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Nata

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LumCAT: 3-1938-M

Luminaire:

Report No: NATA0100

Voltage(V): 34.1900

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.5140

Lamp flux(lm): 2559.0

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): 2368.17

Efficiency(%): 92.54%

Lumens(lm)/Power(W): 115.44

Central intensity(cd): 9174.938

Maximum intensity(cd): 9174.938

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

Beam Angle(50%Imax): [C0/180]Total=17.5

[C90/270]Total=17.5

Field angle(10%Imax): [C0/180]Total=61.7

[C90/270]Total=61.7

Maximum s/h(1/2): C0\_180=0.30 C90\_270=0.30

Maximum s/h(1/4): C0\_180=0.39 C90\_270=0.39

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.54%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.565%

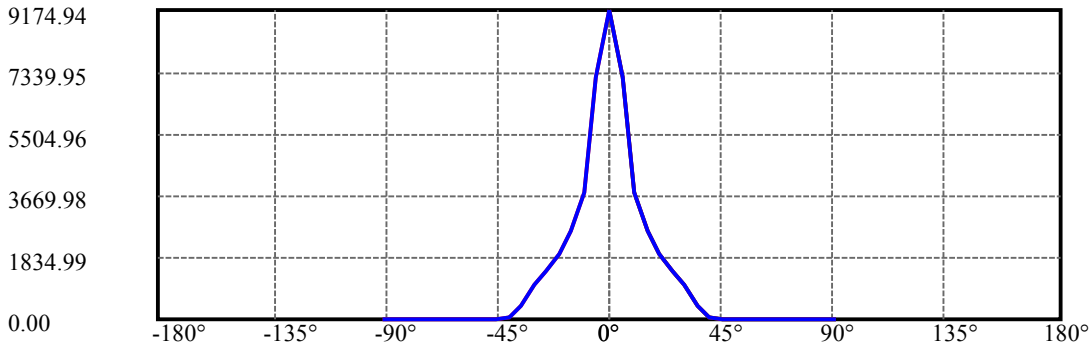
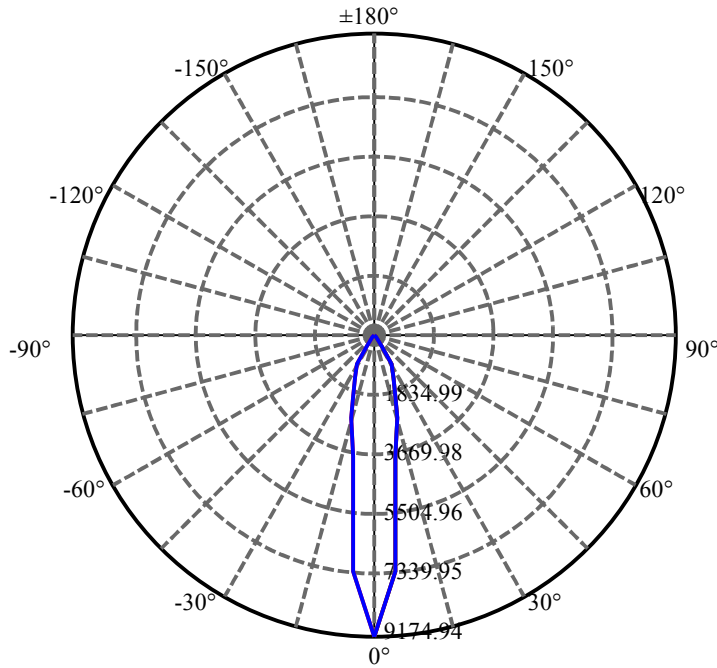
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9174.938	0.000	0	.000%	.000%
5.0	7196.906	195.721	195.721	7.648%	8.265%
10.0	3737.320	391.152	586.872	15.285%	24.782%
15.0	2629.969	377.703	964.576	14.760%	40.731%
20.0	1959.820	378.263	1342.839	14.782%	56.704%
25.0	1414.055	353.857	1696.696	13.828%	71.646%
30.0	1019.897	308.019	2004.715	12.037%	84.652%
35.0	415.772	211.412	2216.127	8.262%	93.580%
40.0	63.239	79.919	2296.046	3.123%	96.954%
45.0	25.580	16.446	2312.492	.643%	97.649%
50.0	17.522	8.709	2321.201	.340%	98.017%
55.0	14.112	6.878	2328.079	.269%	98.307%
60.0	12.319	6.109	2334.189	.239%	98.565%
65.0	11.348	5.754	2339.942	.225%	98.808%
70.0	10.884	5.629	2345.572	.220%	99.046%
75.0	10.631	5.624	2351.196	.220%	99.283%
80.0	10.470	5.646	2356.842	.221%	99.522%
85.0	10.378	5.665	2362.506	.221%	99.761%
90.0	10.308	5.664	2368.17	.221%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2004.71	78.34%	84.65%
0-40	2296.05	89.72%	96.95%
0-60	2334.19	91.21%	98.57%
0-90	2362.51	92.32%	99.76%
0-120	2362.51	92.32%	99.76%
0-180	2368.17	92.54%	100.00%
60-90	34.43	1.35%	1.45%
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%
0-28.21	1894.54	74.03%	80.00%

