
Nata

LumCAT: 2-1794-N

Luminaire: 92.70.135.00

Report No: NT2018041206

Voltage(V): 37.5000

Test No: nata-0100

Current(A): 0.6000

LampCAT: LUMILEDS LUXEON COB 1205

Power (W): 22.5000

Lamp flux(lm): 2300.5

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 69

Width(mm): 69

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1948.37

Efficiency(%): 84.69%

Lumens(lm)/Power(W): 88.40

Central intensity(cd): 7113.012

Maximum intensity(cd): 7113.012

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.6

[C90/270]Total=26.6

Field angle(10%Imax): [C0/180]Total=55.2

[C90/270]Total=55.2

Maximum s/h(1/2): C0_180=0.45 C90_270=0.45

Maximum s/h(1/4): C0_180=0.46 C90_270=0.46

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.46%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.607%

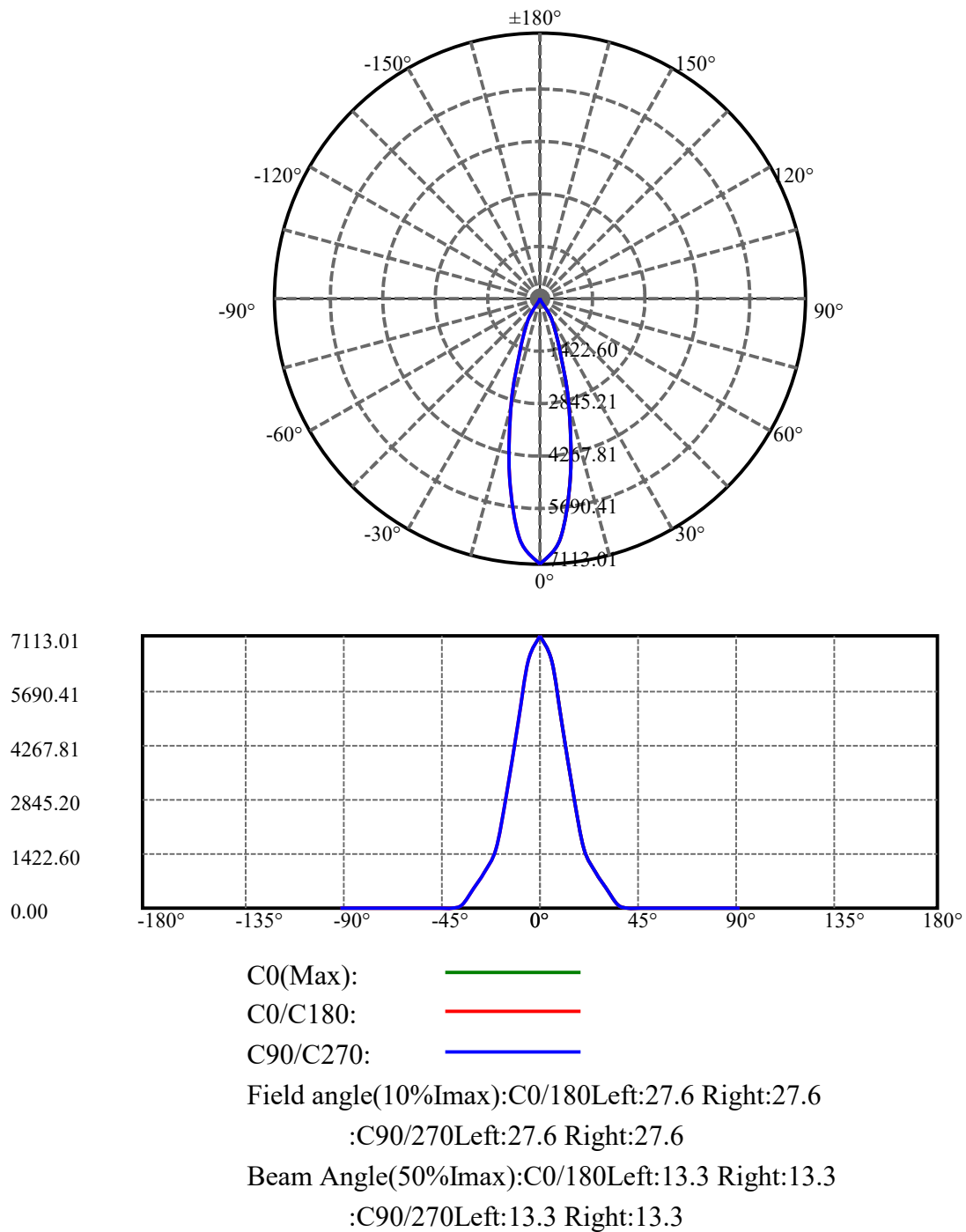
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7113.012	42.537	42.537	1.849%	2.183%
5.0	6442.700	307.789	350.326	13.379%	17.981%
10.0	4821.495	458.925	809.251	19.949%	41.535%
15.0	2901.816	411.676	1220.927	17.895%	62.664%
20.0	1562.783	292.981	1513.908	12.736%	77.701%
25.0	927.831	214.935	1728.843	9.343%	88.733%
30.0	514.075	140.892	1869.735	6.124%	95.964%
35.0	86.666	27.248	1896.983	1.184%	97.363%
40.0	16.125	5.681	1902.664	.247%	97.654%
45.0	12.546	4.863	1907.527	.211%	97.904%
50.0	11.128	4.673	1912.199	.203%	98.144%
55.0	10.357	4.651	1916.85	.202%	98.382%
60.0	9.945	4.721	1921.571	.205%	98.625%
65.0	9.656	4.797	1926.367	.209%	98.871%
70.0	9.463	4.874	1931.241	.212%	99.121%
75.0	9.277	4.912	1936.153	.214%	99.373%
80.0	9.277	5.008	1941.161	.218%	99.630%
85.0	8.995	4.912	1946.073	.214%	99.882%
90.0	8.375	2.295	1948.368	.100%	100.000%

