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Nata

LumCAT: 1-0914-S	
Luminaire: 92.70.192.000	
Report No: 220325-B004	Voltage(V): 34.8400
Test No: 220325-C004	Current(A): 0.2320
LampCAT: CITIZEN CLU028	Power (W): 8.0820
Lamp flux(lm): 1024.6	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 111	Width(mm): 111
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 840.47
Efficiency(%): 82.03%
Lumens(lm)/Power(W): 103.99
Central intensity(cd): 1915.529
Maximum intensity(cd): 1915.529
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=37.5
 [C90/270]Total=37.5
Field angle(10%Imax): [C0/180]Total=63.3
 [C90/270]Total=63.3
Maximum s/h(1/2): C0_180=0.61 C90_270=0.61
Maximum s/h(1/4): C0_180=0.62 C90_270=0.62
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.03%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.437%

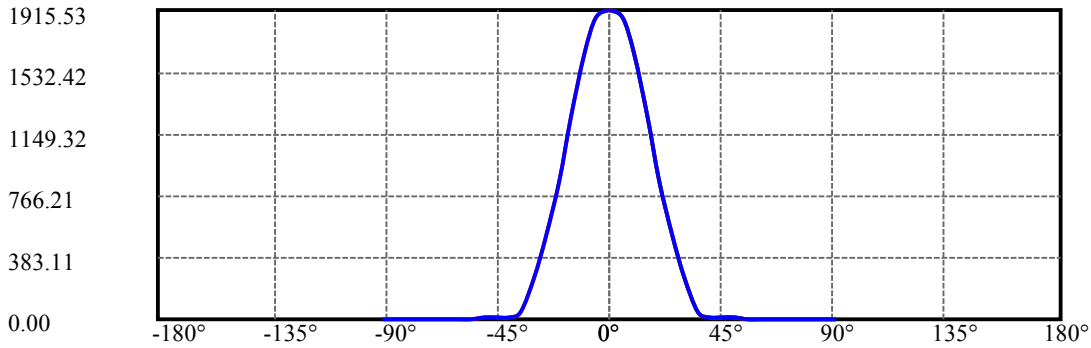
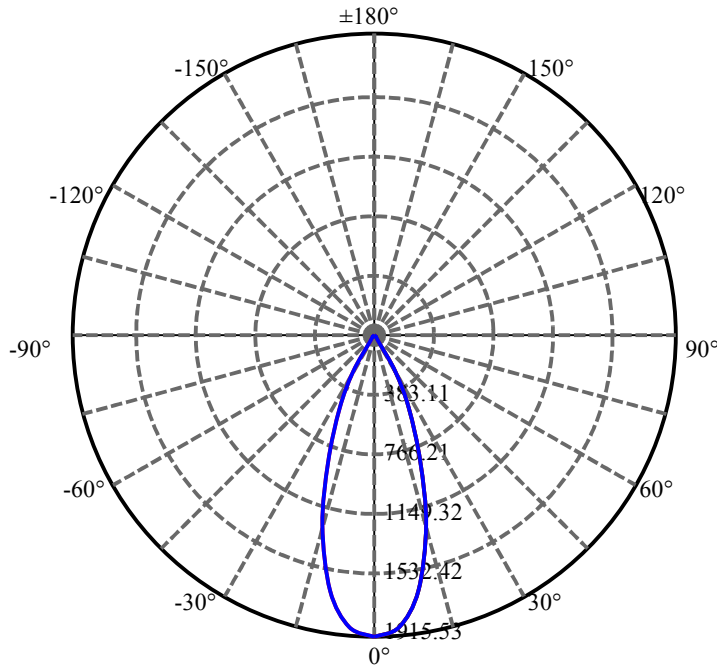
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1915.529	0.000	0	.000%	.000%
5.0	1865.560	45.202	45.202	4.412%	5.378%
10.0	1647.462	125.672	170.874	12.265%	20.331%
15.0	1252.025	171.996	342.869	16.786%	40.795%
20.0	861.988	174.224	517.094	17.004%	61.524%
25.0	510.223	143.920	661.013	14.046%	78.648%
30.0	261.143	97.617	758.63	9.527%	90.262%
35.0	50.334	45.867	804.497	4.477%	95.720%
40.0	12.951	10.559	815.056	1.031%	96.976%
45.0	8.373	3.948	819.004	.385%	97.446%
50.0	6.782	3.062	822.067	.299%	97.810%
55.0	5.789	2.733	824.8	.267%	98.135%
60.0	5.169	2.533	827.333	.247%	98.437%
65.0	4.706	2.400	829.733	.234%	98.722%
70.0	4.414	2.309	832.042	.225%	98.997%
75.0	4.168	2.243	834.285	.219%	99.264%
80.0	3.951	2.172	836.458	.212%	99.522%
85.0	3.675	2.072	838.53	.202%	99.769%
90.0	3.421	1.943	840.473	.190%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	758.63	74.04%	90.26%
0-40	815.06	79.55%	96.98%
0-60	827.33	80.75%	98.44%
0-90	838.53	81.84%	99.77%
0-120	838.53	81.84%	99.77%
0-180	840.47	82.03%	100.00%
60-90	13.73	1.34%	1.63%
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%
0-25.58	672.38	65.62%	80.00%