ZONAL LUMEN SUMMARY

0-10	586.87
10-20	755.97
20-30	661.88
30-40	291.33
40-50	25.15
50-60	12.99
60-70	11.38
70-80	11.27
80-90	5.66
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



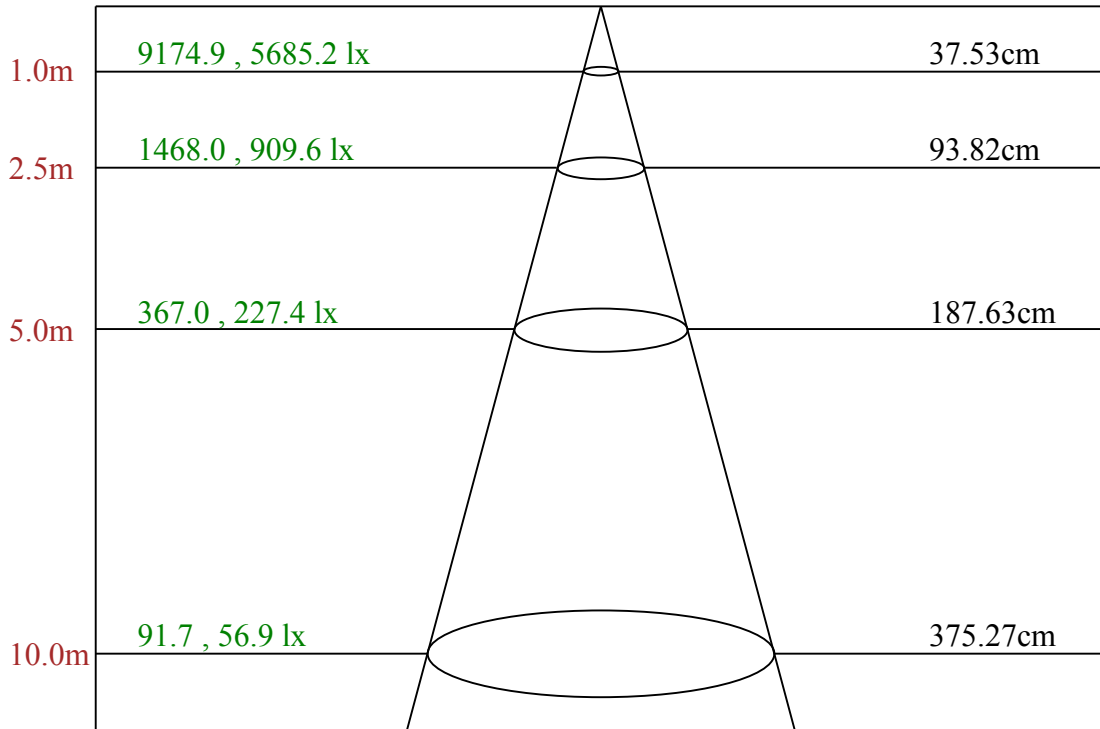
C0(Max): —————

C0/C180: —————

