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## Nata

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LumCAT: 3-2099-M	
Luminaire: 92.70.136.00	
Report No: GC2017082804	Voltage(V): 36.7000
Test No: NT-0010	Current(A): 1.0000
LampCAT: CREE CXA3050	Power (W): 36.7000
Lamp flux(lm): 3994.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 3614.60  
Efficiency(%): 90.50%  
Lumens(lm)/Power(W): 98.49  
Central intensity(cd): 14957.450  
Maximum intensity(cd): 14957.450  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=22.0  
                                  [C90/270]Total=22.0  
Field angle(10%Imax): [C0/180]Total=51.6  
                                  [C90/270]Total=51.6  
Maximum s/h(1/2): C0\_180=0.37 C90\_270=0.37  
Maximum s/h(1/4): C0\_180=0.37 C90\_270=0.37  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 90.50%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.725%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2017/8/28  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

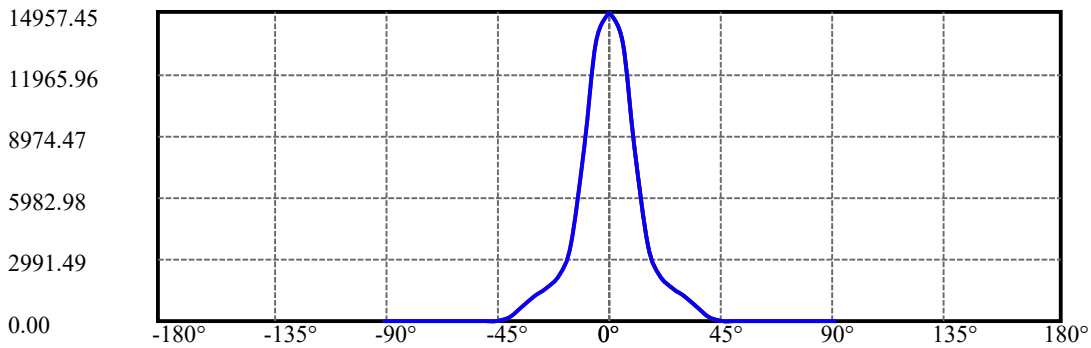
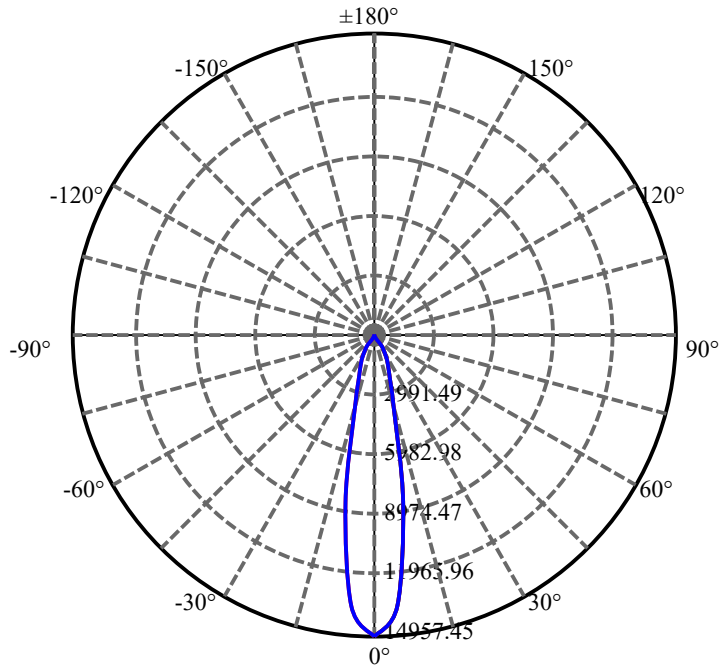
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14957.447	0.000	0	.000%	.000%
5.0	13507.055	340.285	340.285	8.520%	9.414%
10.0	8412.549	784.133	1124.418	19.633%	31.108%
15.0	3677.699	717.185	1841.604	17.957%	50.949%
20.0	2254.628	488.907	2330.511	12.241%	64.475%
25.0	1555.068	399.567	2730.078	10.004%	75.529%
30.0	1187.222	347.039	3077.117	8.689%	85.130%
35.0	689.272	276.327	3353.444	6.919%	92.775%
40.0	212.738	150.493	3503.937	3.768%	96.939%
45.0	20.330	43.154	3547.092	1.080%	98.132%
50.0	16.600	7.462	3554.554	.187%	98.339%
55.0	15.423	6.963	3561.516	.174%	98.531%
60.0	14.851	6.998	3568.514	.175%	98.725%
65.0	14.734	7.192	3575.706	.180%	98.924%
70.0	15.258	7.594	3583.301	.190%	99.134%
75.0	14.900	7.883	3591.183	.197%	99.352%
80.0	14.528	7.874	3599.057	.197%	99.570%
85.0	14.322	7.839	3606.896	.196%	99.787%
90.0	13.805	7.701	3614.598	.193%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	3077.12	77.04%	85.13%
0-40	3503.94	87.73%	96.94%
0-60	3568.51	89.35%	98.73%
0-90	3606.90	90.31%	99.79%
0-120	3606.90	90.31%	99.79%
0-180	3614.60	90.50%	100.00%
60-90	45.38	1.14%	1.26%
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%
0-27.33	2891.68	72.40%	80.00%