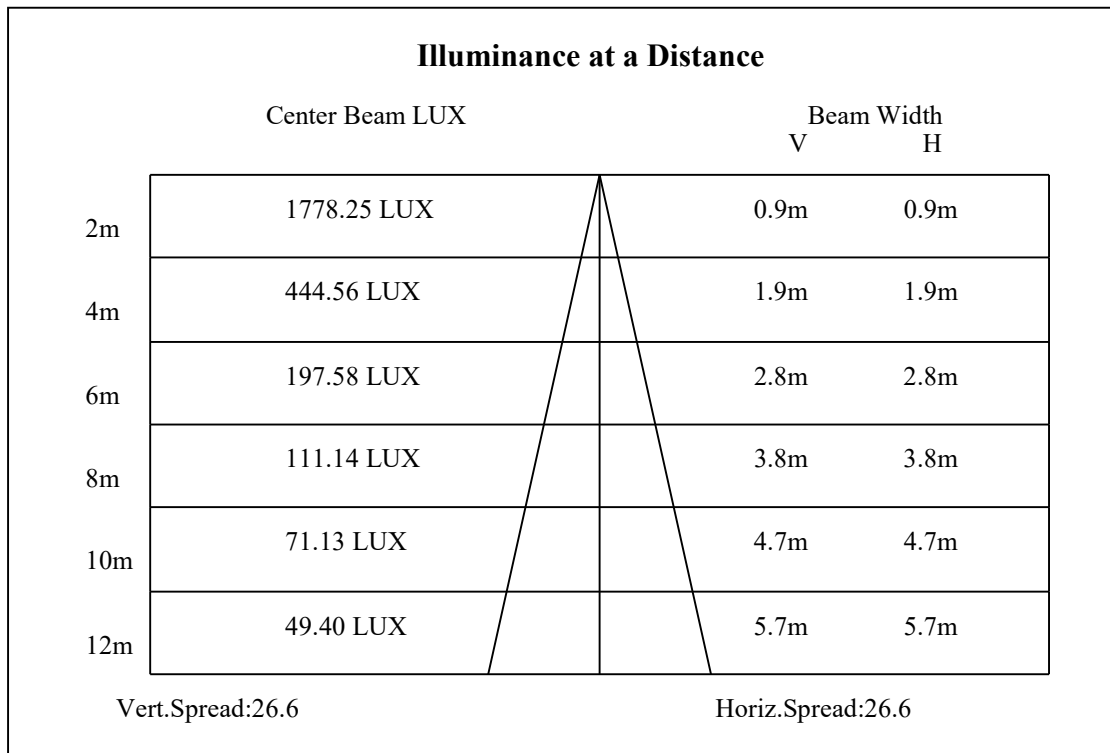
ZONAL LUMEN SUMMARY

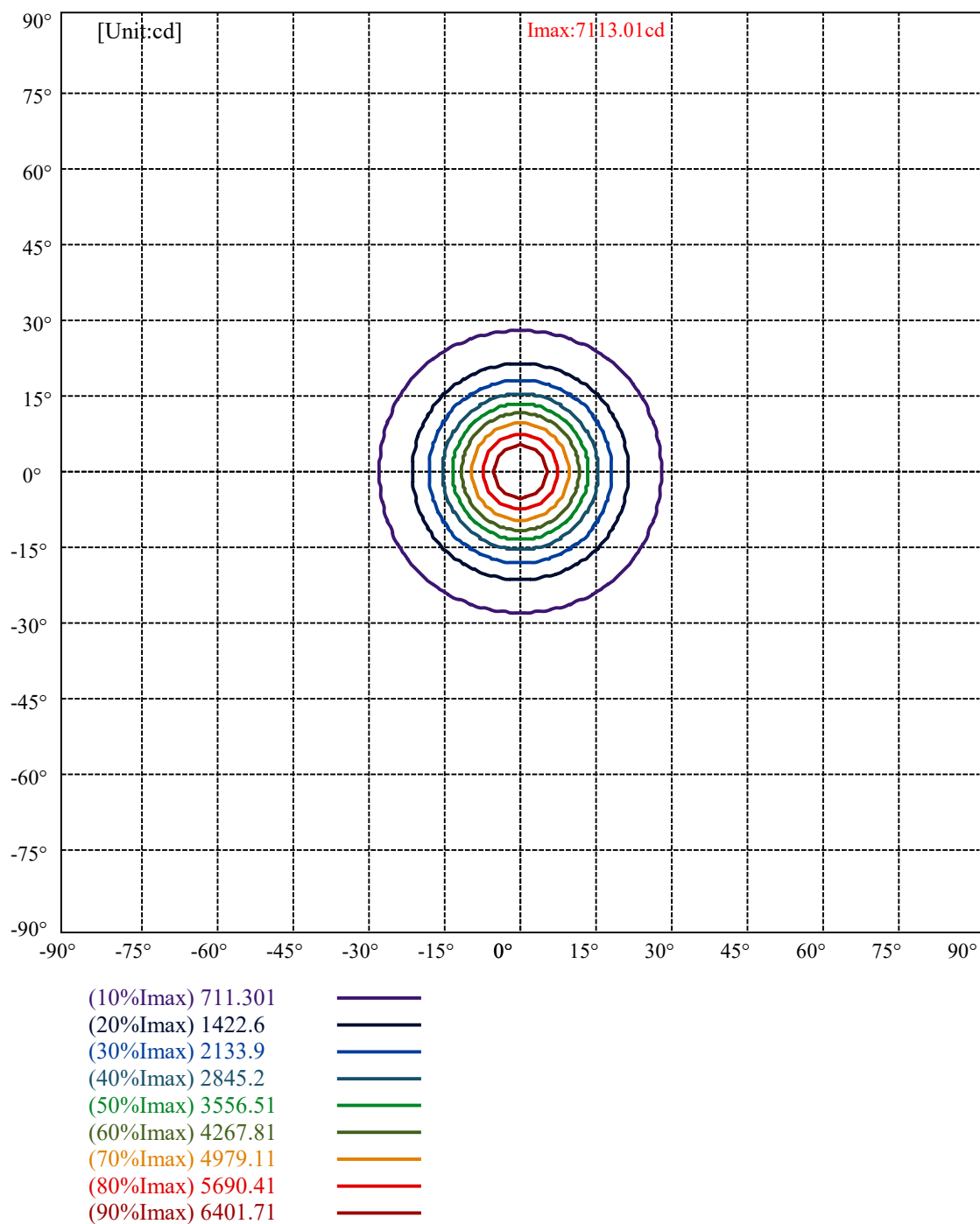
Zone	Lumens	%Lamp	%Fixt
0-30	1869.74	81.28%	95.96%
0-40	1902.66	82.71%	97.65%
0-60	1921.57	83.53%	98.62%
0-90	1946.07	84.59%	99.88%
0-120	1946.07	84.59%	99.88%
0-180	1948.37	84.69%	100.00%
60-90	29.22	1.27%	1.50%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.04	1558.69	67.75%	80.00%