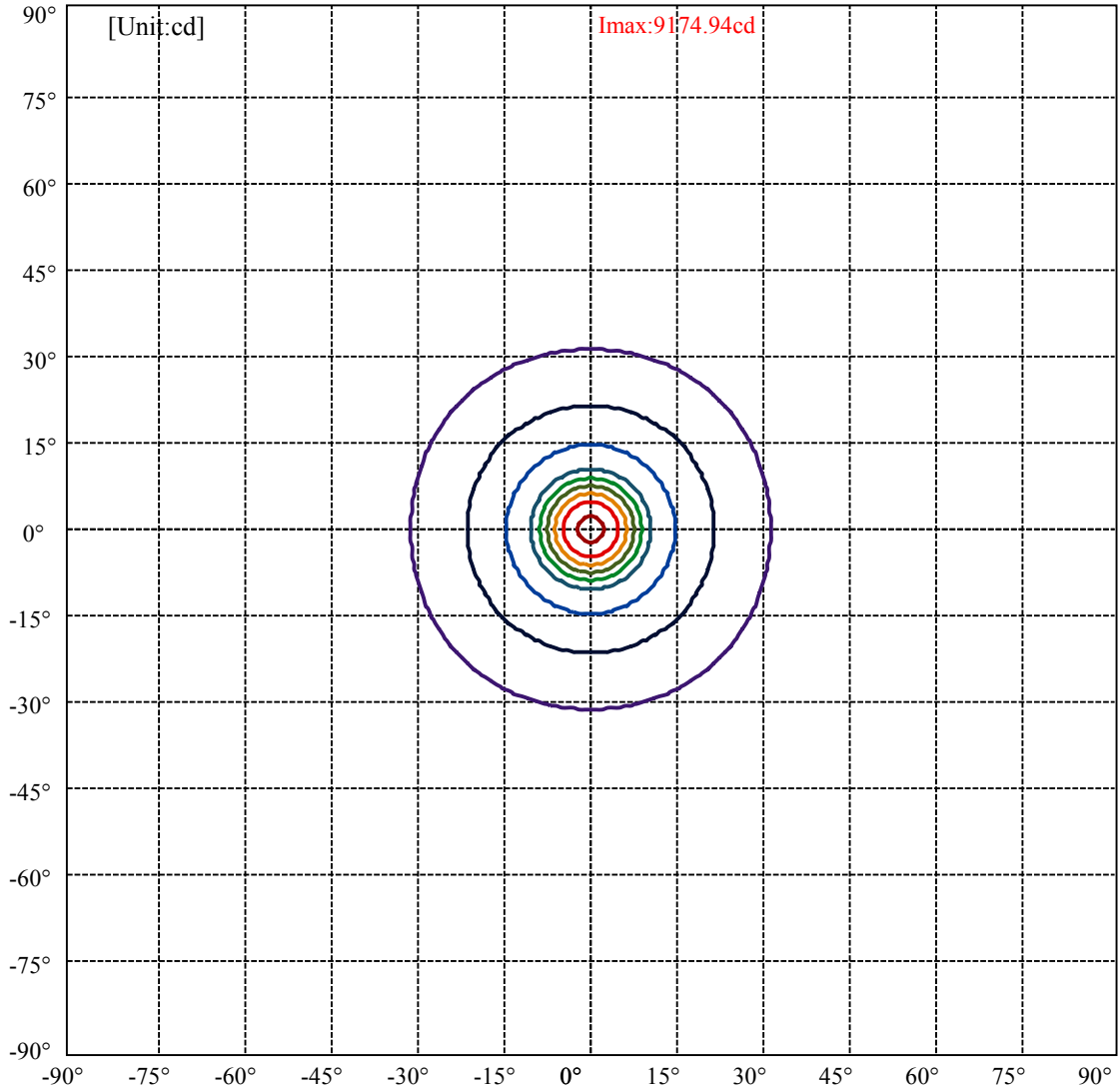
C90/C270: —————

Field angle(10%Imax):C0/180Left:30.8 Right:30.8  
:C90/270Left:30.8 Right:30.8

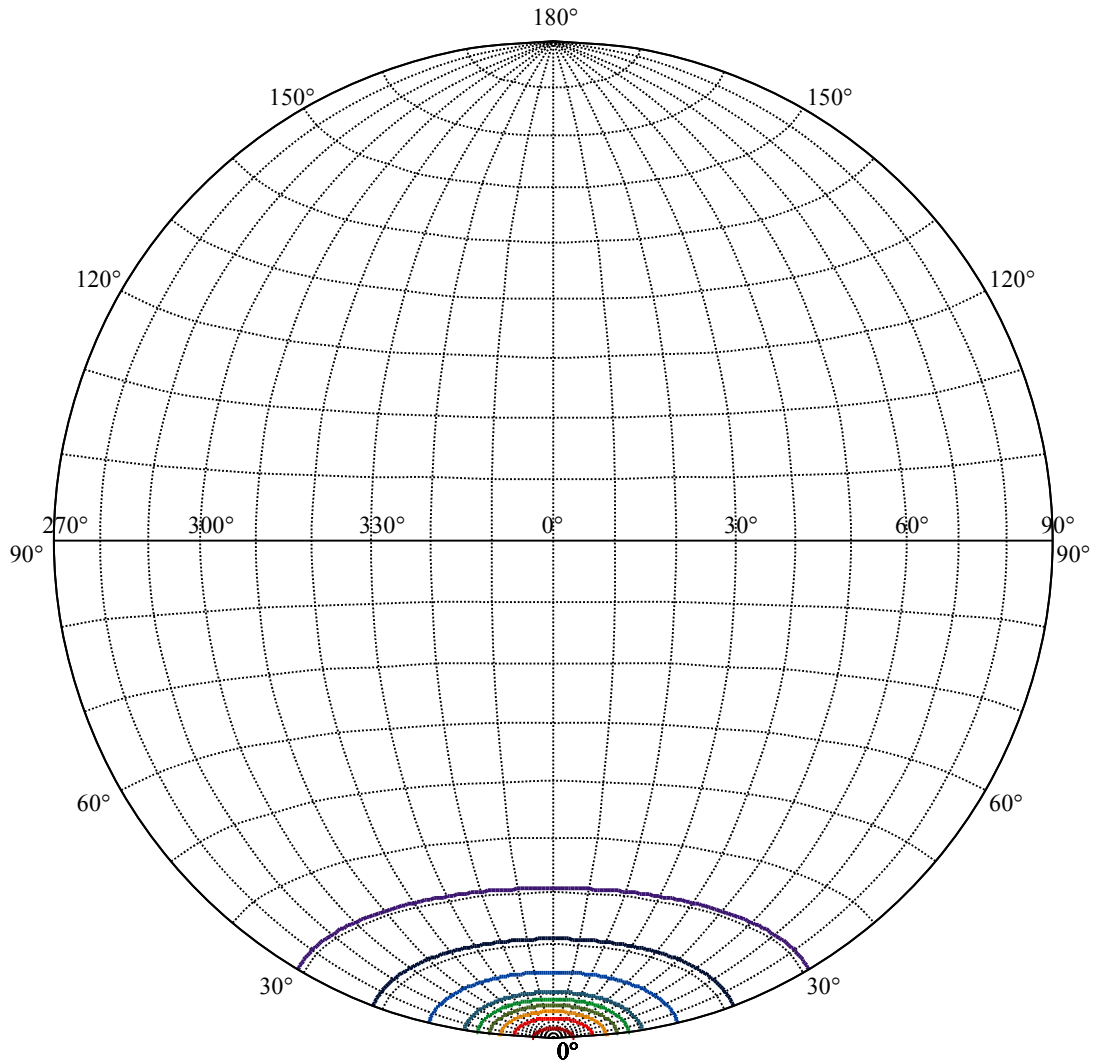
Beam Angle(50%Imax):C0/180Left:8.8 Right:8.8  
:C90/270Left:8.8 Right:8.8