ZONAL LUMEN SUMMARY

0-10	1124.42
10-20	1206.09
20-30	746.61
30-40	426.82
40-50	50.62
50-60	13.96
60-70	14.79
70-80	15.76
80-90	7.84
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: —————

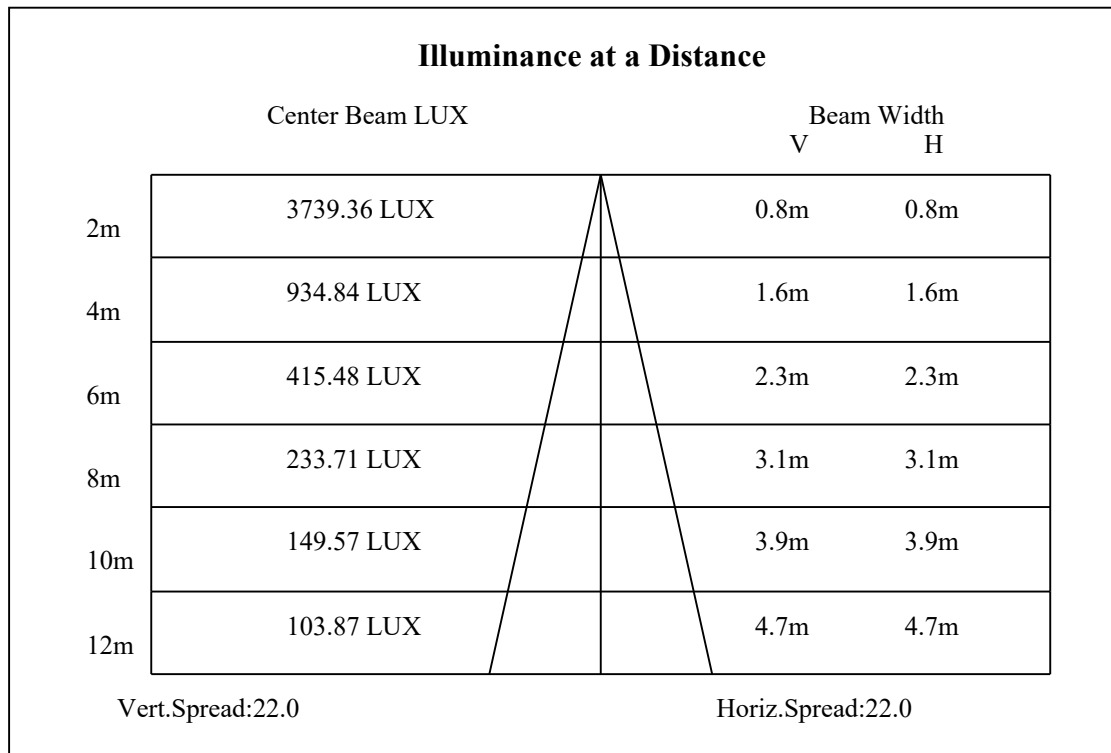