ZONAL LUMEN SUMMARY

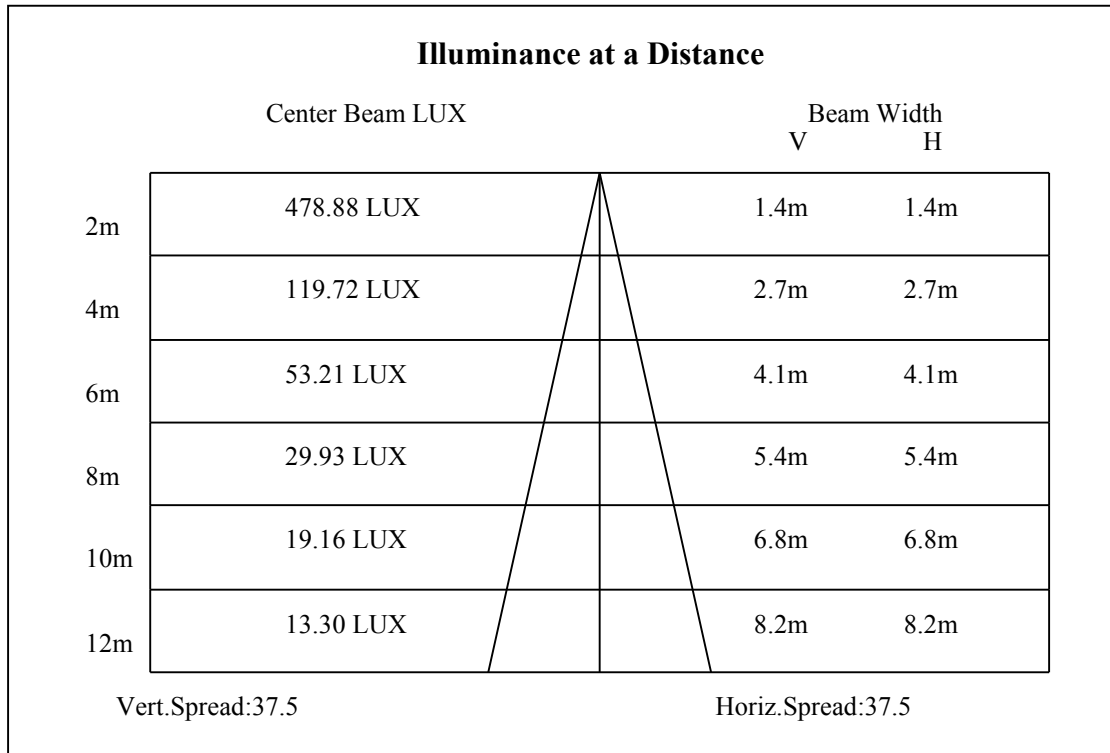
0-10	170.87
10-20	346.22
20-30	241.54
30-40	56.43
40-50	7.01
50-60	5.27
60-70	4.71
70-80	4.42
80-90	2.07
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

