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Nata

LumCAT: LN01D02836DA-N

Luminaire: 92.70.307.00

Report No: 211111-B001

Test No: 211111-C001

LampCAT: LUMINUS CXM-4 LES4.5

Lamp flux(lm): 742.4

Number of Lamps: 1

Length(mm): 111

Phm Type: C

Voltage(V): 35.4300

Current(A): 0.1860

Power (W): 6.5890

PF: 0.0000

Ballast type: DC

Width(mm): 111

Height(mm): 0

Photometric Results

Lumens(lm): 471.96

Efficiency(%): 63.58%

Lumens(lm)/Power(W): 71.63

Central intensity(cd): 864.042

Maximum intensity(cd): 864.042

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.7

[C90/270]Total=36.7

Field angle(10%Imax): [C0/180]Total=69.9

[C90/270]Total=69.9

Maximum s/h(1/2): C0_180=0.60 C90_270=0.60

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(%): 63.58%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.492%

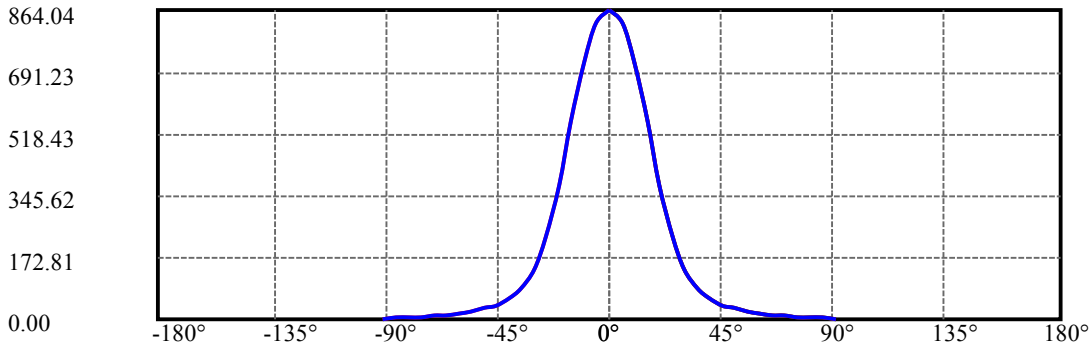
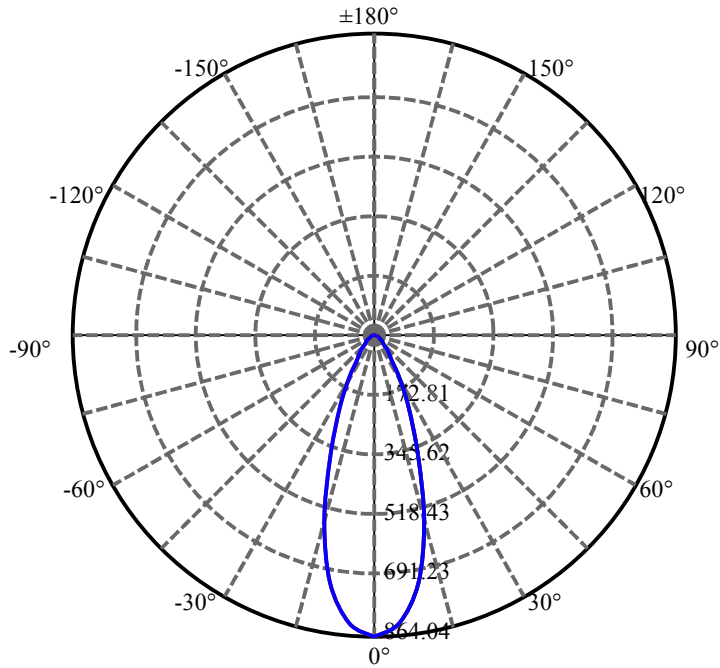
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	864.042	0.000	0	.000%	.000%
5.0	826.360	20.208	20.208	2.722%	4.282%
10.0	718.939	55.280	75.489	7.447%	15.995%
15.0	550.541	75.305	150.793	10.144%	31.951%
20.0	374.479	76.235	227.028	10.269%	48.103%
25.0	228.428	63.234	290.262	8.518%	61.502%
30.0	139.530	46.565	336.827	6.273%	71.368%
35.0	85.745	33.173	370.001	4.469%	78.397%
40.0	57.288	23.864	393.865	3.215%	83.453%
45.0	39.646	17.948	411.813	2.418%	87.256%
50.0	29.608	13.994	425.806	1.885%	90.221%
55.0	21.899	11.199	437.006	1.509%	92.594%
60.0	16.858	8.959	445.964	1.207%	94.492%
65.0	12.787	7.207	453.171	.971%	96.019%
70.0	9.979	5.764	458.936	.777%	97.241%
75.0	8.022	4.705	463.641	.634%	98.238%
80.0	7.103	4.047	467.688	.545%	99.095%
85.0	3.324	2.833	470.521	.382%	99.695%
90.0	1.927	1.438	471.959	.194%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	336.83	45.37%	71.37%
0-40	393.86	53.06%	83.45%
0-60	445.96	60.07%	94.49%
0-90	470.52	63.38%	99.70%
0-120	470.52	63.38%	99.70%
0-180	471.96	63.58%	100.00%
60-90	33.52	4.51%	7.10%
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%
0-36.59	377.57	50.86%	80.00%