C90/C270: —————

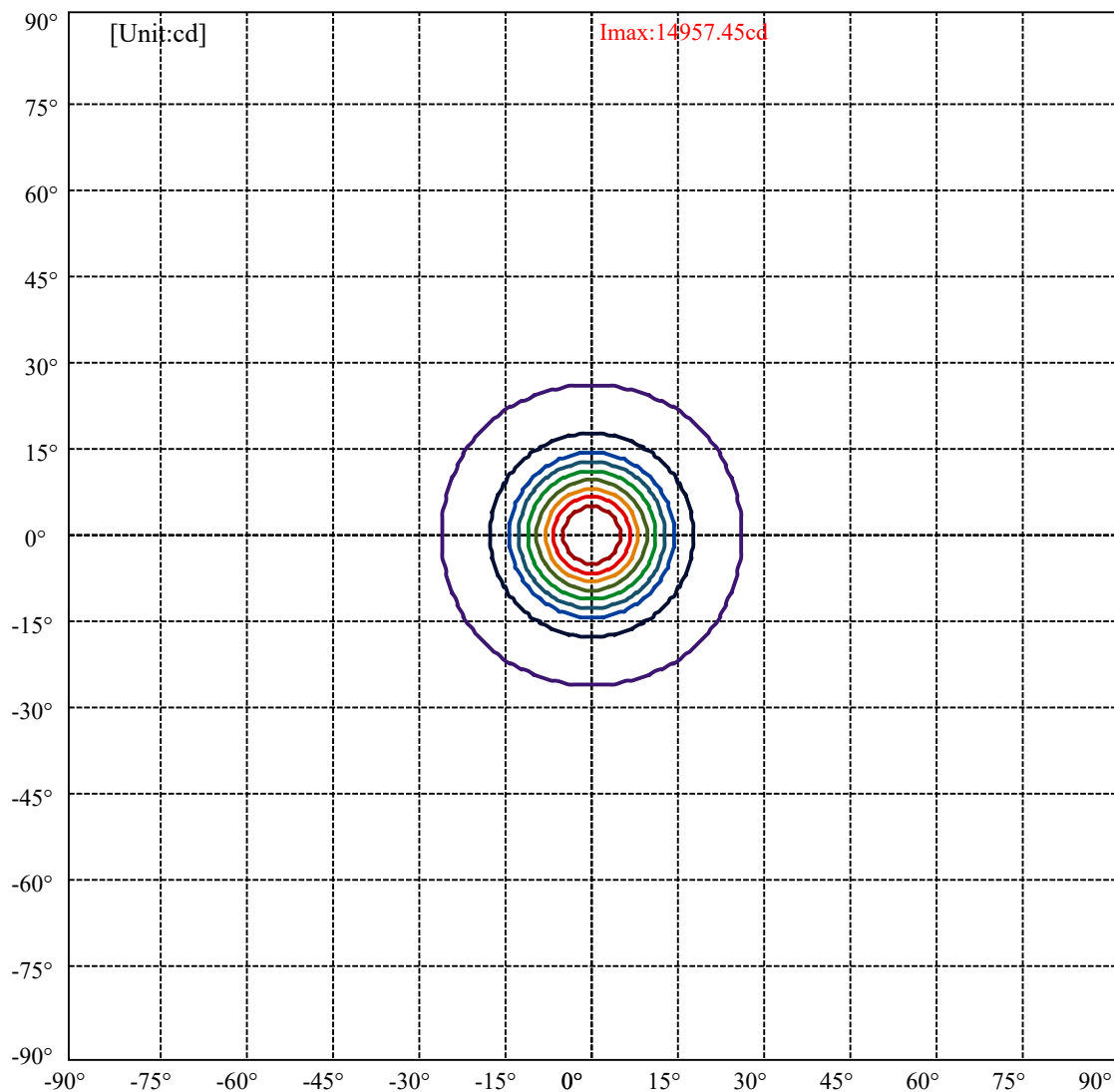
Field angle(10%Imax):C0/180Left:25.8 Right:25.8

:C90/270Left:25.8 Right:25.8

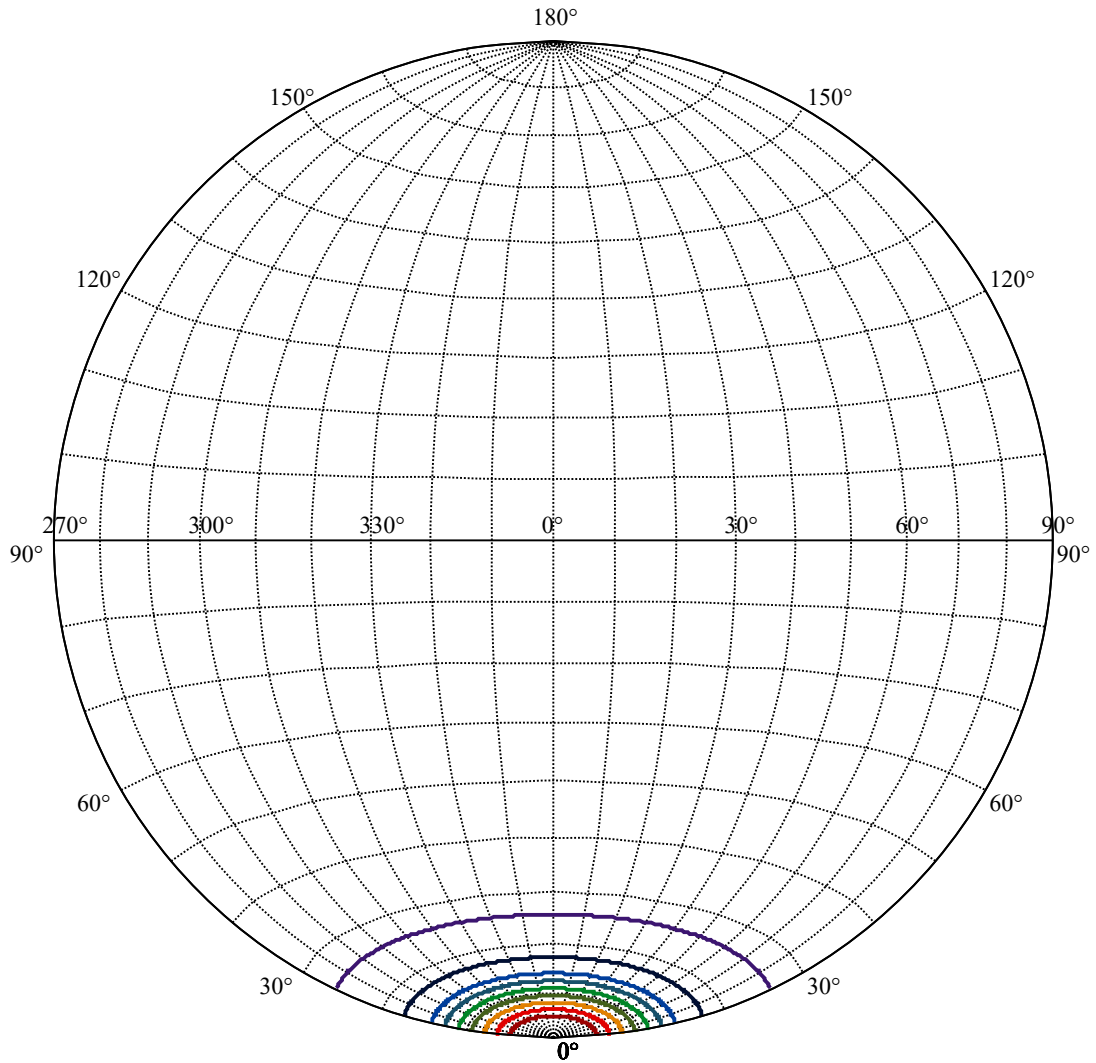
Beam Angle(50%Imax):C0/180Left:11.0 Right:11.0