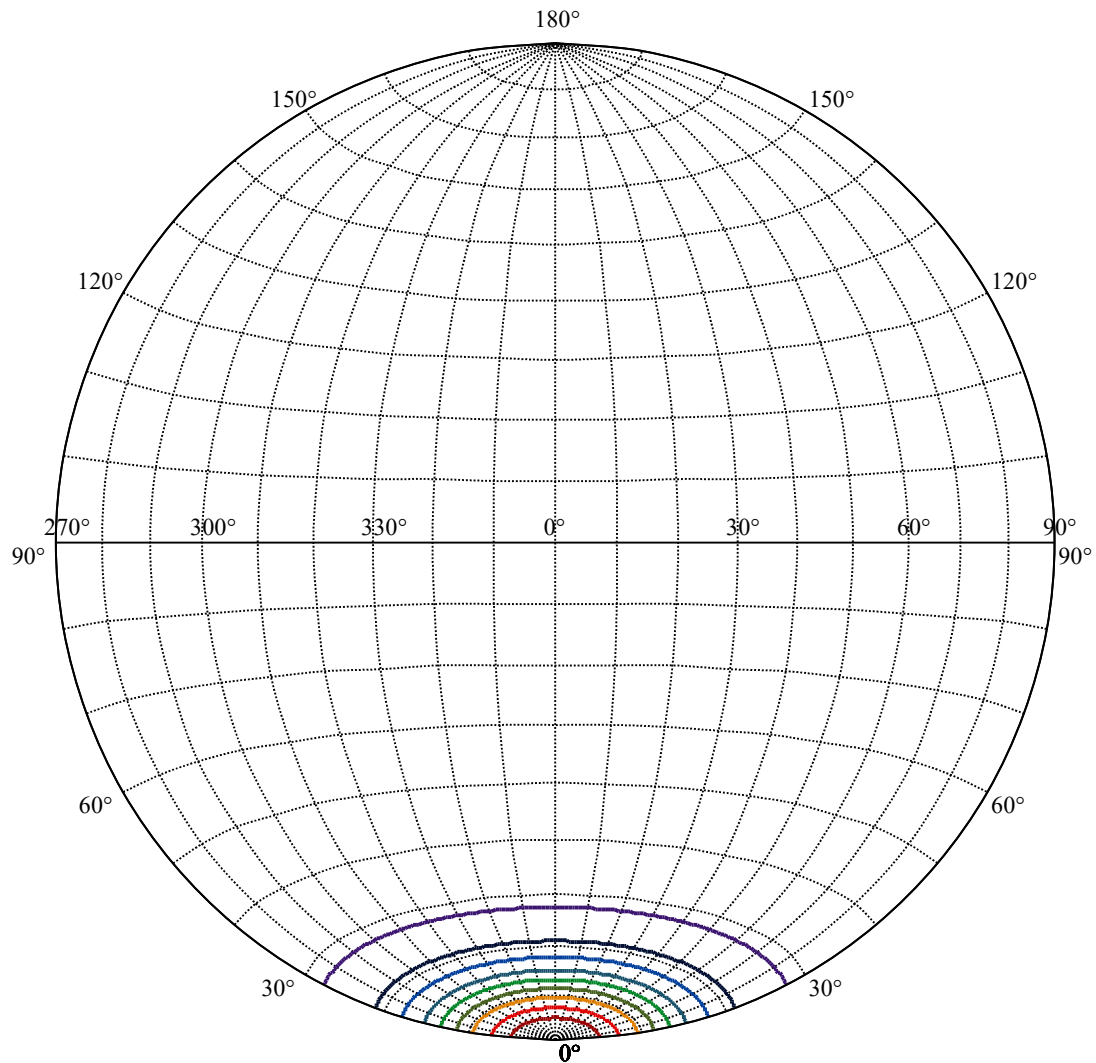
ZONAL LUMEN SUMMARY

0-10	809.25
10-20	704.66
20-30	355.83
30-40	32.93
40-50	9.54
50-60	9.37
60-70	9.67
70-80	9.92
80-90	4.91
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