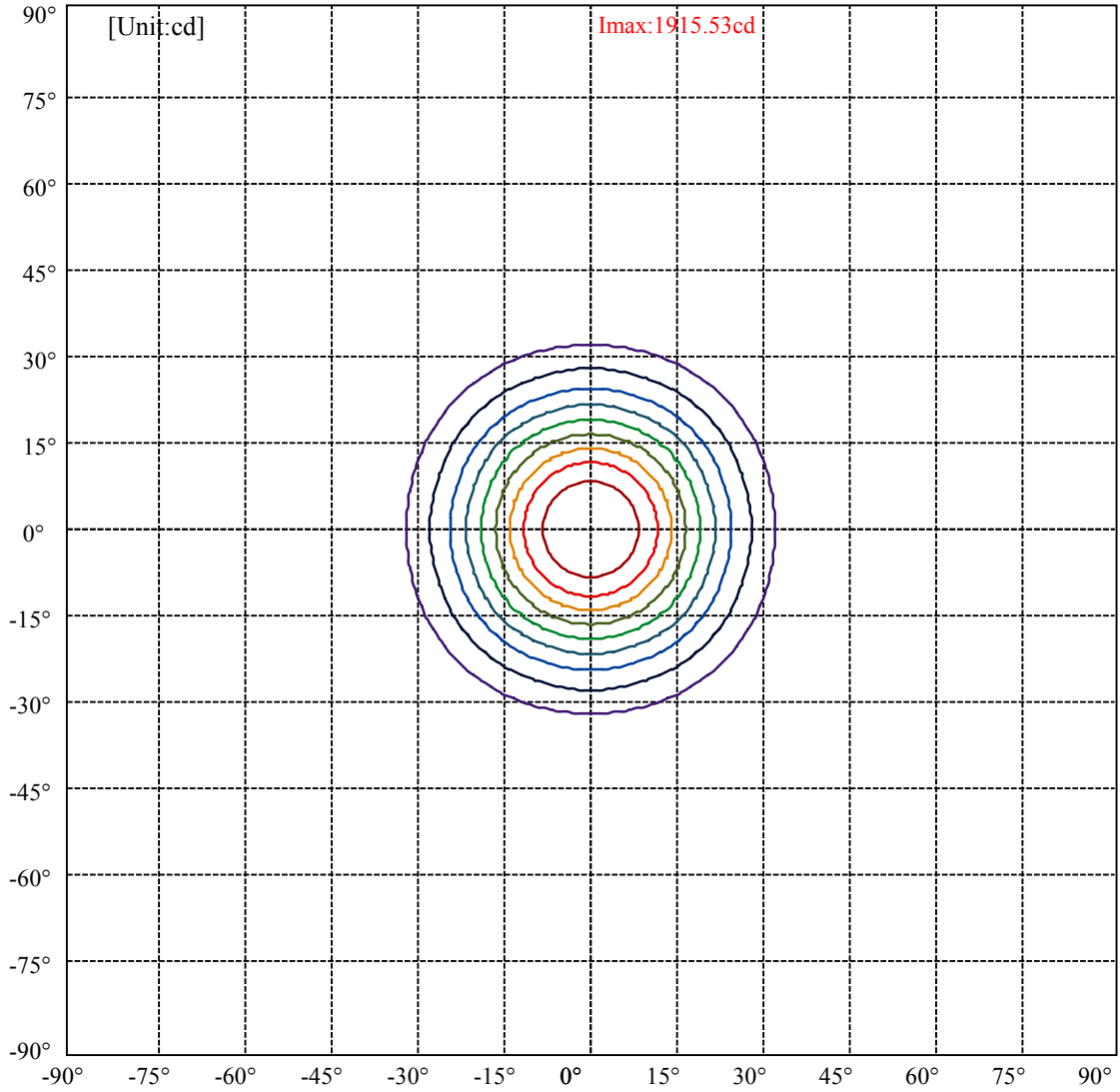


C0(Max): ———
C0/C180: ———
C90/C270: ———