ZONAL LUMEN SUMMARY

0-10	75.49
10-20	151.54
20-30	109.80
30-40	57.04
40-50	31.94
50-60	20.16
60-70	12.97
70-80	8.75
80-90	2.83
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: —————

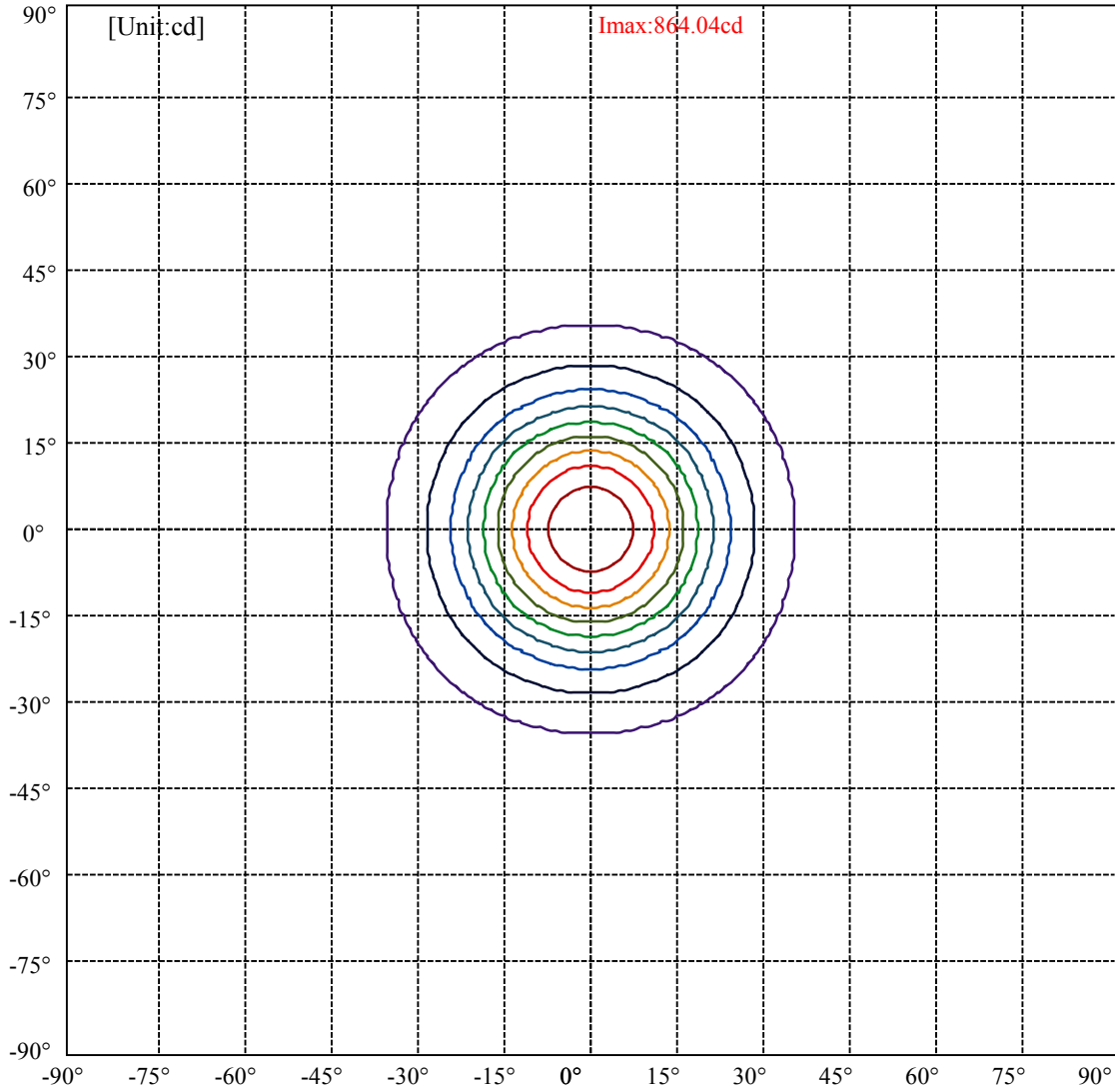
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.9 Right:34.9