Max , Ave      Beam angle of C0 plane 21.25



(10%Imax) 917.494	—
(20%Imax) 1834.99	—
(30%Imax) 2752.48	—
(40%Imax) 3669.98	—
(50%Imax) 4587.47	—
(60%Imax) 5504.96	—
(70%Imax) 6422.46	—
(80%Imax) 7339.95	—
(90%Imax) 8257.44	—



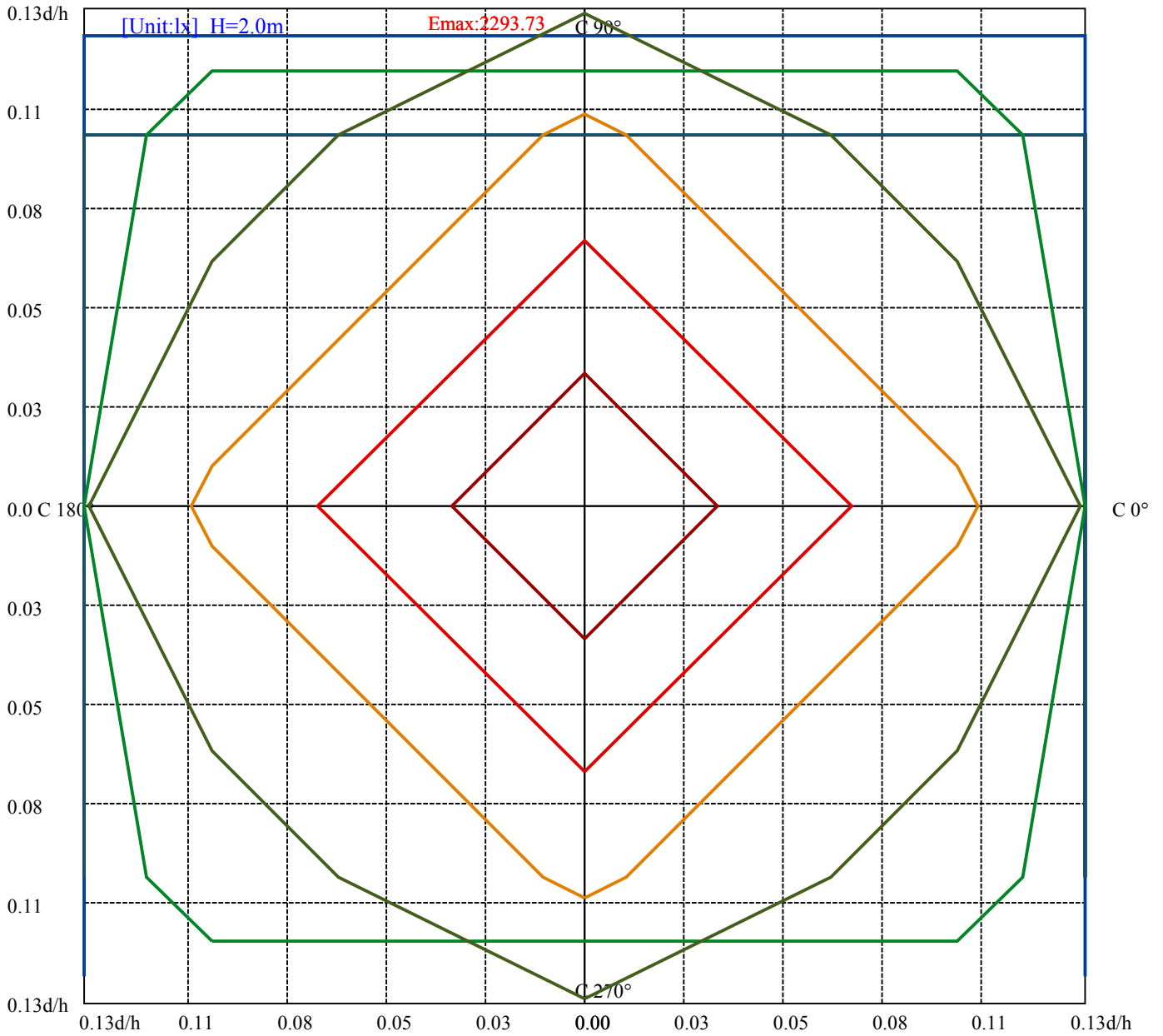
House

[Unit:cd]