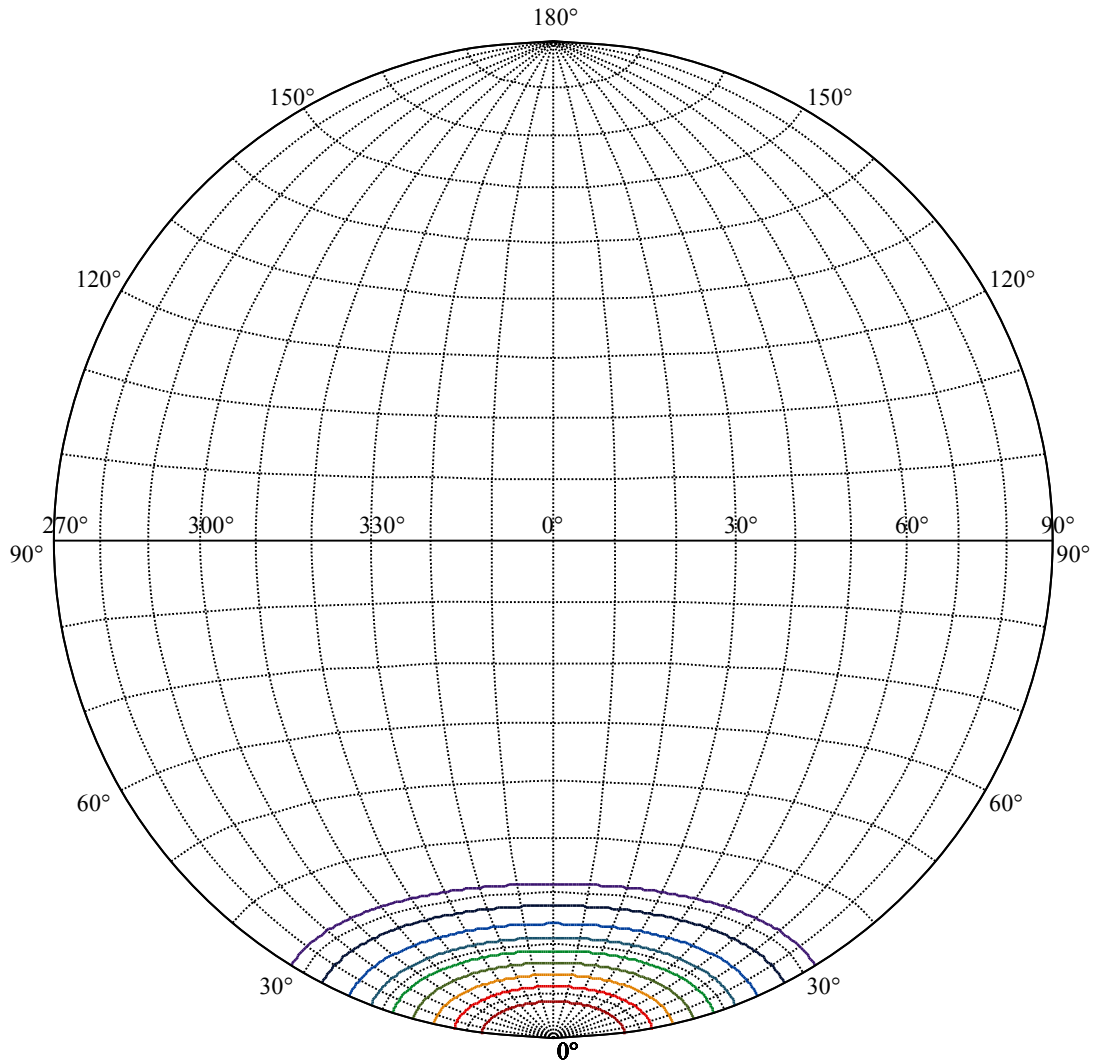
Field angle(10%I_{max}):C0/180Left:31.7 Right:31.7
:C90/270Left:31.7 Right:31.7