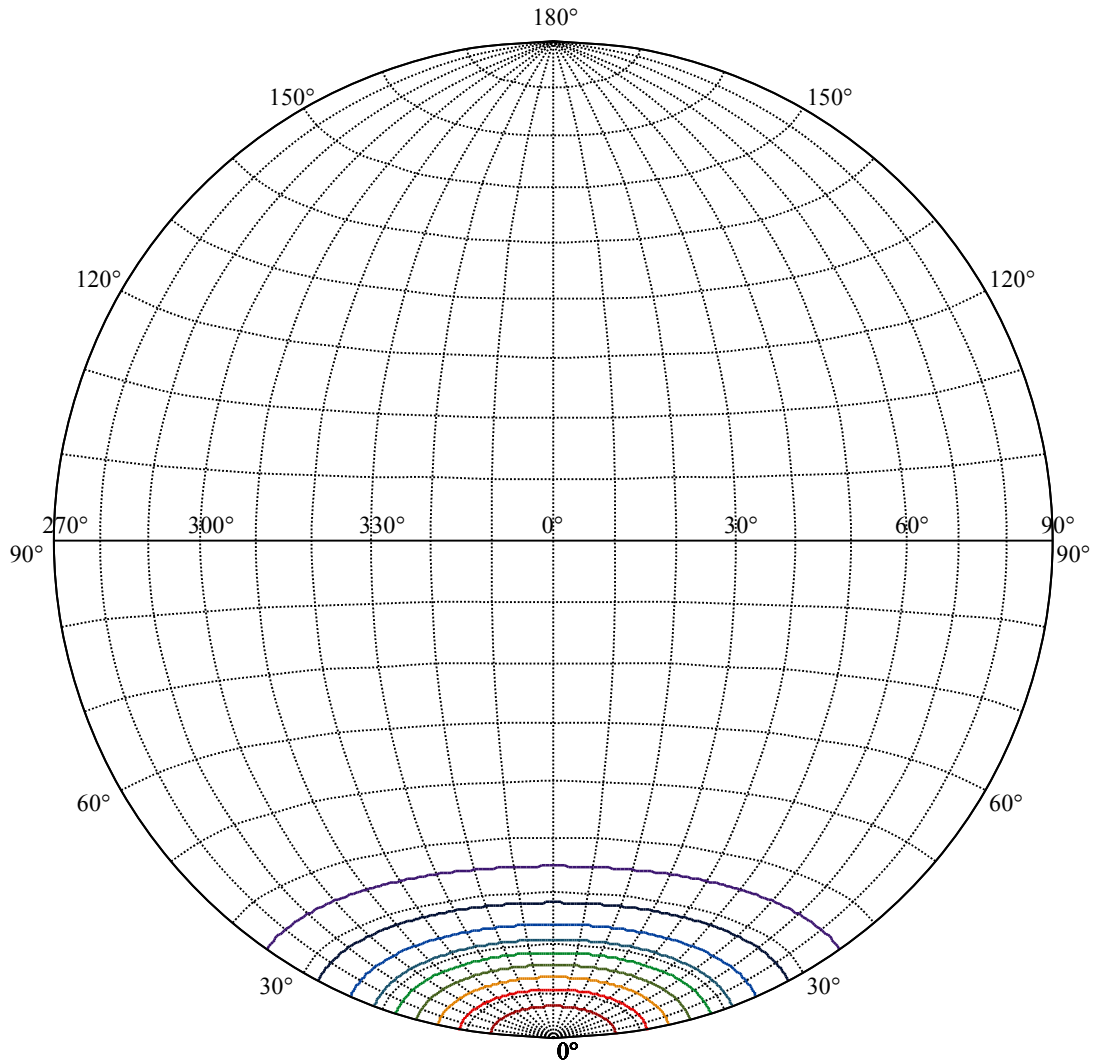
:C90/270Left:34.9 Right:34.9

Beam Angle(50%Imax):C0/180Left:18.4 Right:18.4

:C90/270Left:18.4 Right:18.4



(10%Imax) 86.4042	—
(20%Imax) 172.808	—
(30%Imax) 259.213	—
(40%Imax) 345.617	—
(50%Imax) 432.021	—
(60%Imax) 518.425	—
(70%Imax) 604.829	—
(80%Imax) 691.233	—
(90%Imax) 777.638	—



House

[Unit:cd]