Road

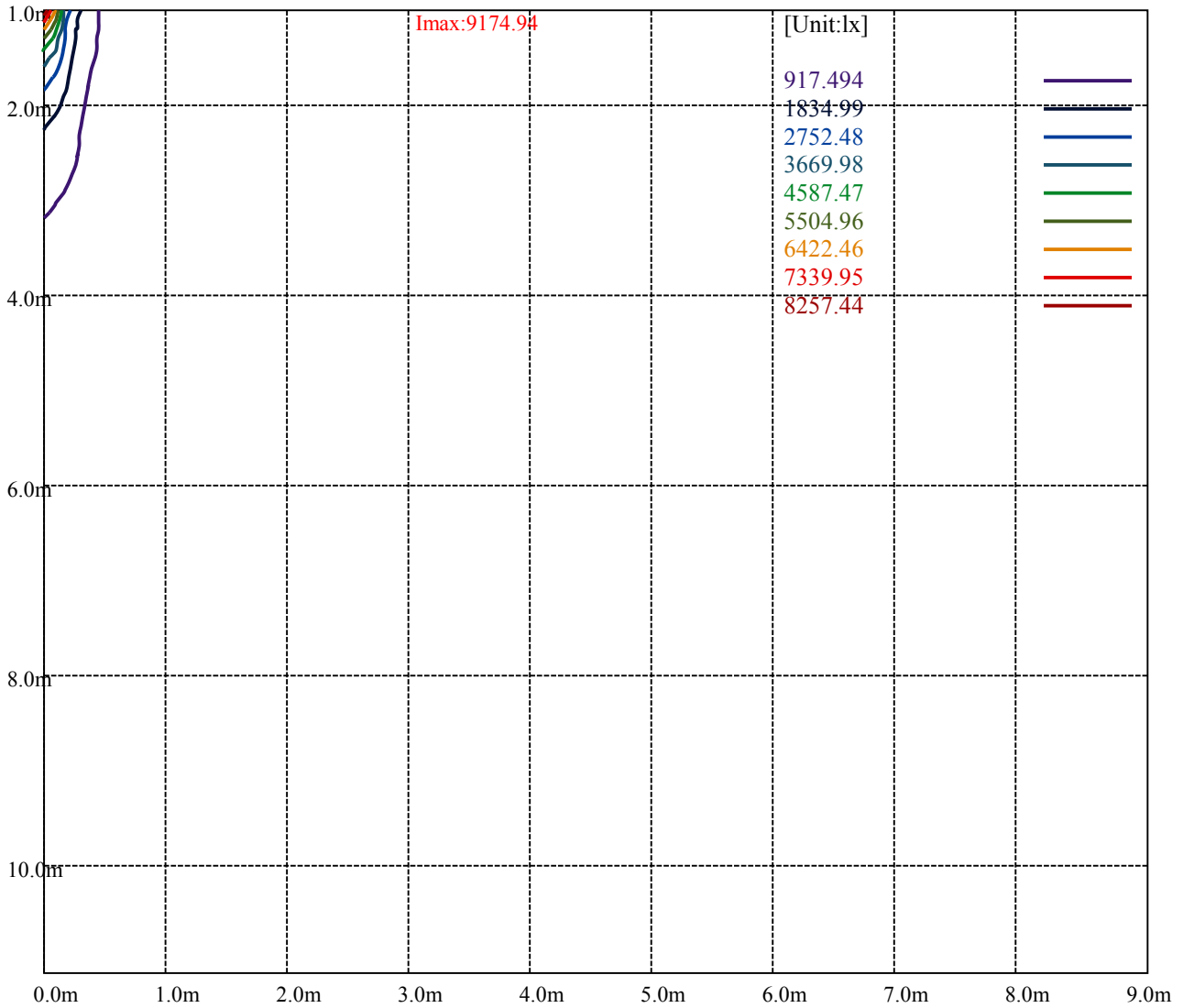
**Imax:9174.94**

(10%Imax) 917.494	—
(20%Imax) 1834.99	—
(30%Imax) 2752.48	—
(40%Imax) 3669.98	—
(50%Imax) 4587.47	—
(60%Imax) 5504.96	—
(70%Imax) 6422.46	—
(80%Imax) 7339.95	—
(90%Imax) 8257.44	—



- (10%Emax) 229.372