Beam Angle(50%I_{max}):C0/180Left:18.8 Right:18.8
:C90/270Left:18.8 Right:18.8





(10%Imax) 191.553	—
(20%Imax) 383.106	—
(30%Imax) 574.659	—
(40%Imax) 766.211	—
(50%Imax) 957.764	—
(60%Imax) 1149.32	—
(70%Imax) 1340.87	—
(80%Imax) 1532.42	—
(90%Imax) 1723.98	—



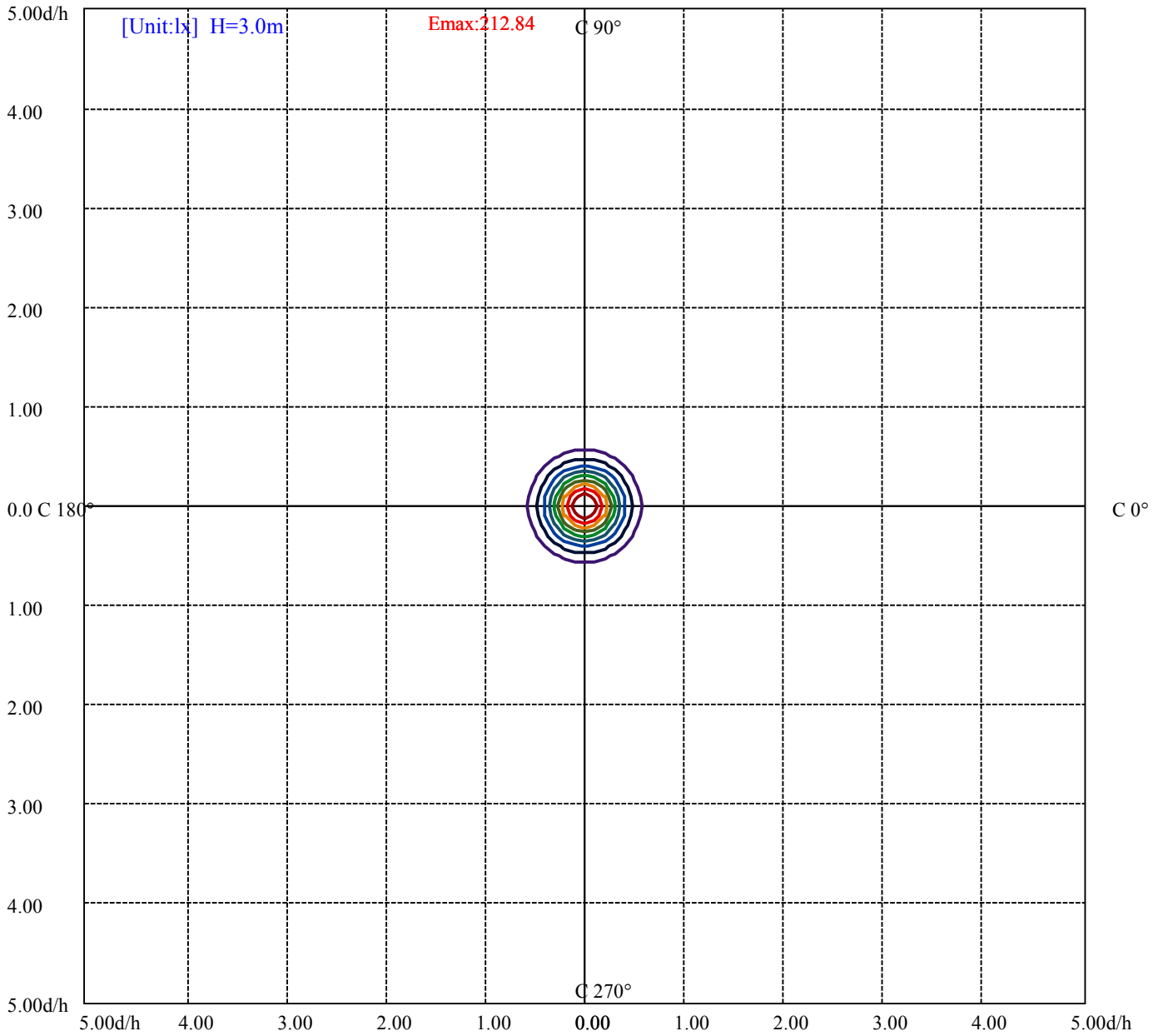
House

[Unit:cd]

