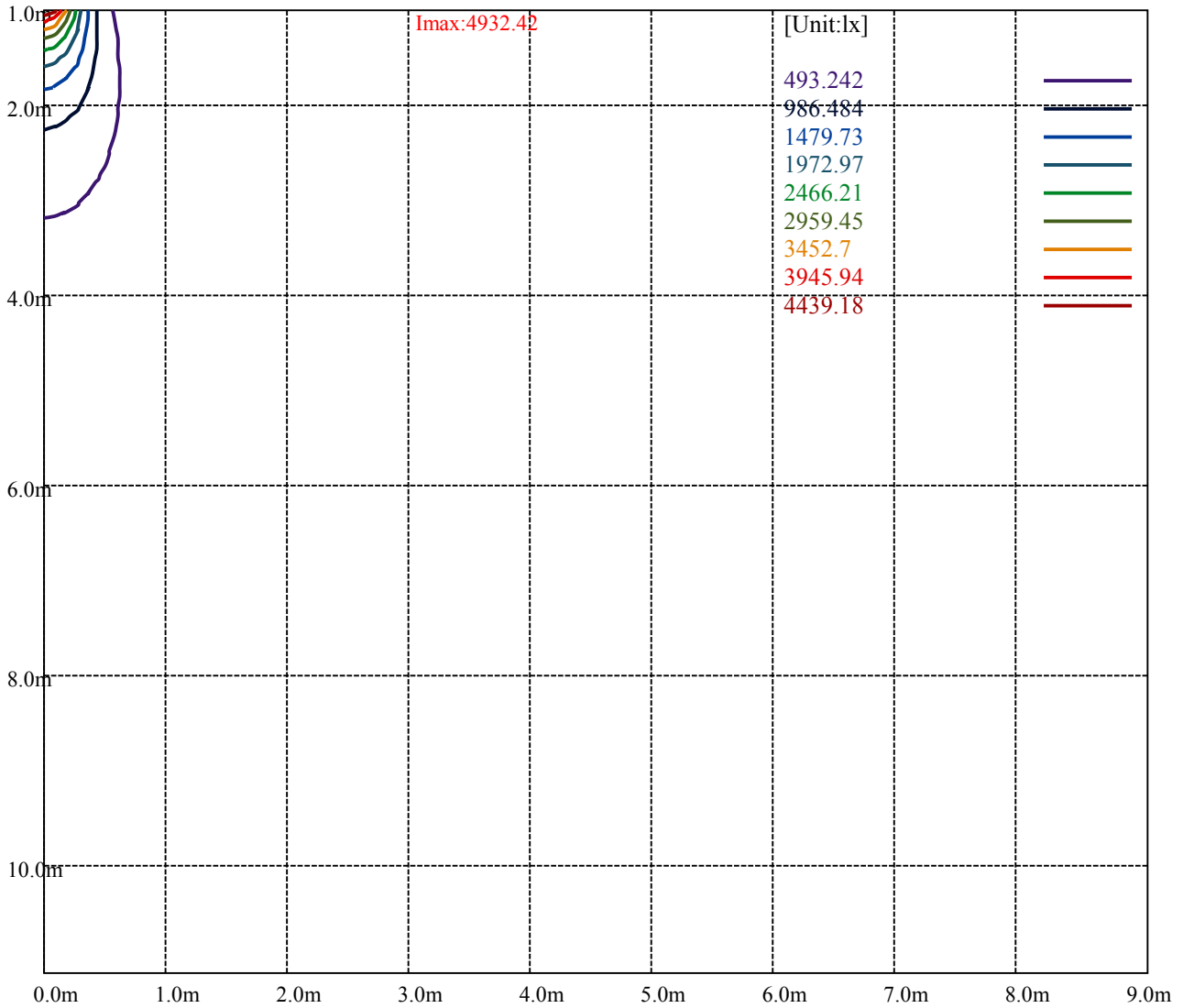
Imax:4932.42

(10%Imax) 493.242	—
(20%Imax) 986.484	—
(30%Imax) 1479.73	—
(40%Imax) 1972.97	—
(50%Imax) 2466.21	—
(60%Imax) 2959.45	—
(70%Imax) 3452.7	—
(80%Imax) 3945.94	—
(90%Imax) 4439.18	—



(10%Emax) 123.3105	—
(20%Emax) 246.6207	—
(30%Emax) 369.93	—
(40%Emax) 493.2425	—
(50%Emax) 616.5525	—
(60%Emax) 739.8625	—
(70%Emax) 863.1725	—
(80%Emax) 986.4825	—
(90%Emax) 1109.792	—