:C90/270Left:11.0 Right:11.0





(10%Imax) 1495.74	—
(20%Imax) 2991.49	—
(30%Imax) 4487.23	—
(40%Imax) 5982.98	—
(50%Imax) 7478.72	—
(60%Imax) 8974.47	—
(70%Imax) 10470.2	—
(80%Imax) 11966	—
(90%Imax) 13461.7	—



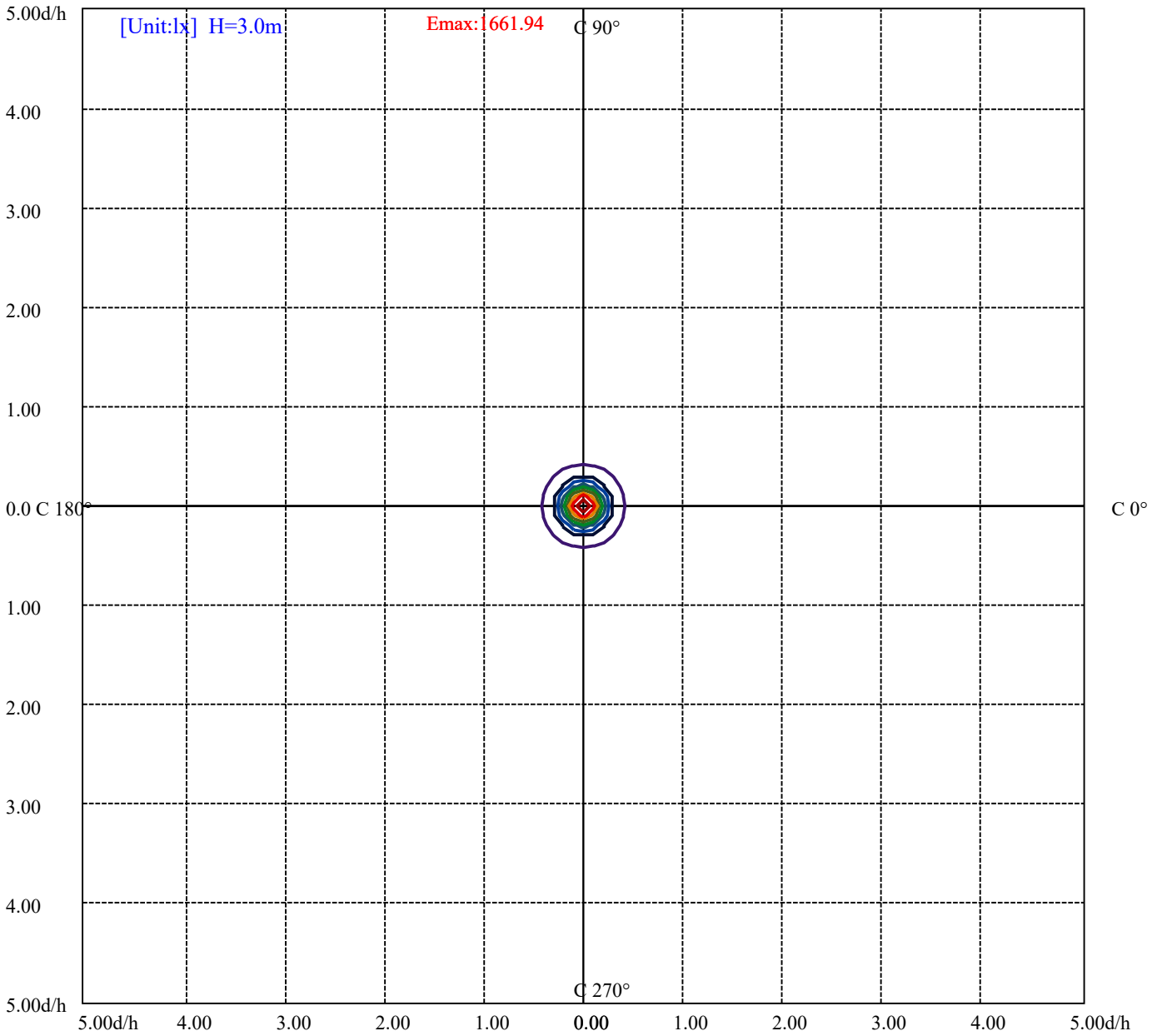
House

[Unit:cd]