- (20%Emax) 458.745
- (30%Emax) 688.115
- (40%Emax) 917.4875
- (50%Emax) 1146.86
- (60%Emax) 1376.233
- (70%Emax) 1605.603
- (80%Emax) 1834.975
- (90%Emax) 2064.347





Luminance Table

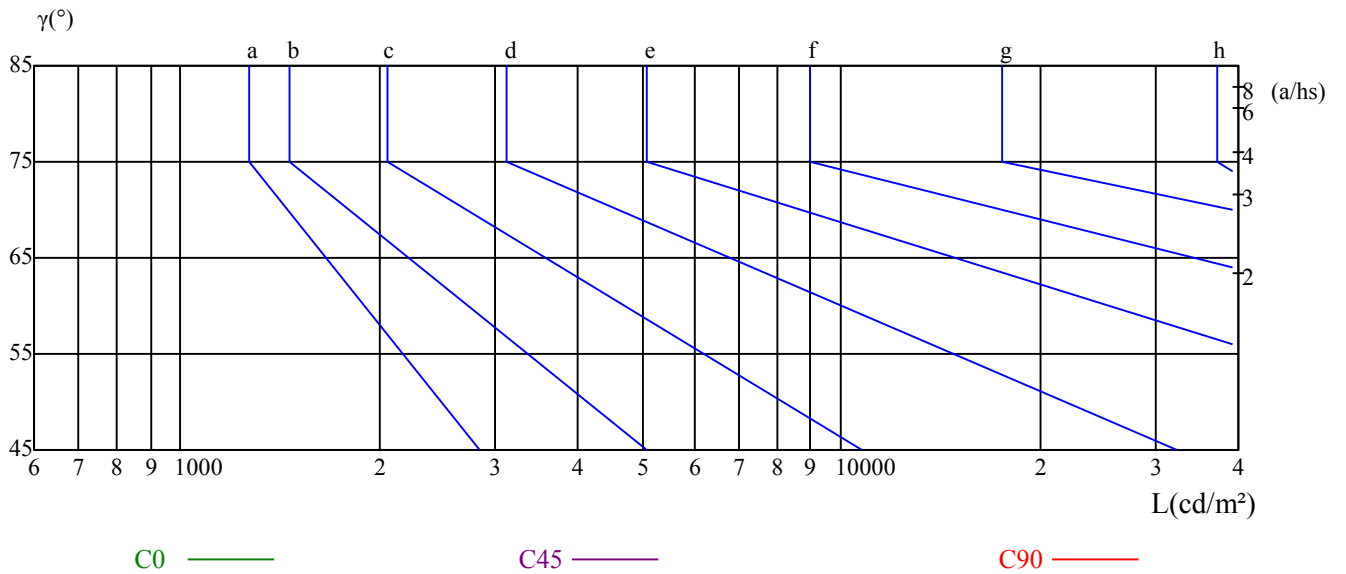
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