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

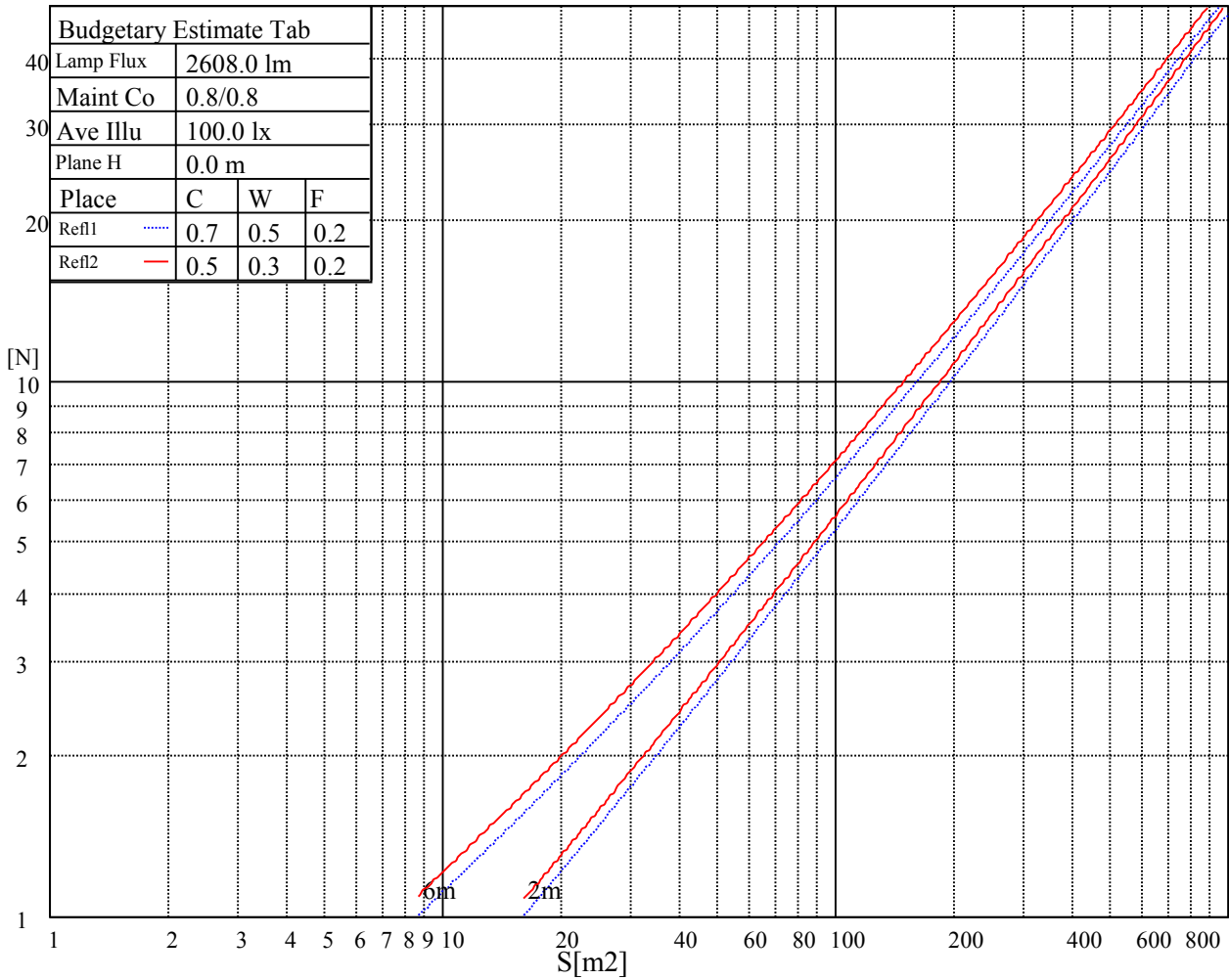
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