Road

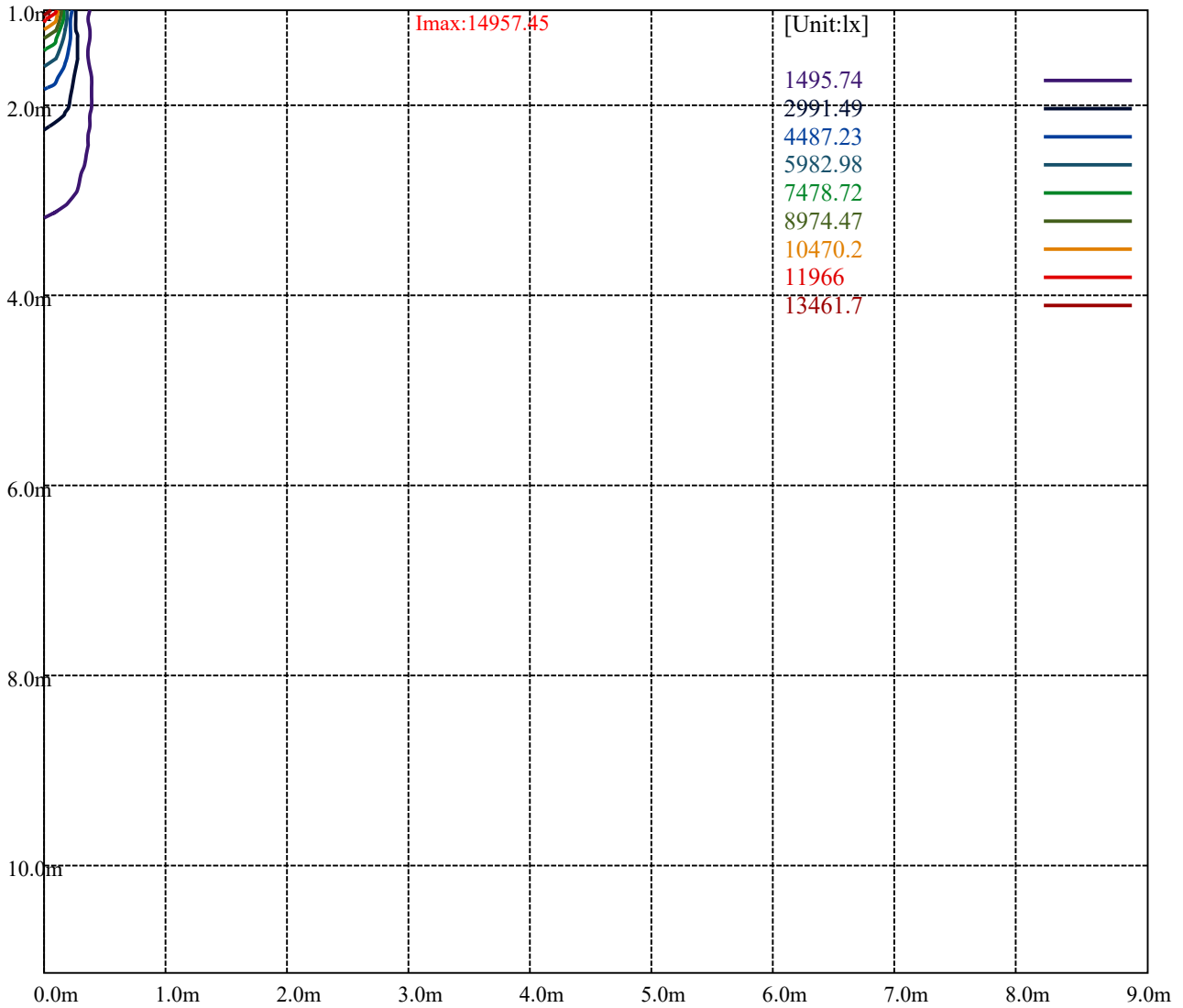
Imax:14957.45

(10%Imax)	1495.74	—
(20%Imax)	2991.49	—
(30%Imax)	4487.23	—
(40%Imax)	5982.98	—
(50%Imax)	7478.72	—
(60%Imax)	8974.47	—
(70%Imax)	10470.2	—
(80%Imax)	11966	—
(90%Imax)	13461.7	—



(10%Emax) 166.1933	—
(20%Emax) 332.3867	—
(30%Emax) 498.58	—
(40%Emax) 664.7733	—
(50%Emax) 830.9667	—
