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NATA

LumCAT: 2-2008-M
Luminaire: 92.70.131.00
Report No: NATA0100
Test No: GC2019123020
LampCAT: LUMINUS CXM-14-AC40
Lamp flux(lm): 2608.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 34.7100
Current(A): 0.6000
Power (W): 20.8600
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 2321.67
Efficiency(%): 89.02%
Lumens(lm)/Power(W): 111.30
Central intensity(cd): 4140.281
Maximum intensity(cd): 4140.281
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=41.1
 [C90/270]Total=41.1
Field angle(10%Imax): [C0/180]Total=74.4
 [C90/270]Total=74.4
Maximum s/h(1/2): C0_180=0.68 C90_270=0.68
Maximum s/h(1/4): C0_180=0.65 C90_270=0.65
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.02%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.511%

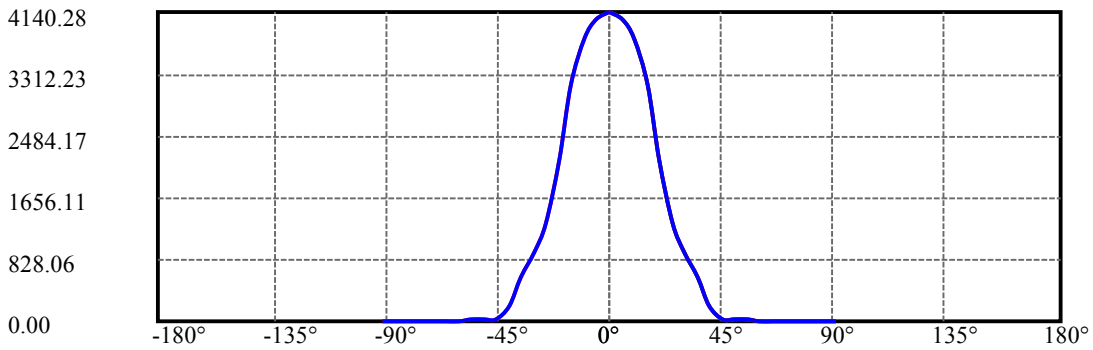
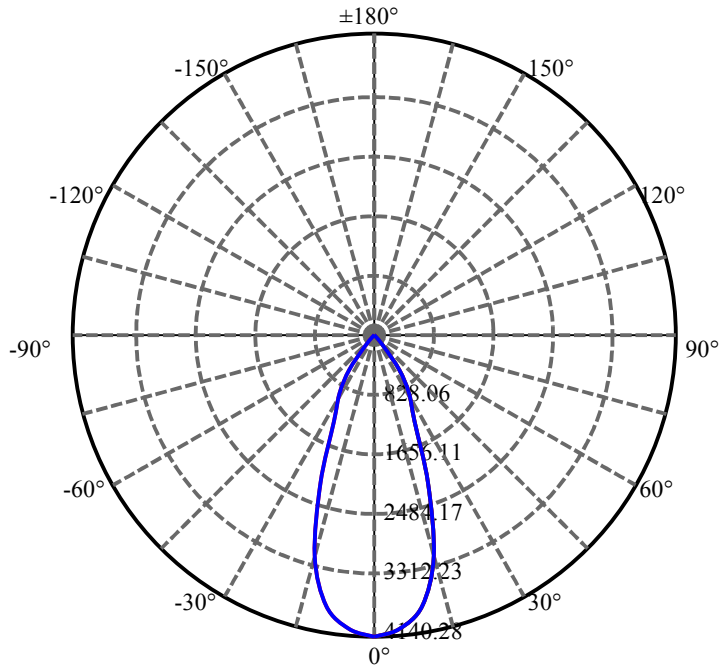
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4140.281	0.000	0	.000%	.000%
5.0	4038.539	97.775	97.775	3.749%	4.211%
10.0	3774.656	279.503	377.278	10.717%	16.250%
15.0	3150.492	410.795	788.073	15.751%	33.944%
20.0	2166.539	438.198	1226.271	16.802%	52.819%
25.0	1305.921	364.197	1590.468	13.965%	68.505%
30.0	923.787	282.171	1872.64	10.819%	80.659%
35.0	581.337	221.640	2094.28	8.498%	90.206%
40.0	205.305	131.245	2225.525	5.032%	95.859%
45.0	22.359	42.154	2267.679	1.616%	97.675%
50.0	14.716	7.492	2275.171	.287%	97.997%
55.0	13.170	6.063	2281.234	.232%	98.258%
60.0	12.213	5.867	2287.101	.225%	98.511%
65.0	11.573	5.783	2292.884	.222%	98.760%
70.0	11.173	5.759	2298.643	.221%	99.008%
75.0	10.849	5.756	2304.399	.221%	99.256%
80.0	10.659	5.755	2310.154	.221%	99.504%
85.0	10.540	5.760	2315.915	.221%	99.752%
90.0	10.477	5.754	2321.669	.221%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1872.64	71.80%	80.66%
0-40	2225.52	85.33%	95.86%
0-60	2287.10	87.70%	98.51%
0-90	2315.91	88.80%	99.75%
0-120	2315.91	88.80%	99.75%
0-180	2321.67	89.02%	100.00%
60-90	34.68	1.33%	1.49%
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%
0-29.73	1857.34	71.22%	80.00%