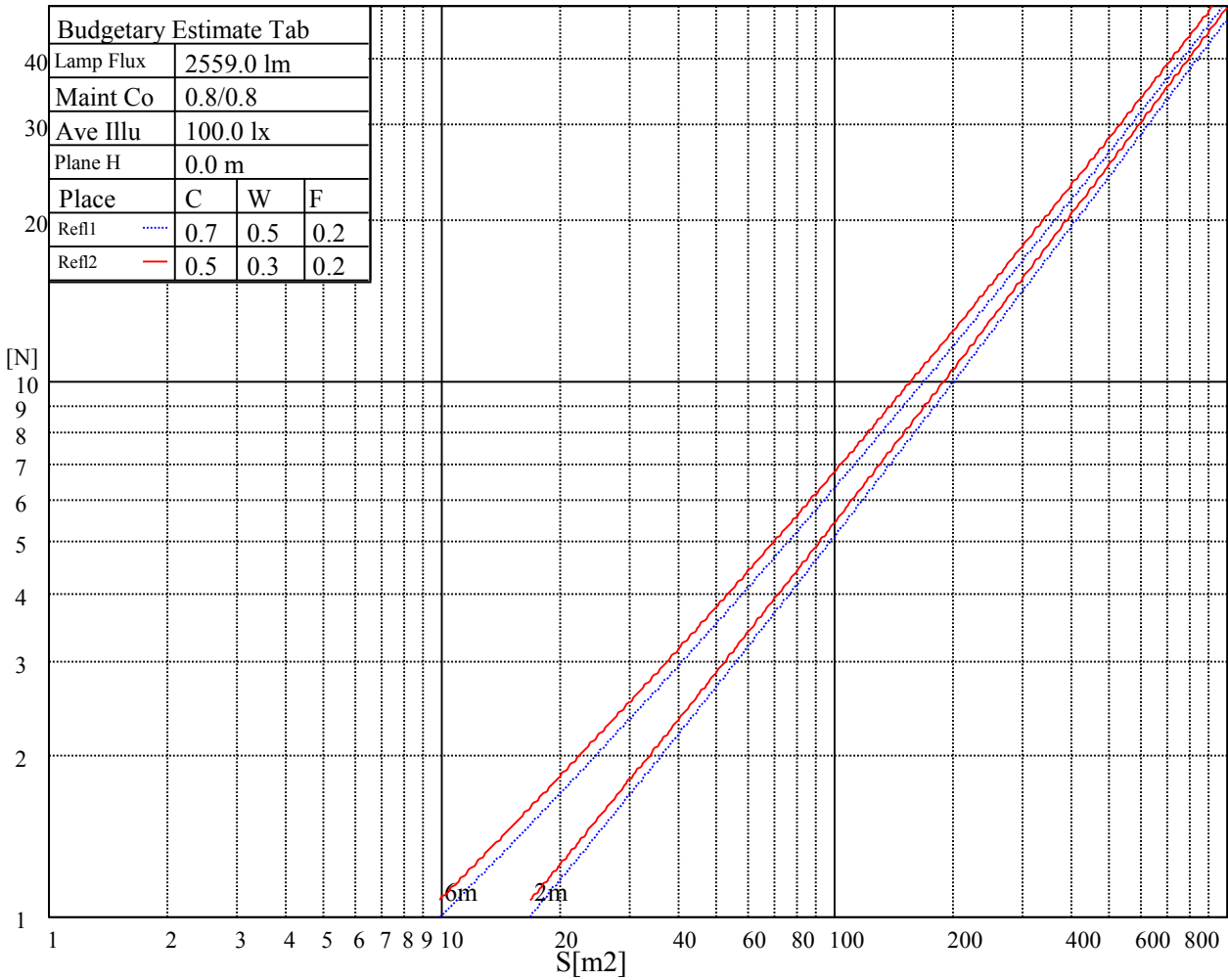
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