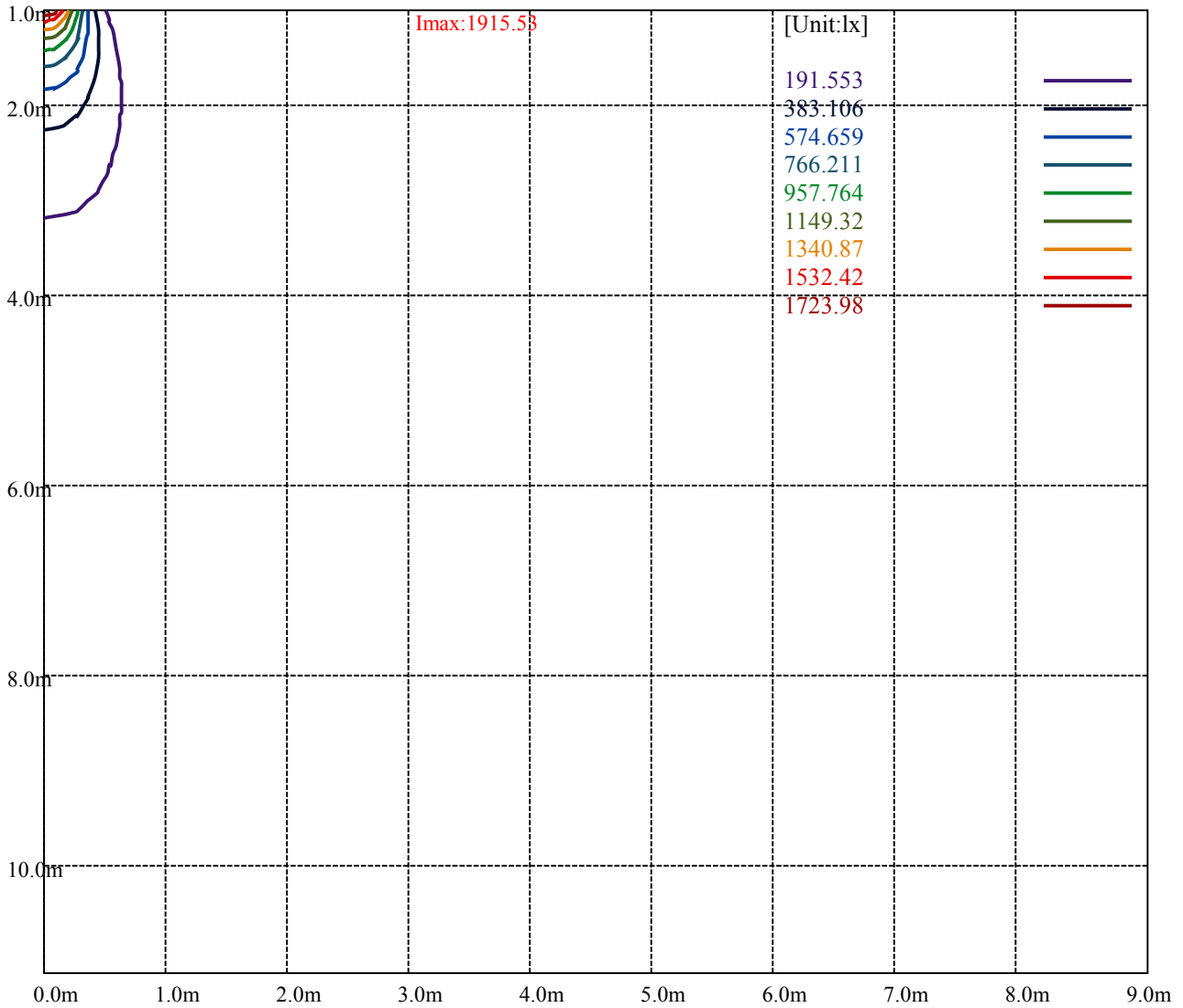
Road

Imax:1915.53

(10%Imax) 191.553	—
(20%Imax) 383.106	—
(30%Imax) 574.659	—
(40%Imax) 766.211	—
(50%Imax) 957.764	—
(60%Imax) 1149.32	—
(70%Imax) 1340.87	—
(80%Imax) 1532.42	—
(90%Imax) 1723.98	—



(10%Emax) 21.28367	—
(20%Emax) 42.56722	—
(30%Emax) 63.85089	—
(40%Emax) 85.13455	—
(50%Emax) 106.4182	—
(60%Emax) 127.7022	—
(70%Emax) 148.9855	—
(80%Emax) 170.2689	—
(90%Emax) 191.5522	—



Luminance Table

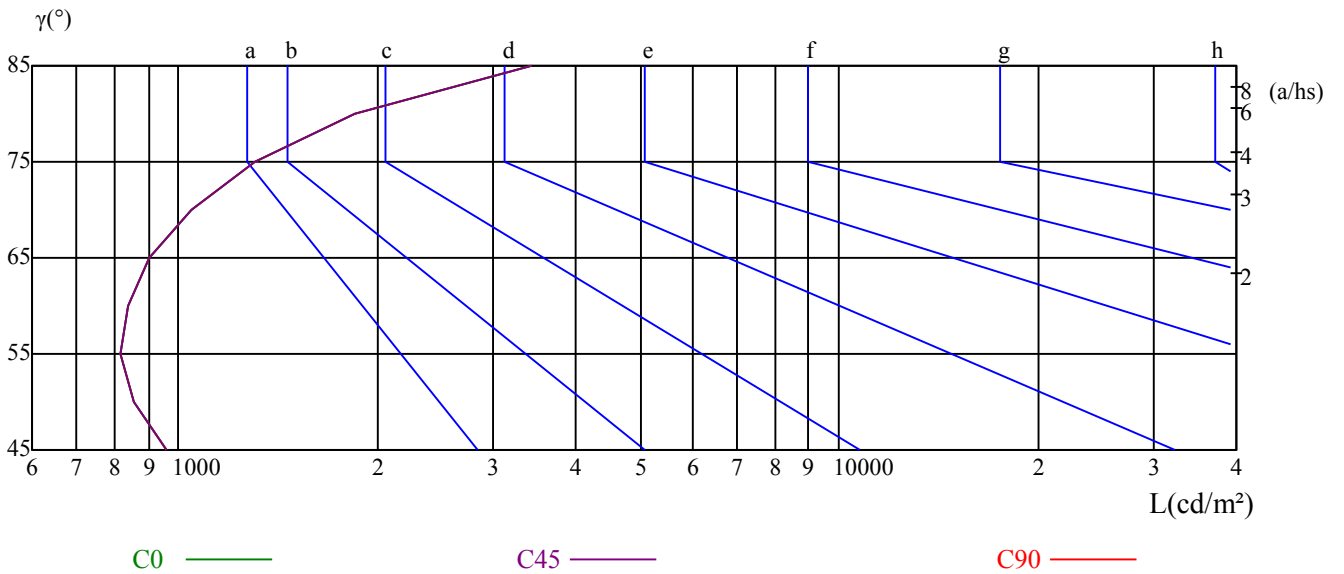
γ	45	50	55	60	65	70	75	80	85
C0	961	856	819	839	904	1048	1307	1847	3422
C45	961	856	819	839	904	1048	1307	1847	3422
C90	961	856	819	839	904	1048	1307	1847	3422