ZONAL LUMEN SUMMARY

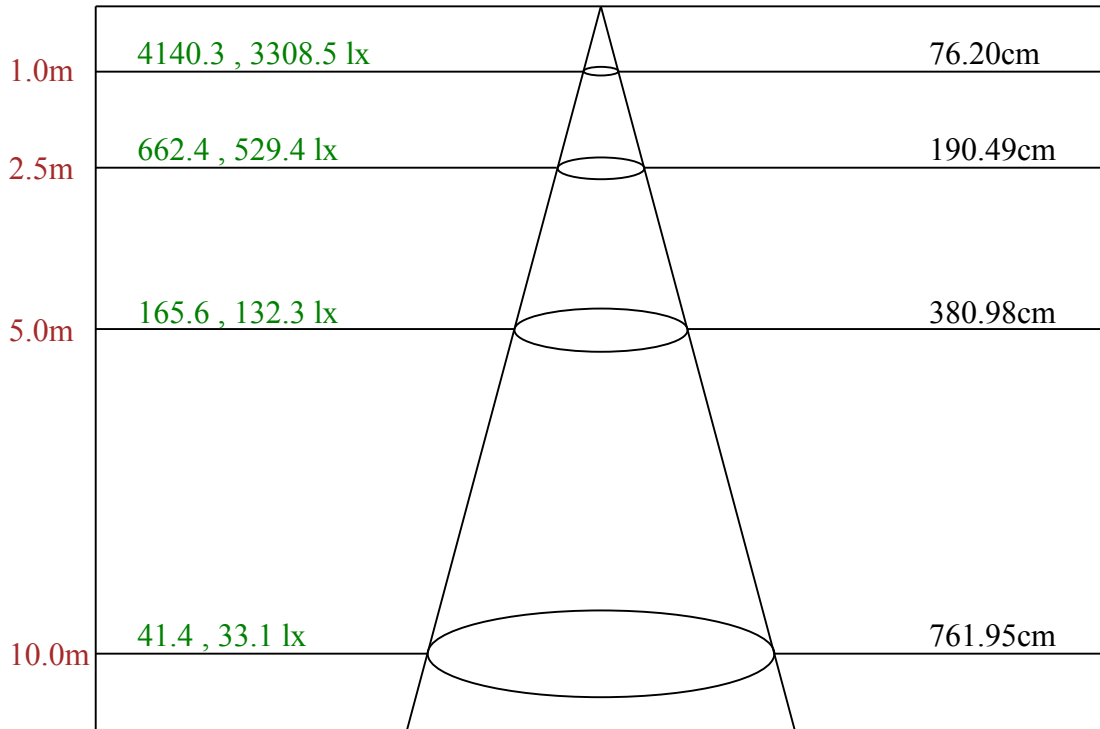
0-10	377.28
10-20	848.99
20-30	646.37
30-40	352.89
40-50	49.65
50-60	11.93
60-70	11.54
70-80	11.51
80-90	5.76
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