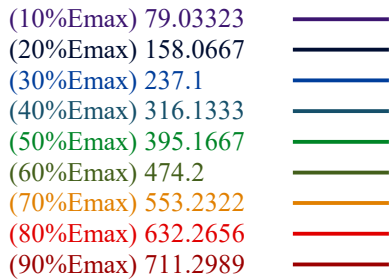
House

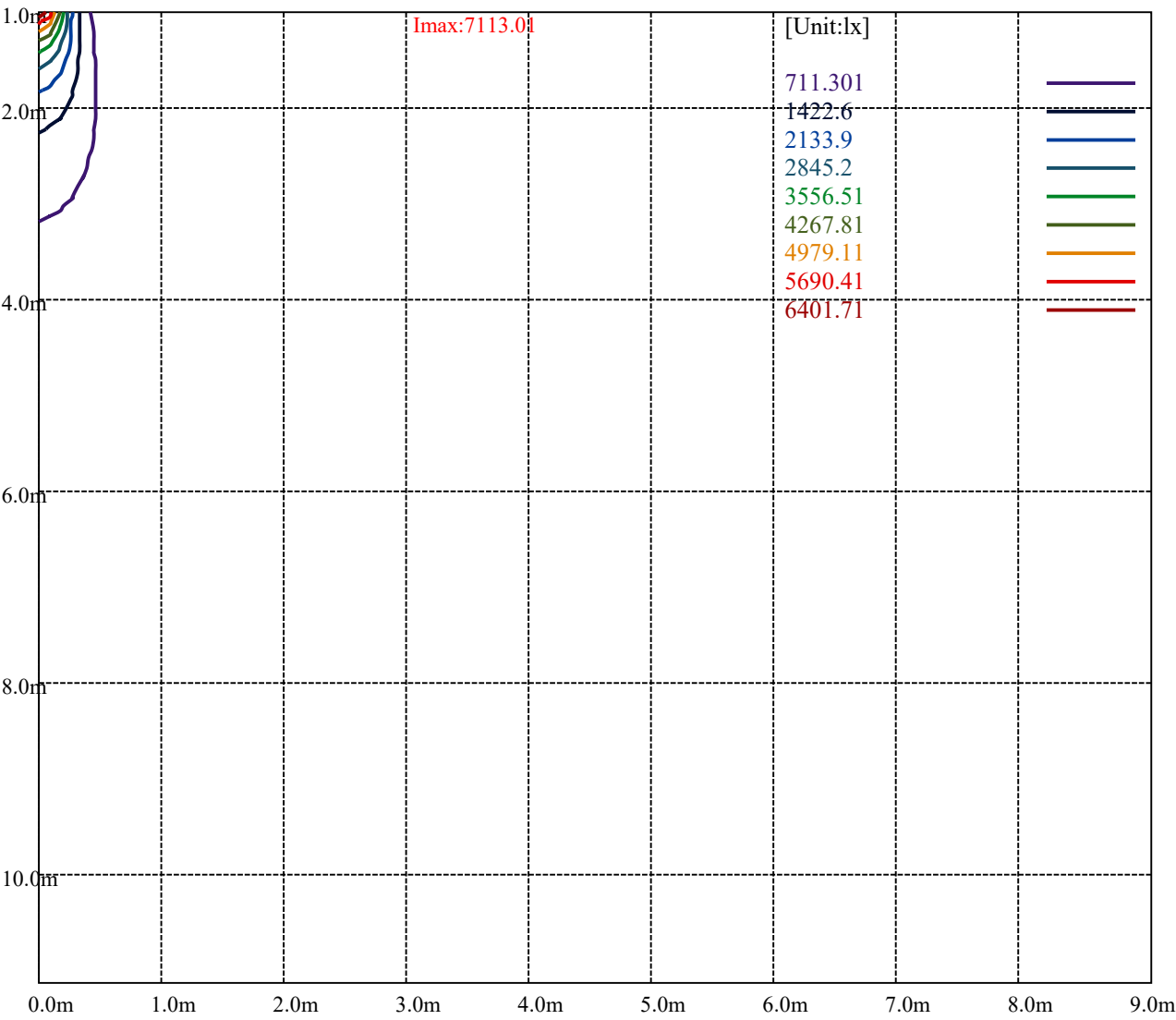
[Unit:cd]