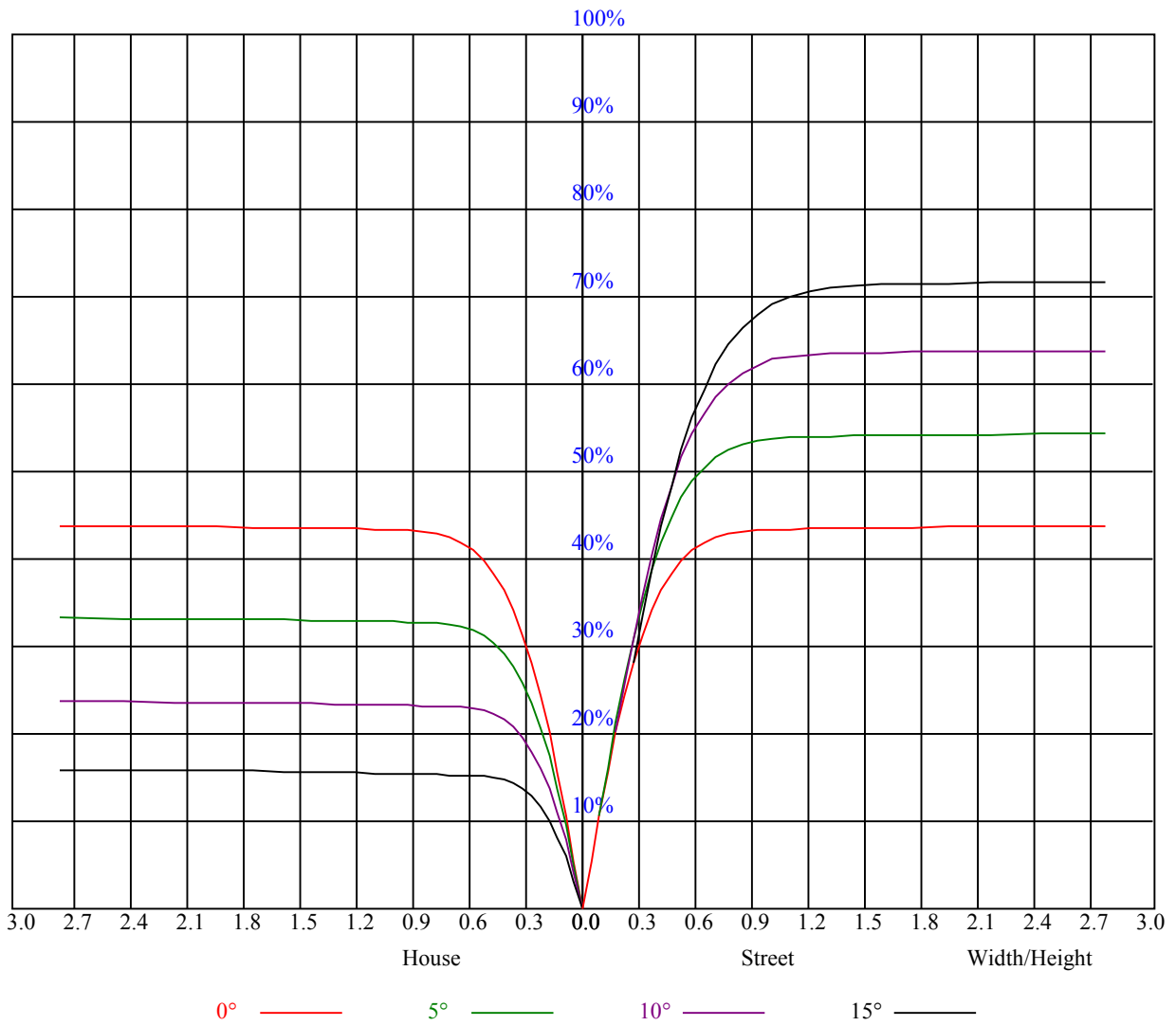
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.99	0.97	0.95	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.87	0.91	0.88	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.80	0.79
3	0.88	0.84	0.80	0.86	0.83	0.80	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
4	0.83	0.78	0.75	0.82	0.78	0.75	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
5	0.78	0.74	0.70	0.78	0.73	0.70	0.76	0.72	0.70	0.75	0.71	0.69	0.73	0.71	0.68	0.67
6	0.75	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
8	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58
9	0.65	0.60	0.57	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55
10	0.62	0.57	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



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	4939.88	4554.00	3701.25	2709.56	1824.75	1208.81	865.69	374.06	30.83
45.0	4954.50	4636.13	3837.94	2779.88	1906.31	1248.75	897.19	378.56	34.43
90.0	4923.56	4639.50	3864.38	2843.44	1960.31	1213.88	906.19	439.03	34.82
135.0	4911.75	4846.50	4311.56	3356.44	2484.00	1558.69	1088.44	698.63	299.25
180.0	4939.88	4836.38	4253.06	3297.38	2374.88	1519.88	1058.96	685.07	168.02
225.0	4954.50	4806.56	4177.69	3237.19	2286.56	1469.25	1063.07	634.44	111.32
270.0	4923.56	4727.81	4105.69	3114.56	2236.50	1451.81	1034.44	608.63	158.91
315.0	4911.75	4497.19	3628.13	2603.25	1791.56	1108.01	835.65	335.64	29.53
360.0	4939.88	4554.00	3701.25	2709.56	1824.75	1208.81	865.69	374.06	30.83

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	17.04	14.40	12.60	11.59	11.31	12.88	23.23	11.64	10.91
45.0	17.10	14.23	12.54	11.59	11.25	11.81	18.06	11.59	11.14
90.0	16.99	14.12	12.43	11.53	11.14	11.19	17.66	11.14	11.03
135.0	21.54	15.24	13.16	11.93	11.14	11.08	12.49	13.89	10.97
180.0	20.59	15.08	12.99	11.93	11.25	11.03	12.83	15.75	11.03
225.0	18.96	15.30	13.22	12.26	11.64	11.25	15.13	14.01	11.14
270.0	18.45	15.08	13.11	11.87	11.31	11.36	15.30	16.93	11.42
315.0	16.65	14.23	12.43	11.42	11.19	11.64	20.64	12.09	10.91
360.0	17.04	14.40	12.60	11.59	11.31	12.88	23.23	11.64	10.91

C/γ(°)	90.0
0.0	10.58
45.0	10.69
90.0	10.69
135.0	10.63
180.0	10.58
225.0	10.74
270.0	10.74
315.0	10.69
360.0	10.58