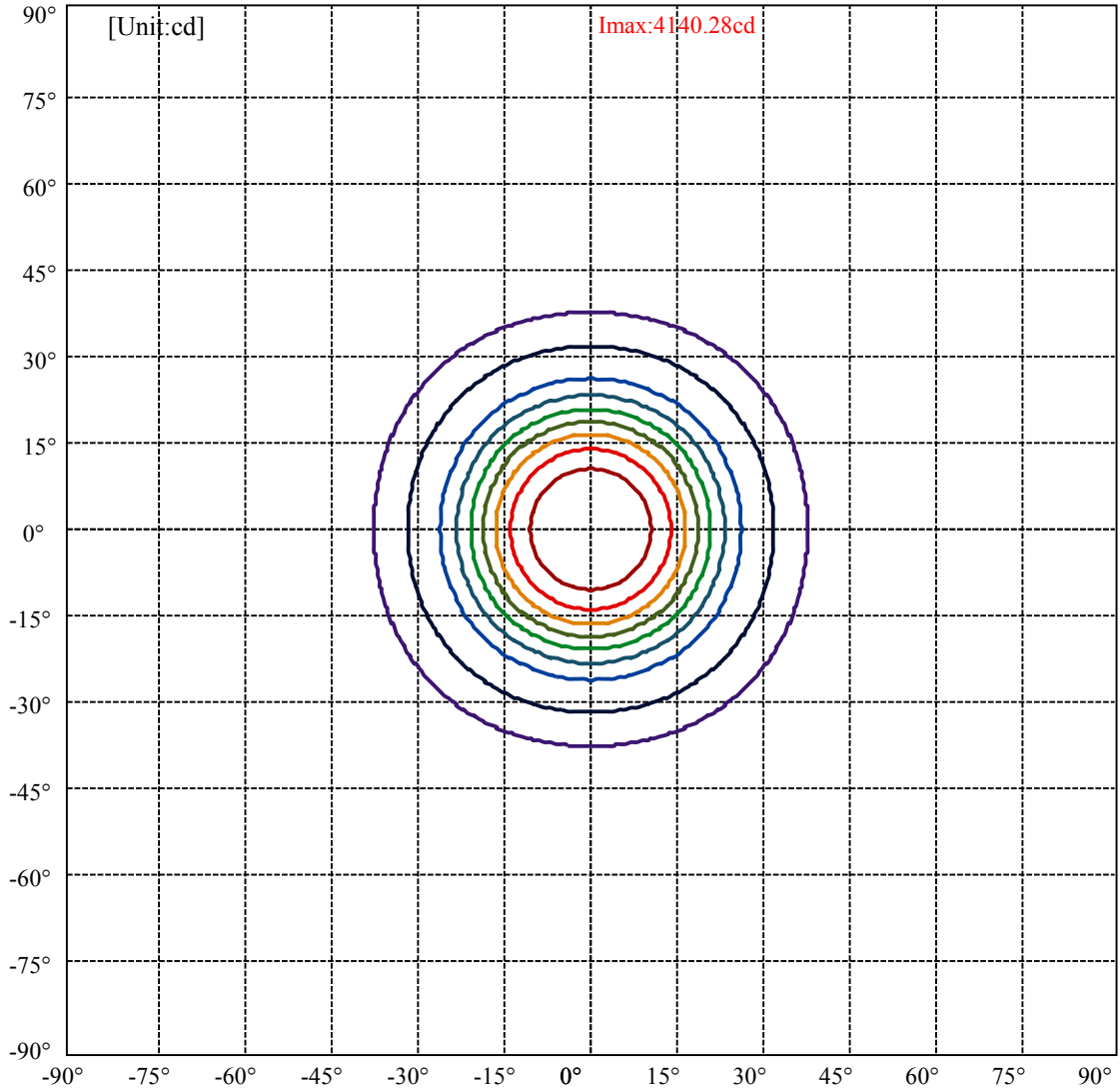
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.2 Right:37.2
:C90/270Left:37.2 Right:37.2