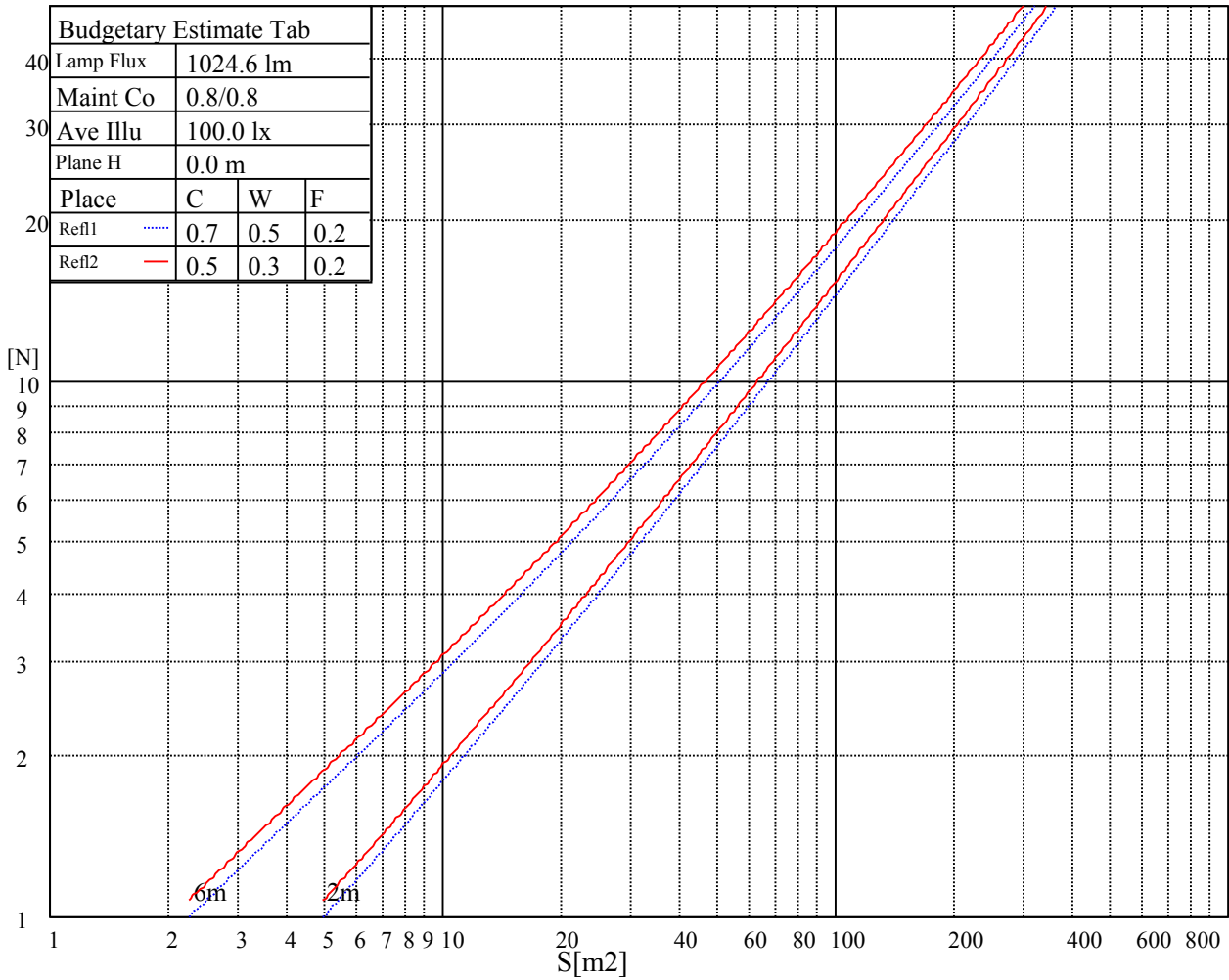
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
904	904	904	1307	1307	1307	3422	3422	3422