Road

I_{max}:864.04

(10%I_{max}) 86.4042

(20%I_{max}) 172.808

(30%I_{max}) 259.213

(40%I_{max}) 345.617

(50%I_{max}) 432.021

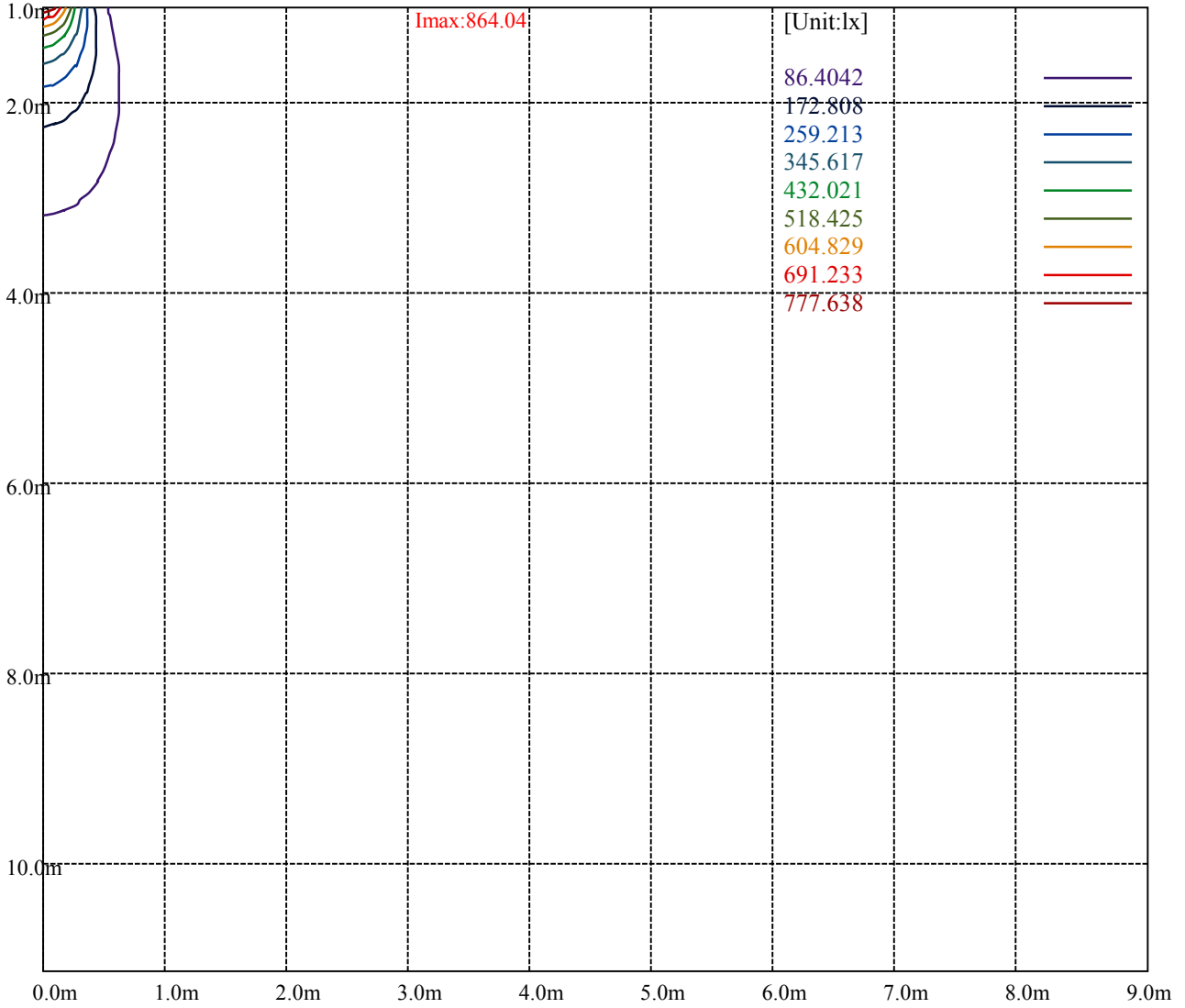
(60%I_{max}) 518.425

(70%I_{max}) 604.829

(80%I_{max}) 691.233