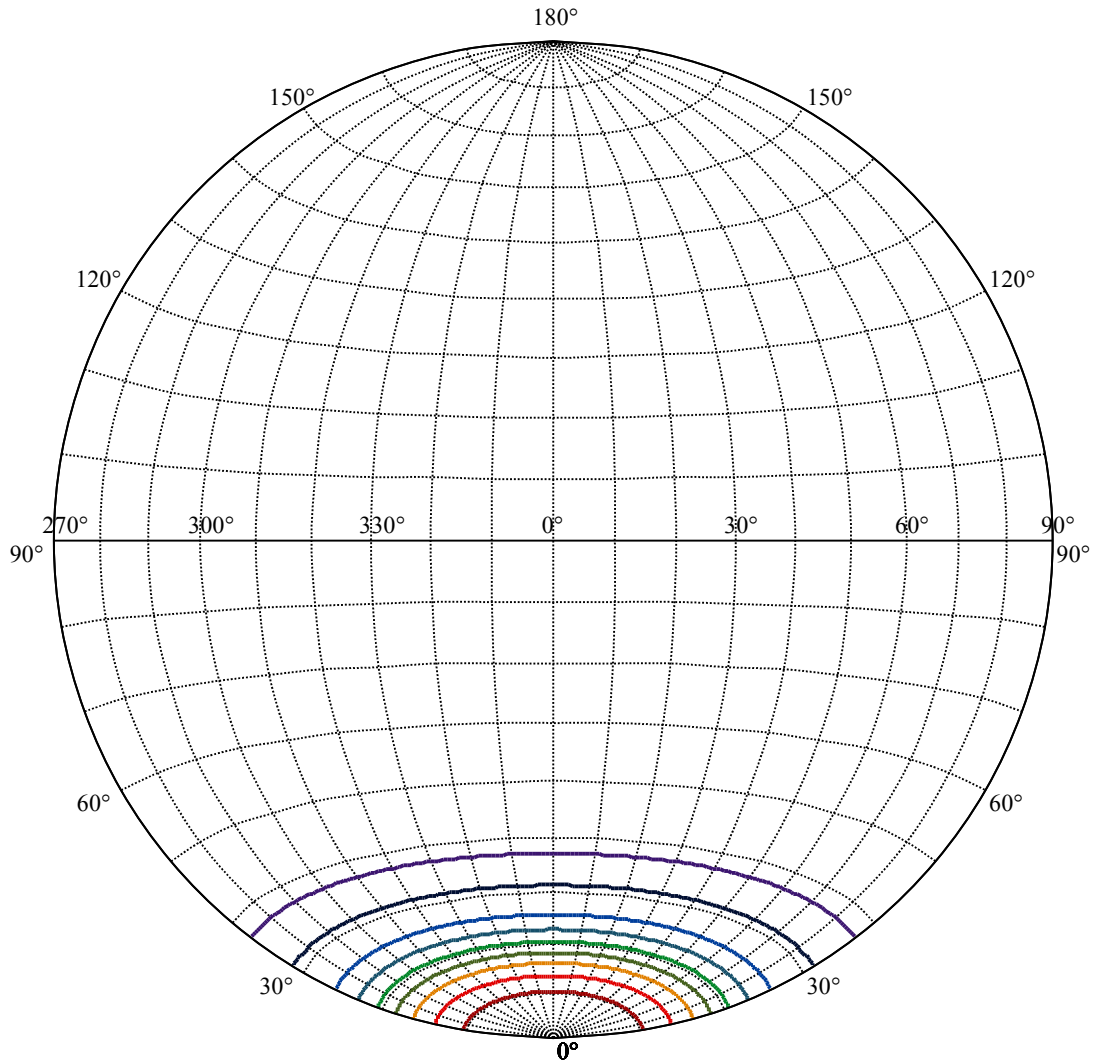
Beam Angle(50%Imax):C0/180Left:20.6 Right:20.6
:C90/270Left:20.6 Right:20.6



Max , Ave Beam angle of C0 plane 41.71



(10%Imax) 414.028	—
(20%Imax) 828.056	—
(30%Imax) 1242.08	—
(40%Imax) 1656.11	—
(50%Imax) 2070.14	—
(60%Imax) 2484.17	—
(70%Imax) 2898.2	—
(80%Imax) 3312.23	—
(90%Imax) 3726.25	—