(60%Emax) 997.16	—
(70%Emax) 1163.356	—
(80%Emax) 1329.544	—
(90%Emax) 1495.745	—





Luminance Table

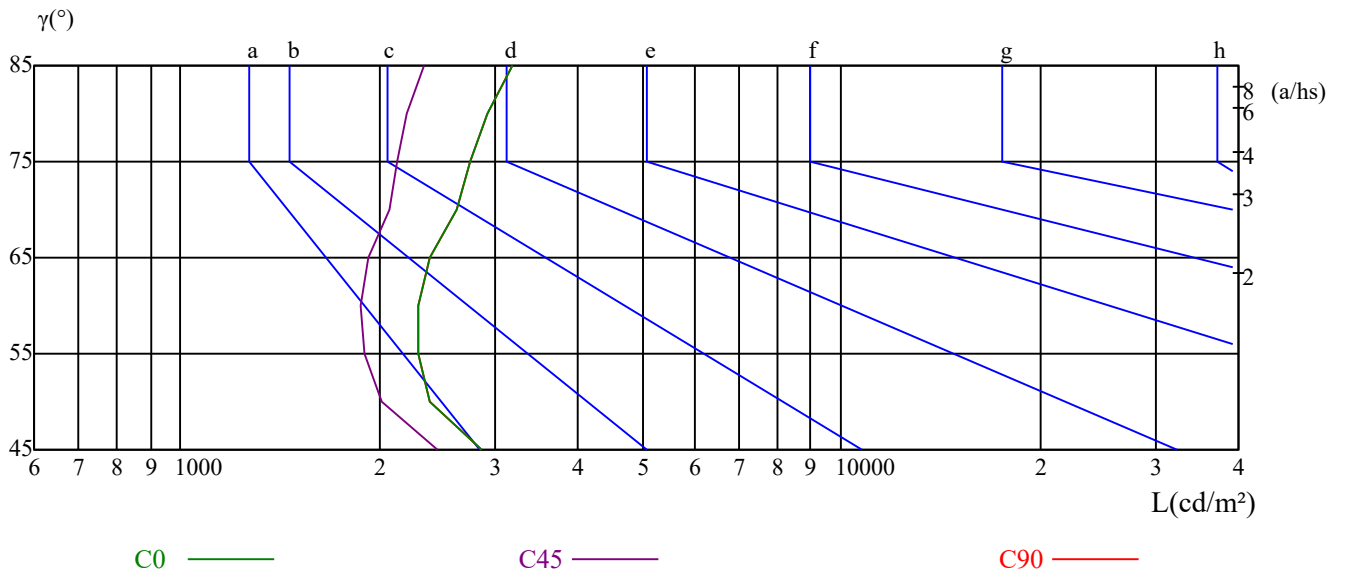
$\gamma$	45	50	55	60	65	70	75	80	85
C0	2857	2386	2285	2289	2386	2622	2750	2921	3187
C45	2455	2019	1905	1877	1921	2071	2126	2202	2335
C90	2857	2386	2285	2289	2386	2622	2750	2921	3187