Road

Imax:7113.01

(10%Imax)	711.301	—
(20%Imax)	1422.6	—
(30%Imax)	2133.9	—
(40%Imax)	2845.2	—
(50%Imax)	3556.51	—
(60%Imax)	4267.81	—
(70%Imax)	4979.11	—
(80%Imax)	5690.41	—
(90%Imax)	6401.71	—





Luminance Table

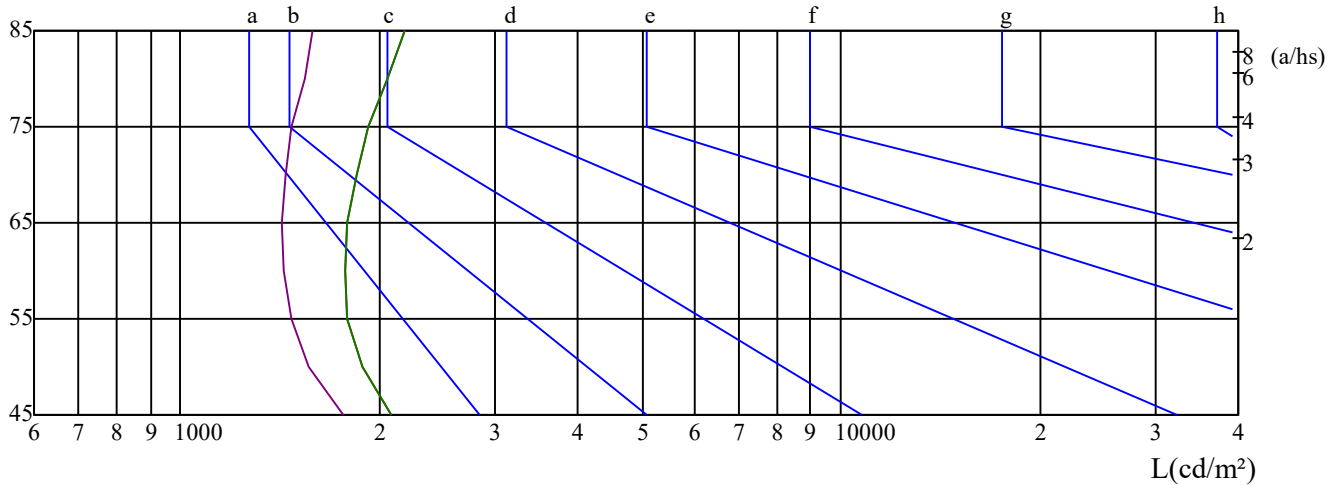
γ	45	50	55	60	65	70	75	80	85
C0	2091	1881	1791	1774	1792	1845	1920	2063	2180
C45	1769	1568	1470	1432	1422	1438	1467	1542	1588
C90	2091	1881	1791	1774	1792	1845	1920	2063	2180

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4799	4799	4799	7529	7529	7529	21677	21677	21677