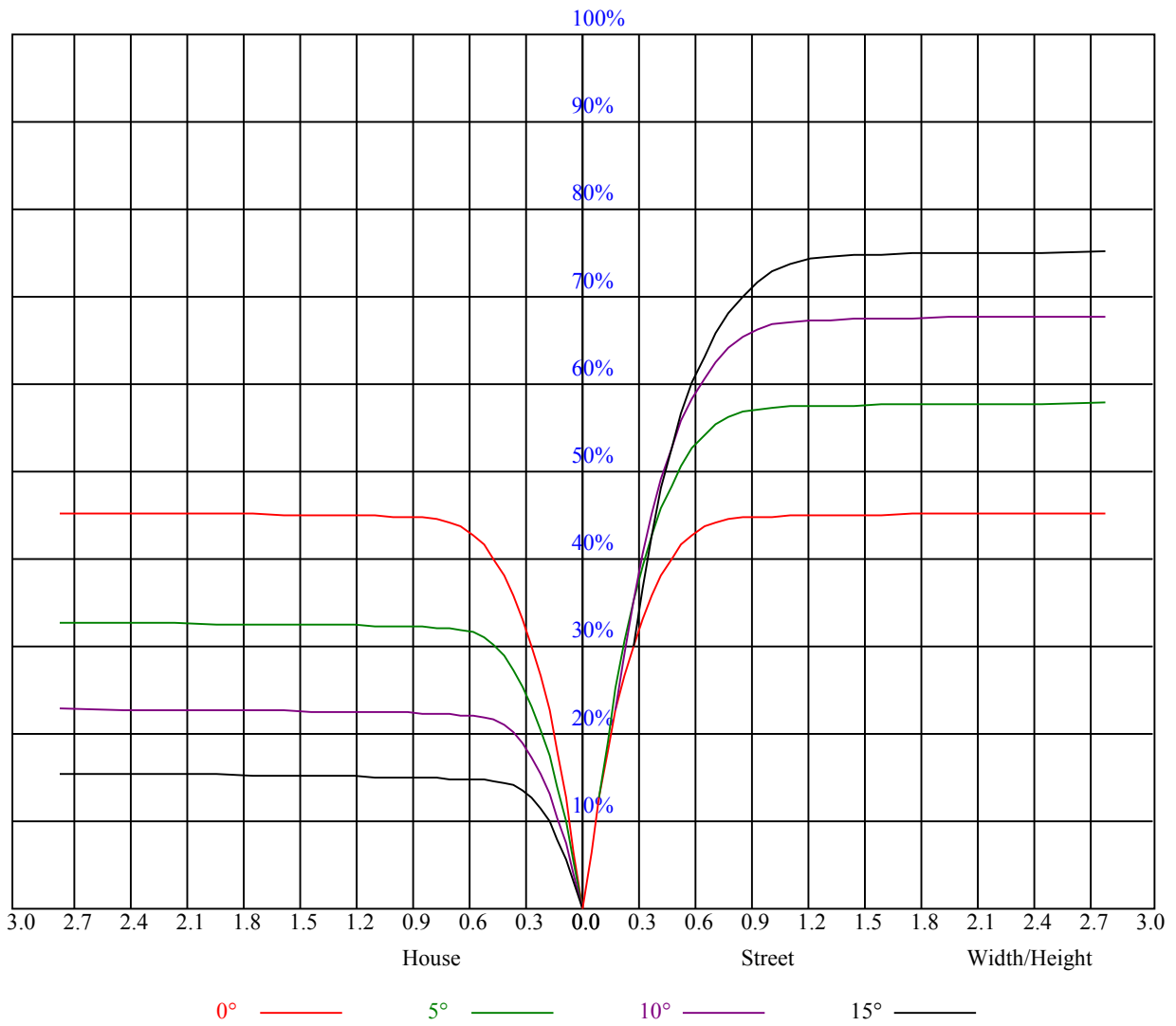
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.08	1.08	1.08	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.93
1	1.03	1.01	0.99	1.01	0.99	0.98	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88
2	0.97	0.94	0.91	0.96	0.93	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.88	0.86	0.85	0.83
3	0.92	0.88	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.84	0.82	0.80	0.79
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.75
5	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
6	0.79	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.68
7	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.65
8	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
9	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.60
10	0.67	0.62	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58



Intensity data(cd)

C/ $\gamma$ ( $^{\circ}$ )	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	9086.63	8486.44	4545.00	2941.31	2176.31	1580.06	1147.50	619.88	163.46
45.0	9187.88	7962.75	3952.13	2718.56	2001.38	1447.88	1091.81	515.25	57.88
90.0	9184.50	6347.81	3341.25	2448.56	1823.63	1329.19	964.69	327.26	42.41
135.0	9240.75	7113.38	3516.19	2541.94	1922.06	1378.13	962.44	320.06	45.45
180.0	9086.63	5929.88	3215.25	2412.56	1798.31	1221.75	829.74	242.44	38.76
225.0	9187.88	6297.75	3348.56	2466.00	1838.25	1351.69	952.93	318.15	43.43
270.0	9184.50	7873.88	4051.69	2757.38	2057.06	1509.19	1100.81	507.94	63.00
315.0	9240.75	7563.38	3928.50	2753.44	2061.56	1494.56	1109.25	475.20	51.53
360.0	9086.63	8486.44	4545.00	2941.31	2176.31	1580.06	1147.50	619.88	163.46
C/ $\gamma$ ( $^{\circ}$ )	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	29.42	18.68	14.68	12.49	11.42	10.91	10.69	10.52	10.46
45.0	27.56	18.06	14.23	12.38	11.36	10.91	10.63	10.46	10.41
90.0	24.24	17.27	13.84	12.21	11.25	10.80	10.58	10.46	10.35
135.0	24.92	17.61	14.12	12.32	11.31	10.86	10.63	10.46	10.35
180.0	21.71	16.03	13.44	12.04	11.25	10.86	10.63	10.46	10.35
225.0	23.40	17.21	14.18	12.26	11.31	10.86	10.58	10.41	10.35
270.0	27.96	18.00	14.40	12.60	11.53	10.97	10.69	10.46	10.35
315.0	25.43	17.33	14.01	12.26	11.36	10.91	10.63	10.52	10.41
360.0	29.42	18.68	14.68	12.49	11.42	10.91	10.69	10.52	10.46
C/ $\gamma$ ( $^{\circ}$ )	90.0								
0.0	10.35								
45.0	10.29								
90.0	10.29								
135.0	10.29								
180.0	10.35								
225.0	10.29								
270.0	10.29								
315.0	10.29								
360.0	10.35								