(90%I_{max}) 777.638





Luminance Table

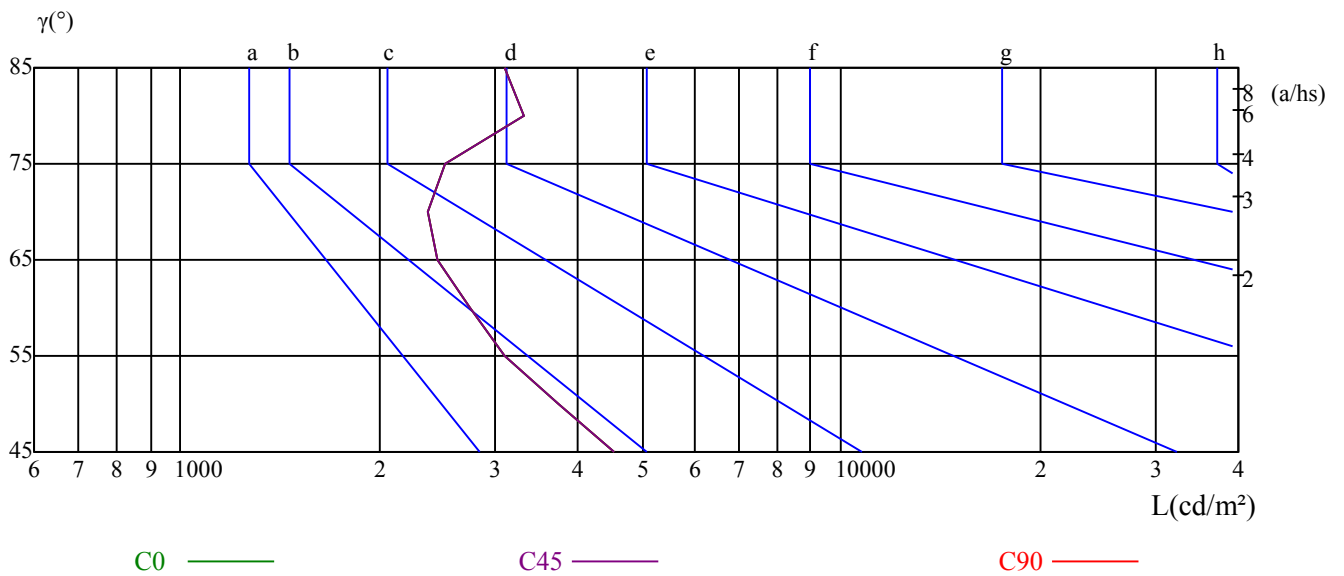
γ	45	50	55	60	65	70	75	80	85
C0	4551	3738	3099	2736	2456	2368	2516	3320	3095
C45	4551	3738	3099	2736	2456	2368	2516	3320	3095
C90	4551	3738	3099	2736	2456	2368	2516	3320	3095