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

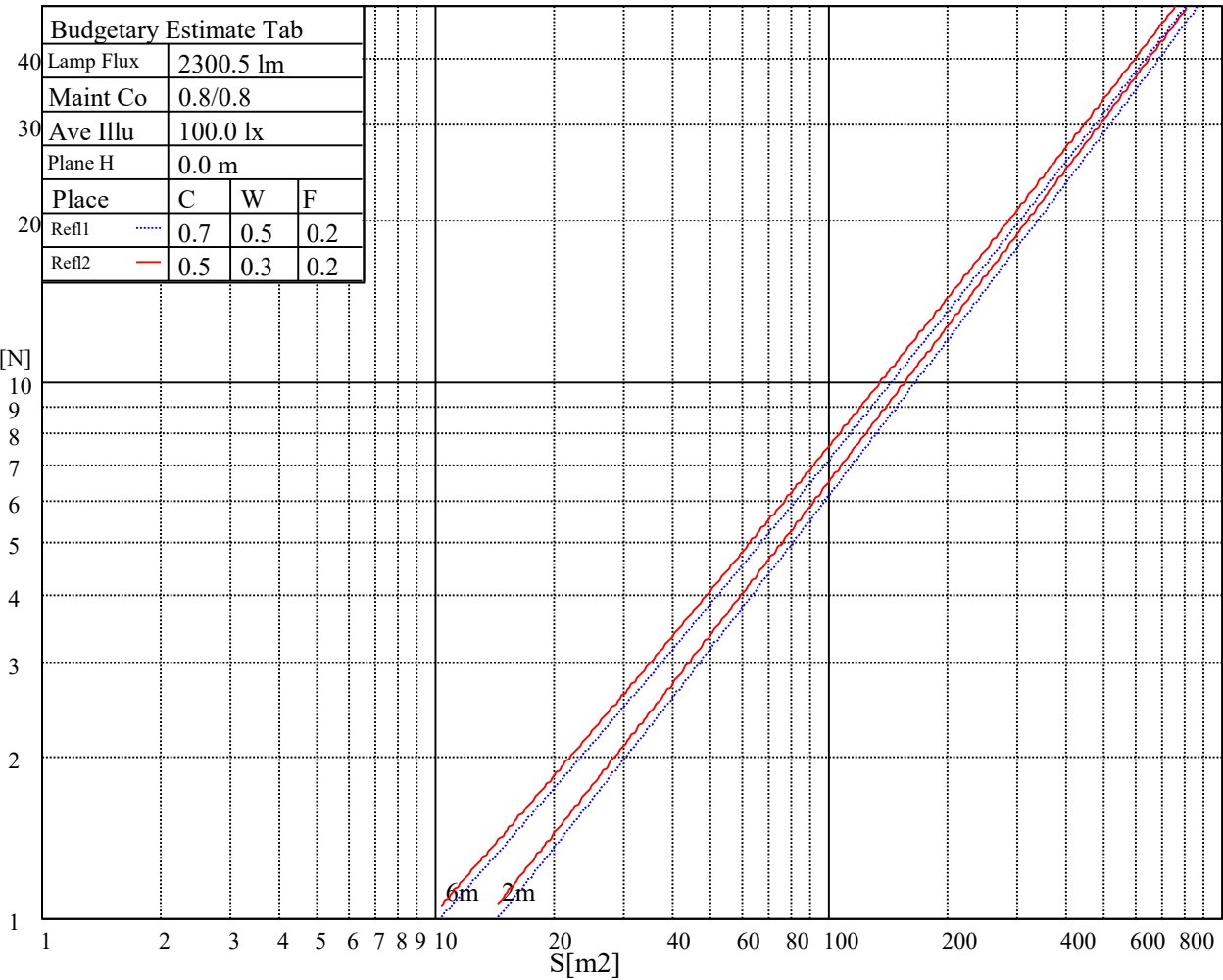
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