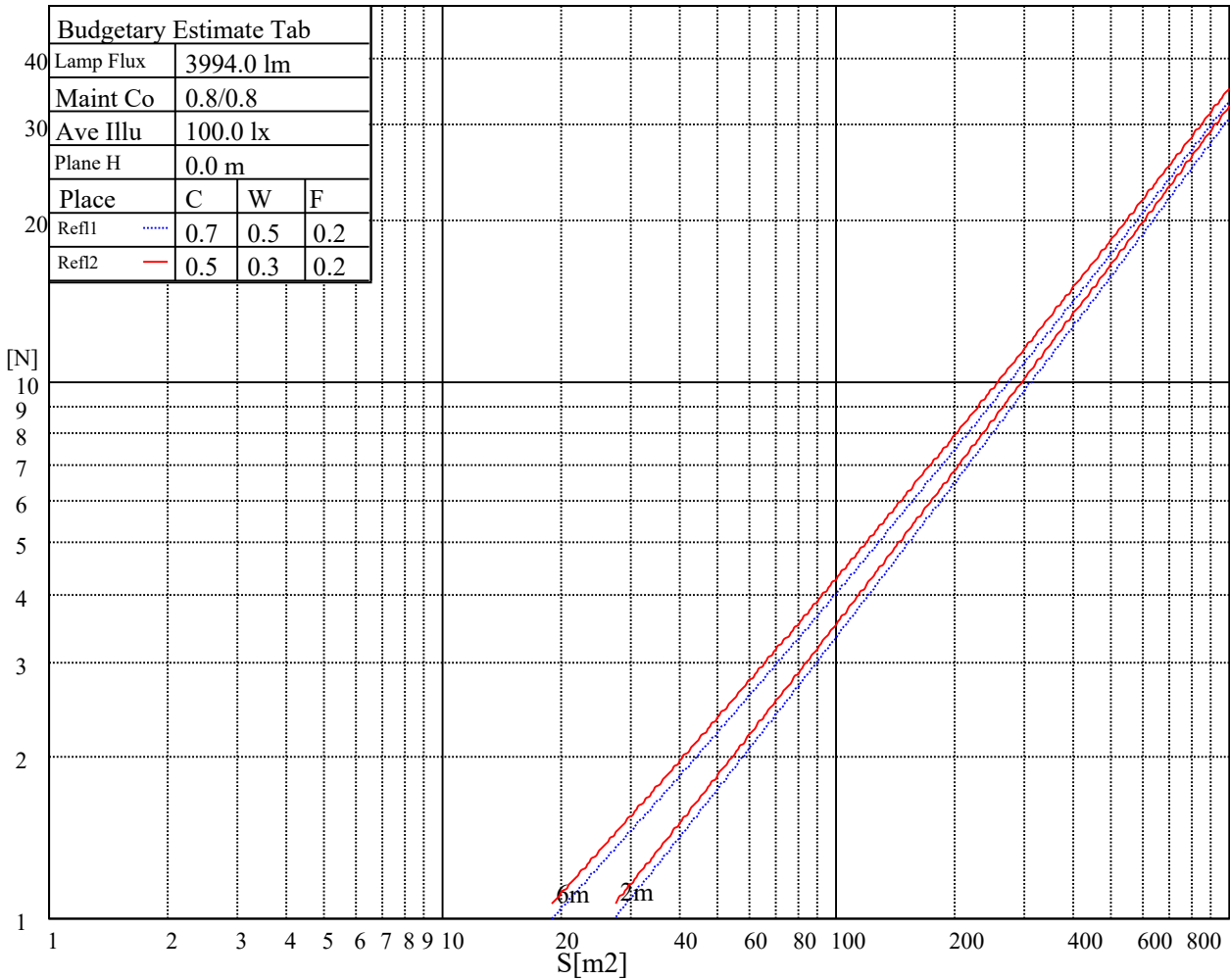
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5731	5731	5731	9462	9462	9462	27009	27009	27009