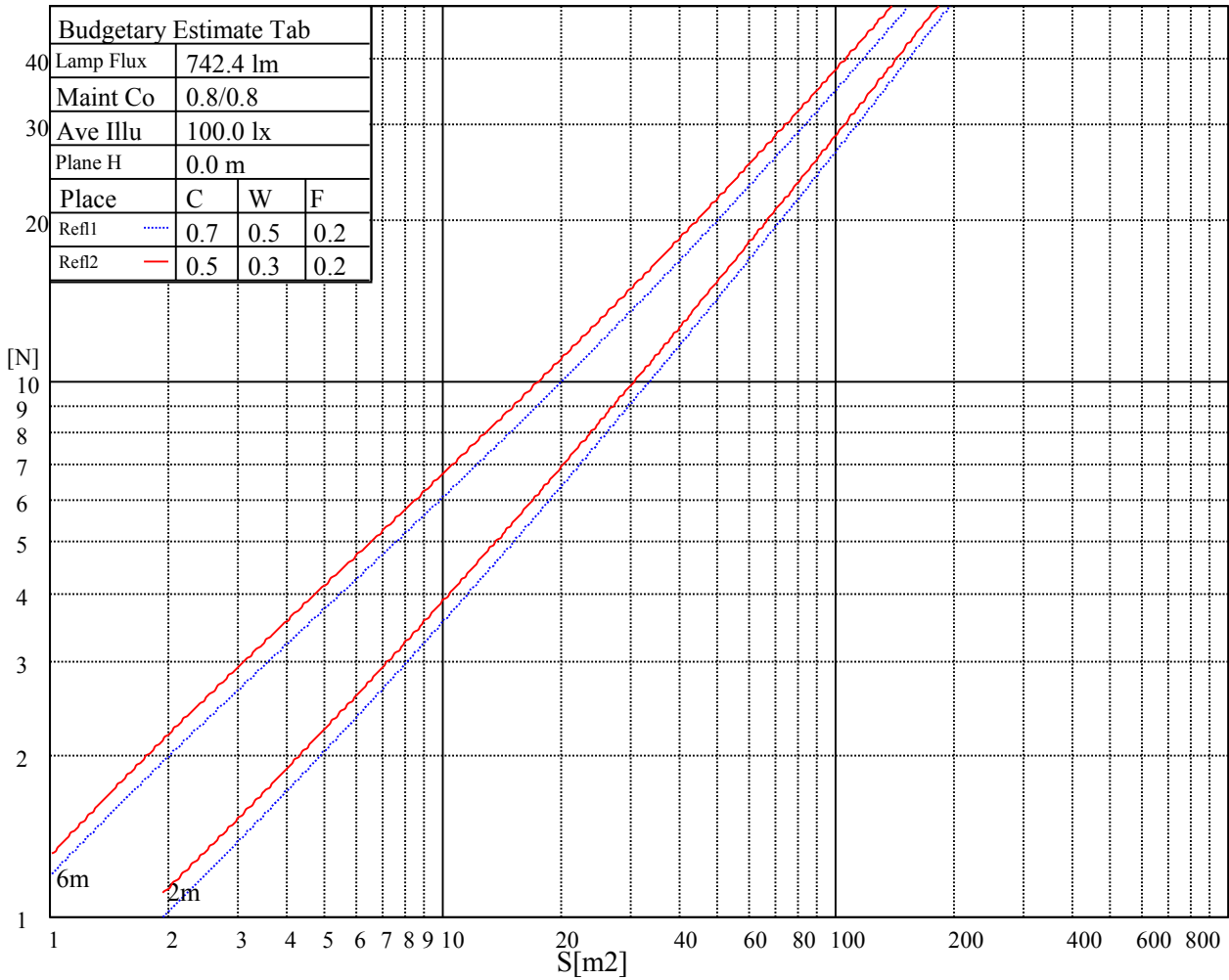
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2456	2456	2456	2516	2516	2516	3095	3095	3095