Glare Table

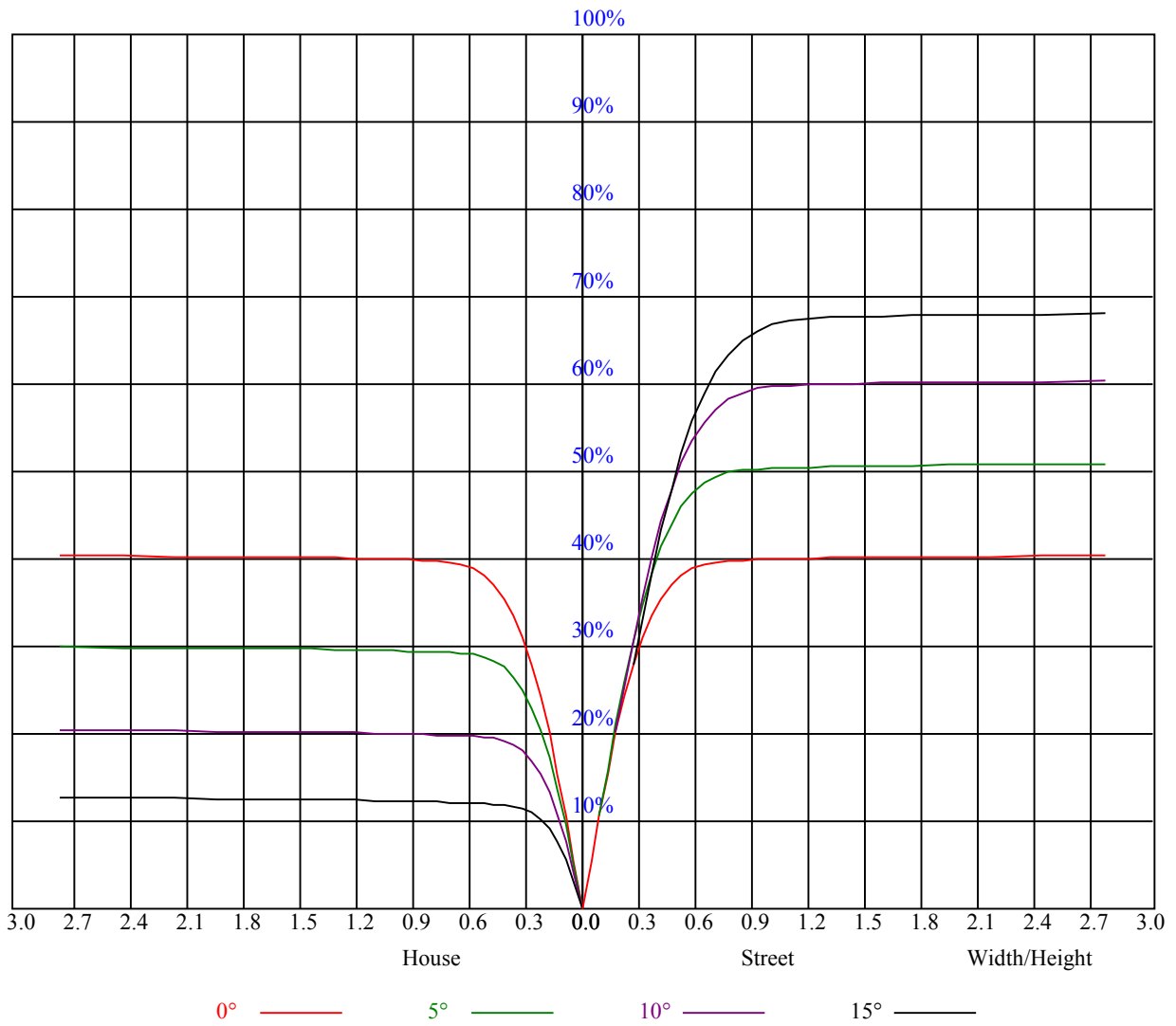
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.98	0.98	0.98	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.82
1	0.92	0.90	0.88	0.90	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.78
2	0.86	0.83	0.81	0.85	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.77	0.78	0.76	0.75	0.74
3	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.77	0.74	0.73	0.75	0.73	0.71	0.70
4	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.69	0.67	0.65	0.64
6	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
7	0.68	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.59
8	0.65	0.61	0.58	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
9	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.53	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.52



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	1911.50	1898.95	1740.60	1413.16	986.52	592.15	313.70	76.54	13.92
45.0	1918.07	1873.25	1680.25	1303.81	914.82	541.96	306.53	53.12	13.56
90.0	1915.08	1829.04	1564.33	1147.61	754.74	426.70	176.51	38.48	13.38
135.0	1917.47	1854.73	1615.72	1276.92	809.05	498.34	308.92	51.75	14.16
180.0	1911.50	1820.07	1577.48	1174.98	769.02	458.01	191.27	31.55	11.77
225.0	1918.07	1869.07	1626.47	1182.27	841.98	495.47	231.72	39.62	12.07
270.0	1915.08	1900.14	1704.75	1327.71	928.56	542.56	305.34	64.29	12.97
315.0	1917.47	1879.23	1670.09	1189.74	891.21	526.60	255.14	47.32	11.77
360.0	1911.50	1898.95	1740.60	1413.16	986.52	592.15	313.70	76.54	13.92
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	8.60	6.93	5.98	5.50	4.96	4.66	4.30	4.06	3.82
45.0	8.37	6.75	5.80	5.14	4.66	4.36	4.12	3.88	3.64
90.0	8.54	6.81	5.62	4.96	4.48	4.24	4.06	3.88	3.53
135.0	8.90	7.05	5.86	5.08	4.66	4.36	4.12	3.94	3.59
180.0	8.19	6.87	5.98	5.38	4.84	4.54	4.24	4.00	3.64
225.0	8.07	6.75	5.80	5.20	4.84	4.42	4.12	3.88	3.64
270.0	8.43	6.69	5.68	5.08	4.60	4.36	4.18	4.00	3.76
315.0	7.89	6.39	5.62	5.02	4.60	4.36	4.18	3.94	3.76
360.0	8.60	6.93	5.98	5.50	4.96	4.66	4.30	4.06	3.82
C/ γ (°)	90.0								
0.0	3.59								
45.0	3.41								
90.0	3.35								
135.0	3.35								
180.0	3.35								
225.0	3.47								
270.0	3.41								
315.0	3.47								
360.0	3.59								