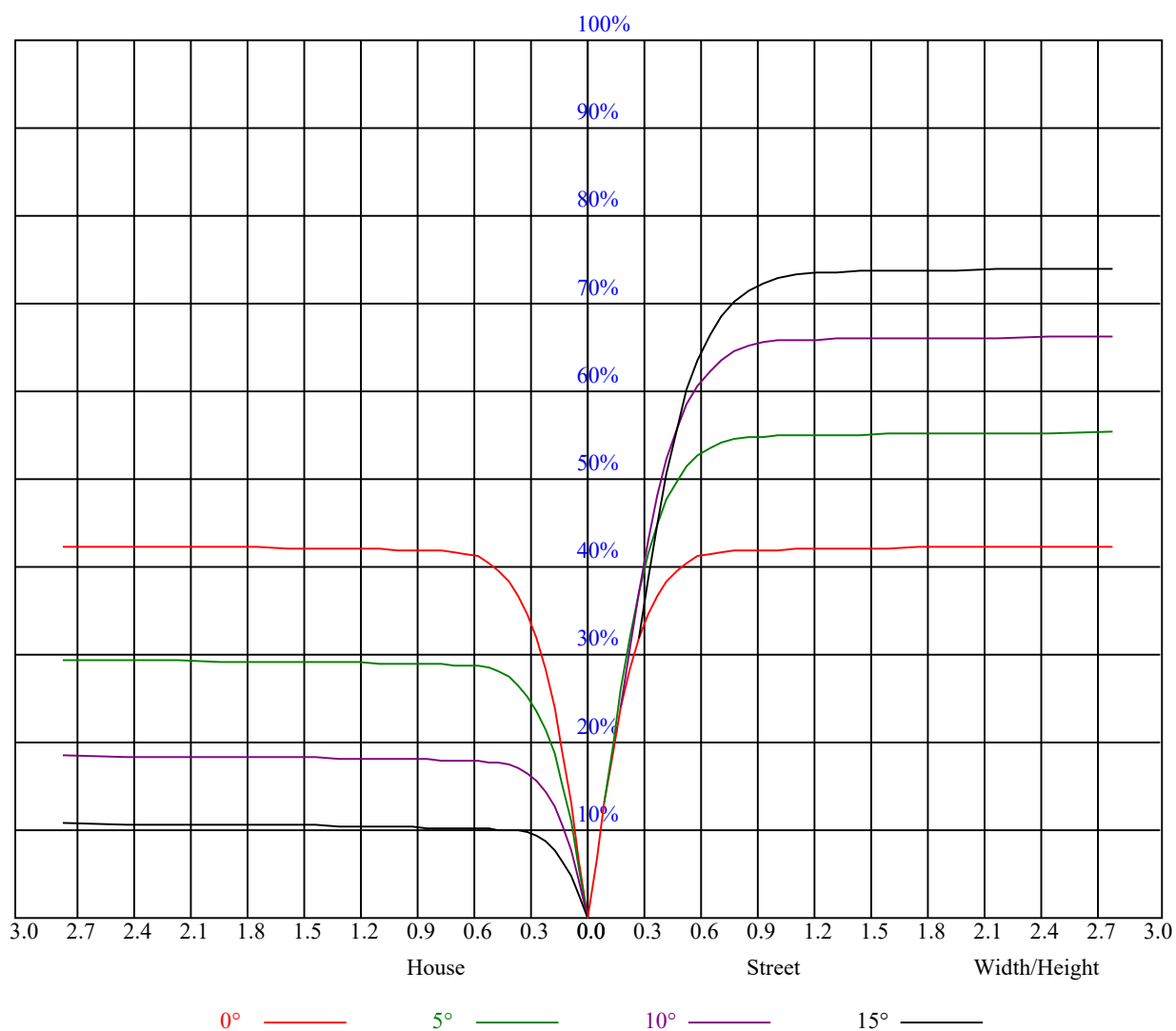
C0 ———

C45 ———

C90 ———



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



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Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	7139.16	6316.07	4751.37	2769.34	1491.48	936.51	465.23	32.37	13.32		
45.0	7144.12	6313.87	4492.60	2570.58	1383.02	880.35	417.88	26.59	14.98		
90.0	7040.61	6003.90	4176.58	2333.29	1080.26	782.52	337.55	29.29	15.86		
135.0	7128.15	6567.68	4941.31	3093.07	1709.50	970.64	605.07	77.96	16.13		
180.0	7139.16	6564.37	5076.75	3110.69	1704.00	958.42	581.67	89.25	14.87		
225.0	7144.12	6686.60	5171.45	3263.19	1808.05	1001.04	635.52	121.18	18.22		
270.0	7040.61	6794.51	5290.92	3360.09	1841.09	974.50	601.22	286.29	21.09		
315.0	7128.15	6294.60	4670.98	2714.28	1484.87	918.67	468.47	30.39	14.53		
360.0	7139.16	6316.07	4751.37	2769.34	1491.48	936.51	465.23	32.37	13.32		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	11.23	10.46	10.08	10.02	9.91	9.69	9.47	9.58	9.58		
45.0	12.17	10.90	10.41	9.97	9.69	9.47	9.14	8.81	8.70		
90.0	12.66	11.29	10.41	9.86	9.58	9.41	9.36	9.14	8.92		
135.0	12.50	10.96	10.13	9.74	9.36	9.19	9.03	8.81	8.64		
180.0	11.73	10.52	9.74	9.52	9.30	9.08	8.86	8.70	8.48		
225.0	13.38	11.51	10.41	9.80	9.41	9.19	8.97	8.81	8.59		
270.0	14.70	12.44	11.23	10.46	10.02	9.80	9.69	9.52	9.25		
315.0	12.00	10.96	10.46	10.19	9.97	9.86	9.69	10.85	9.80		
360.0	11.23	10.46	10.08	10.02	9.91	9.69	9.47	9.58	9.58		
C/γ(°)	90.0										
0.0	8.26										
45.0	8.26										
90.0	8.37										
135.0	8.42										
180.0	8.53										
225.0	8.37										
270.0	8.42										
315.0	8.37										
360.0	8.26										