Glare Table

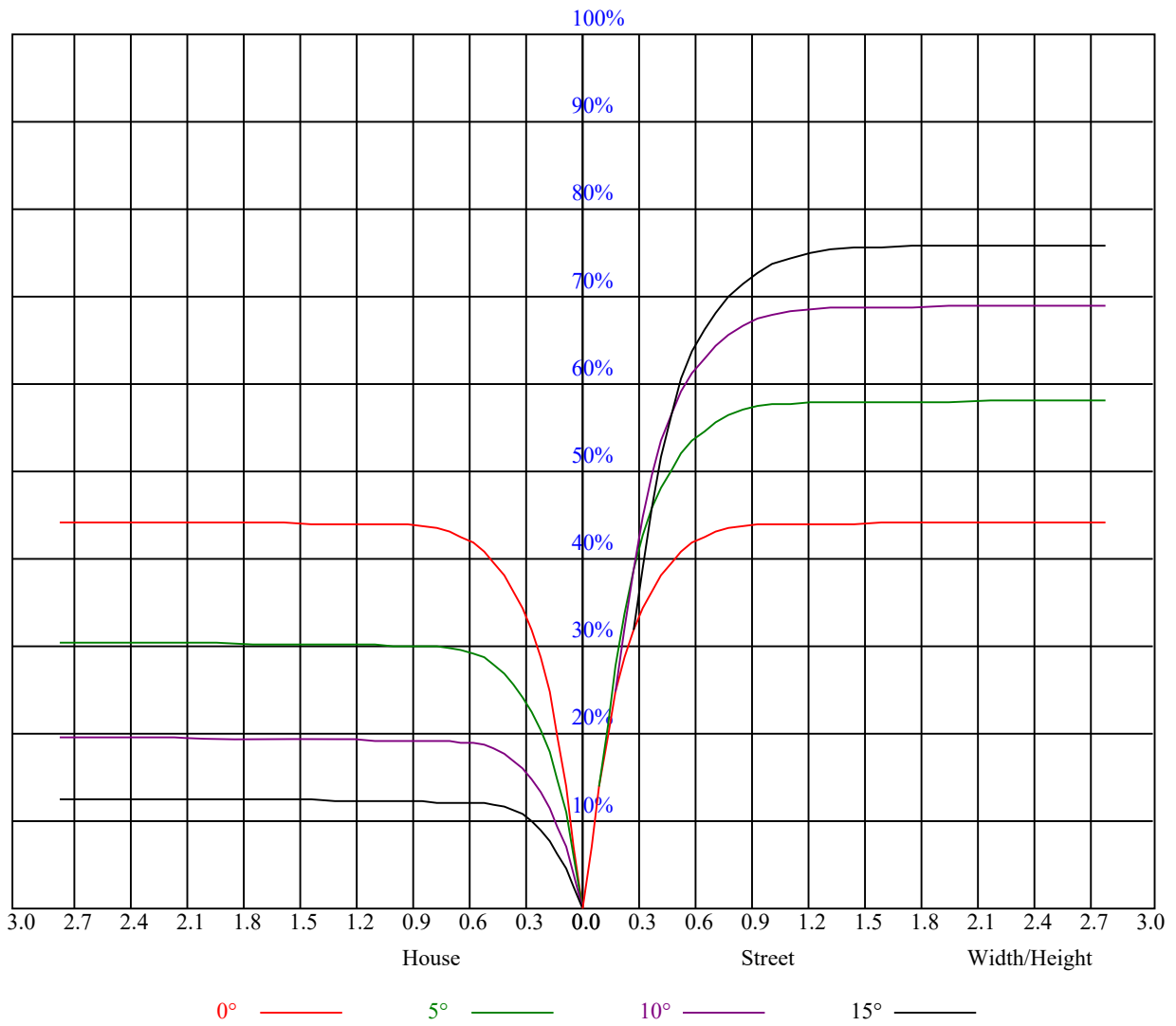
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.01	0.99	0.98	0.99	0.98	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.88	0.86
2	0.96	0.93	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.84	0.87	0.85	0.82	0.85	0.83	0.81	0.83	0.81	0.80	0.79
4	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.81	0.78	0.76	0.75
5	0.83	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.72
6	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.71	0.75	0.73	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.65	0.64
9	0.71	0.67	0.64	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
10	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60



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	14969.84	14639.50	10207.46	4272.38	2846.42	1635.18	1333.47	803.82	291.80
45.0	14936.80	14375.23	9981.73	4035.63	2468.73	1587.28	1286.12	753.17	297.30
90.0	14958.82	13758.59	7482.16	3455.34	2037.64	1508.55	1046.90	635.24	123.93
135.0	14964.33	13885.22	8225.43	3716.31	2151.05	1561.95	1269.05	703.07	280.79
180.0	14969.84	10623.13	6555.57	3155.83	1946.79	1478.26	1082.46	566.14	98.99
225.0	14936.80	12514.32	7440.32	3334.22	2026.63	1536.07	1089.73	618.17	141.94
270.0	14958.82	14138.48	9051.27	3886.98	2478.64	1593.88	1292.72	774.64	297.86
315.0	14964.33	14121.97	8356.46	3564.90	2081.13	1539.38	1097.33	659.91	169.30
360.0	14969.84	14639.50	10207.46	4272.38	2846.42	1635.18	1333.47	803.82	291.80

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	25.77	16.90	15.58	14.98	14.53	14.31	14.15	14.04	13.98
45.0	21.64	16.57	15.42	14.87	14.48	14.26	14.15	14.09	14.09
90.0	18.06	16.19	15.14	14.65	14.37	14.15	13.98	13.93	13.98
135.0	19.60	16.79	15.47	14.92	14.53	14.31	14.42	14.31	14.26
180.0	17.89	16.24	15.25	14.81	15.03	17.18	16.96	16.24	15.53
225.0	18.88	16.30	15.20	14.70	15.91	18.17	15.69	14.87	14.59
270.0	21.25	17.12	15.75	15.03	14.53	15.47	15.75	14.70	14.20
315.0	19.55	16.68	15.58	14.87	14.48	14.20	14.09	14.04	13.93
360.0	25.77	16.90	15.58	14.98	14.53	14.31	14.15	14.04	13.98

C/γ(°)	90.0
0.0	13.82
45.0	13.82
90.0	13.76
135.0	13.76
180.0	13.82
225.0	13.82
270.0	13.82
315.0	13.82
360.0	13.82