Glare Table

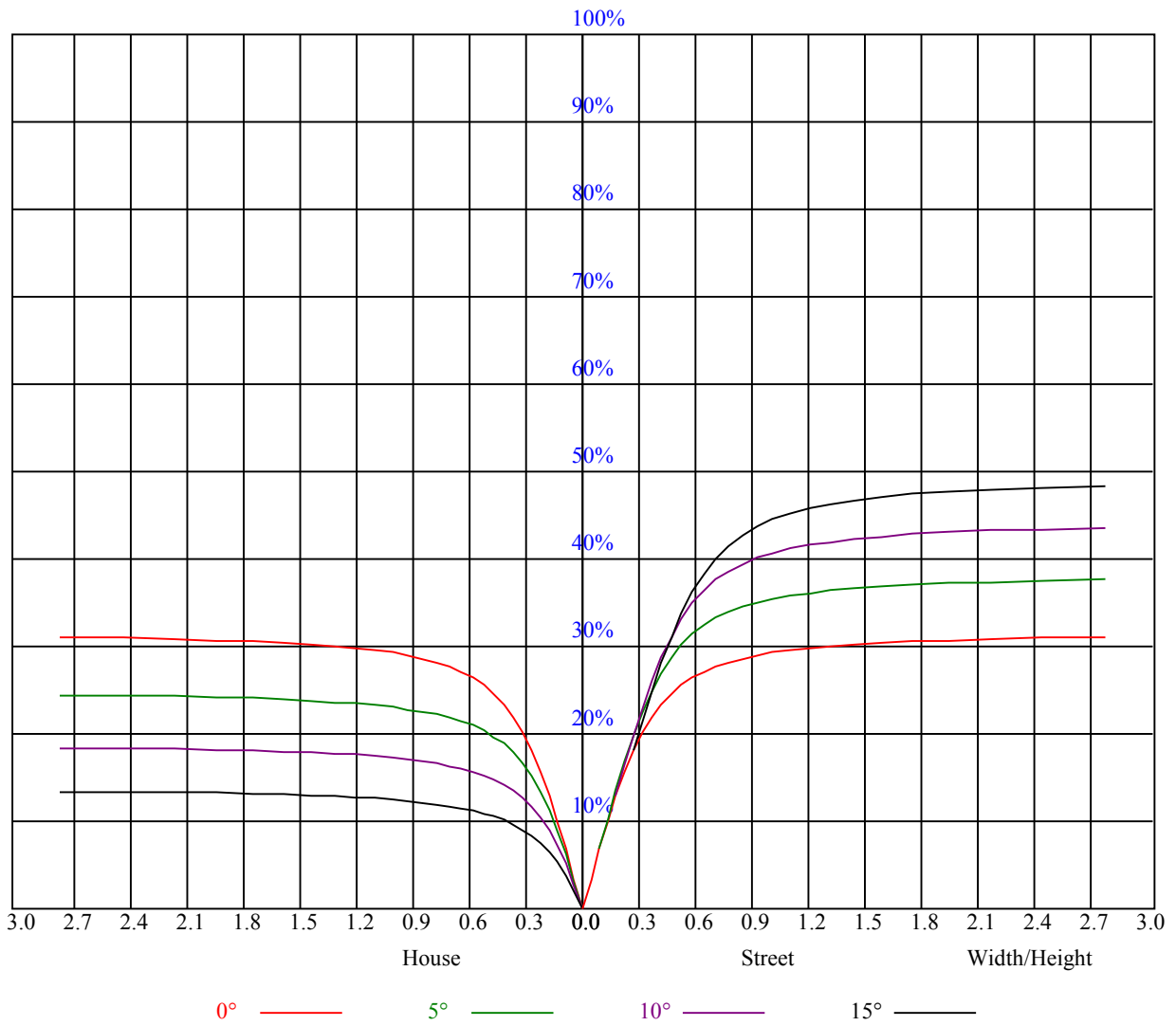
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.76	0.76	0.76	0.74	0.74	0.74	0.71	0.71	0.71	0.68	0.68	0.68	0.65	0.65	0.65	0.64
1	0.70	0.68	0.66	0.68	0.67	0.65	0.66	0.64	0.63	0.63	0.62	0.61	0.61	0.60	0.60	0.58
2	0.65	0.62	0.59	0.63	0.61	0.59	0.61	0.59	0.57	0.59	0.58	0.56	0.58	0.56	0.55	0.54
3	0.60	0.57	0.54	0.59	0.56	0.54	0.58	0.55	0.53	0.56	0.54	0.52	0.55	0.53	0.51	0.50
4	0.56	0.53	0.50	0.55	0.52	0.49	0.54	0.51	0.49	0.53	0.50	0.48	0.52	0.49	0.48	0.47
5	0.53	0.49	0.46	0.52	0.49	0.46	0.51	0.48	0.46	0.50	0.47	0.45	0.49	0.47	0.45	0.44
6	0.50	0.46	0.43	0.49	0.46	0.43	0.48	0.45	0.43	0.47	0.45	0.42	0.47	0.44	0.42	0.41
7	0.47	0.43	0.41	0.47	0.43	0.41	0.46	0.43	0.40	0.45	0.42	0.40	0.44	0.42	0.40	0.39
8	0.45	0.41	0.38	0.44	0.41	0.38	0.44	0.40	0.38	0.43	0.40	0.38	0.42	0.40	0.38	0.37
9	0.43	0.39	0.36	0.42	0.39	0.36	0.42	0.38	0.36	0.41	0.38	0.36	0.41	0.38	0.36	0.35
10	0.41	0.37	0.35	0.40	0.37	0.35	0.40	0.37	0.34	0.39	0.36	0.34	0.39	0.36	0.34	0.33



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	858.71	854.71	765.14	595.08	415.28	249.17	148.13	90.23	60.89
45.0	865.88	837.91	742.91	569.15	384.99	237.34	142.33	86.40	57.06
90.0	866.78	818.73	705.50	543.99	368.91	224.01	139.82	85.92	56.65
135.0	864.80	823.87	715.30	554.81	386.42	245.17	149.98	91.12	61.43
180.0	858.71	787.78	660.99	490.81	337.01	205.55	126.32	80.97	54.91
225.0	865.88	815.27	699.47	524.57	354.10	214.21	135.04	83.47	55.57
270.0	866.78	838.45	737.83	574.58	382.12	236.08	141.49	86.58	58.02
315.0	864.80	834.15	724.38	551.34	367.00	215.89	133.13	81.26	53.78
360.0	858.71	854.71	765.14	595.08	415.28	249.17	148.13	90.23	60.89
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	43.32	35.25	26.89	21.51	16.55	13.09	9.74	6.27	4.24
45.0	39.26	28.26	20.55	15.66	11.59	8.96	6.81	5.20	2.87
90.0	39.02	28.02	20.20	14.88	11.05	8.43	6.09	4.24	2.39
135.0	41.23	29.70	21.93	16.43	12.25	9.50	7.41	5.62	3.17
180.0	40.39	32.51	24.98	20.61	16.49	13.38	14.10	20.61	3.53
225.0	38.66	27.96	20.50	15.54	11.65	9.02	6.87	5.38	3.64
270.0	39.26	28.02	20.32	15.30	11.29	8.54	6.39	4.54	2.69
315.0	36.03	27.13	19.84	14.94	11.41	8.90	6.75	4.96	4.06
360.0	43.32	35.25	26.89	21.51	16.55	13.09	9.74	6.27	4.24
C/ γ (°)	90.0								
0.0	1.91								
45.0	1.85								
90.0	1.79								
135.0	1.85								
180.0	2.51								
225.0	1.85								
270.0	1.85								
315.0	1.79								
360.0	1.91								