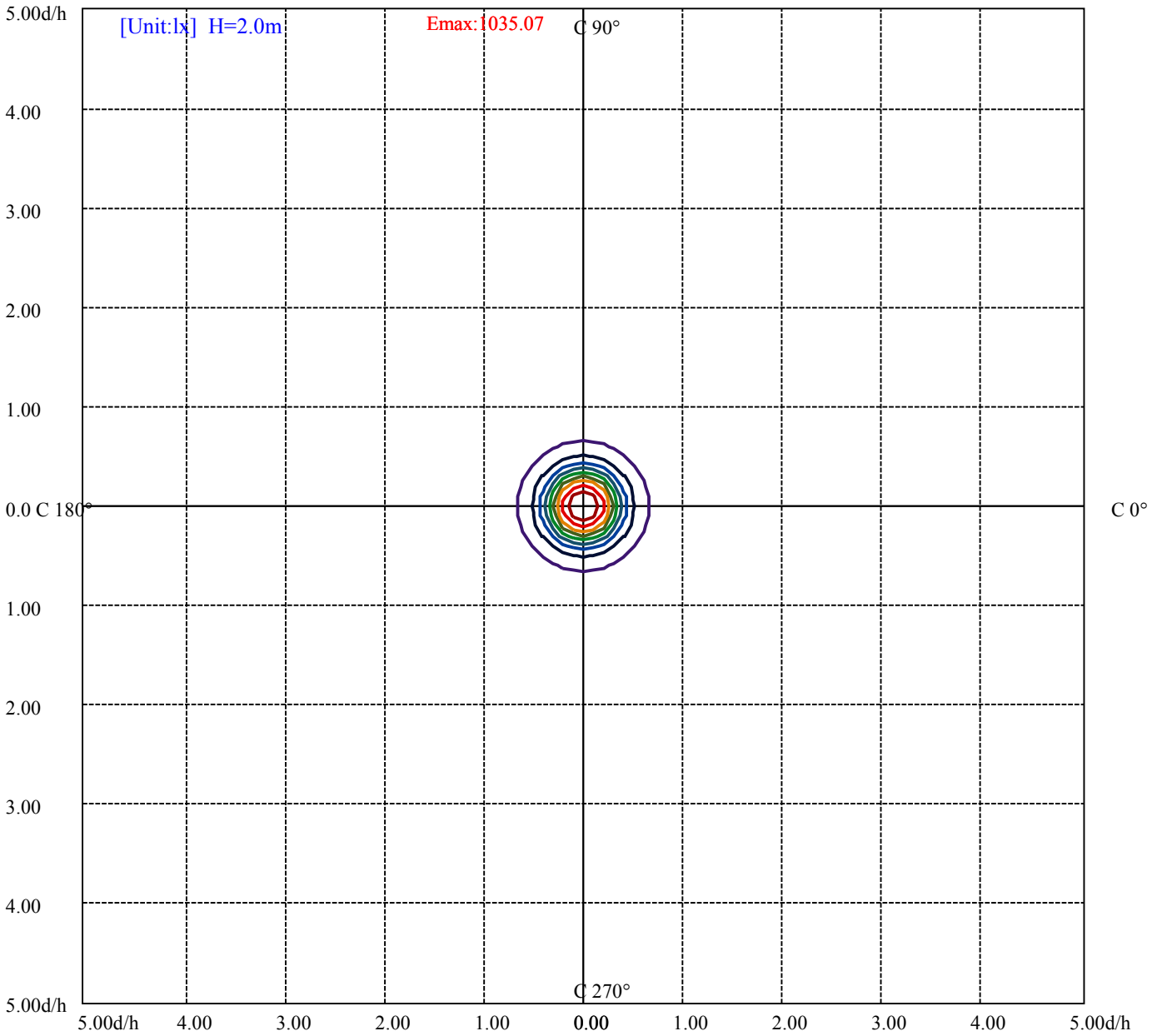
House

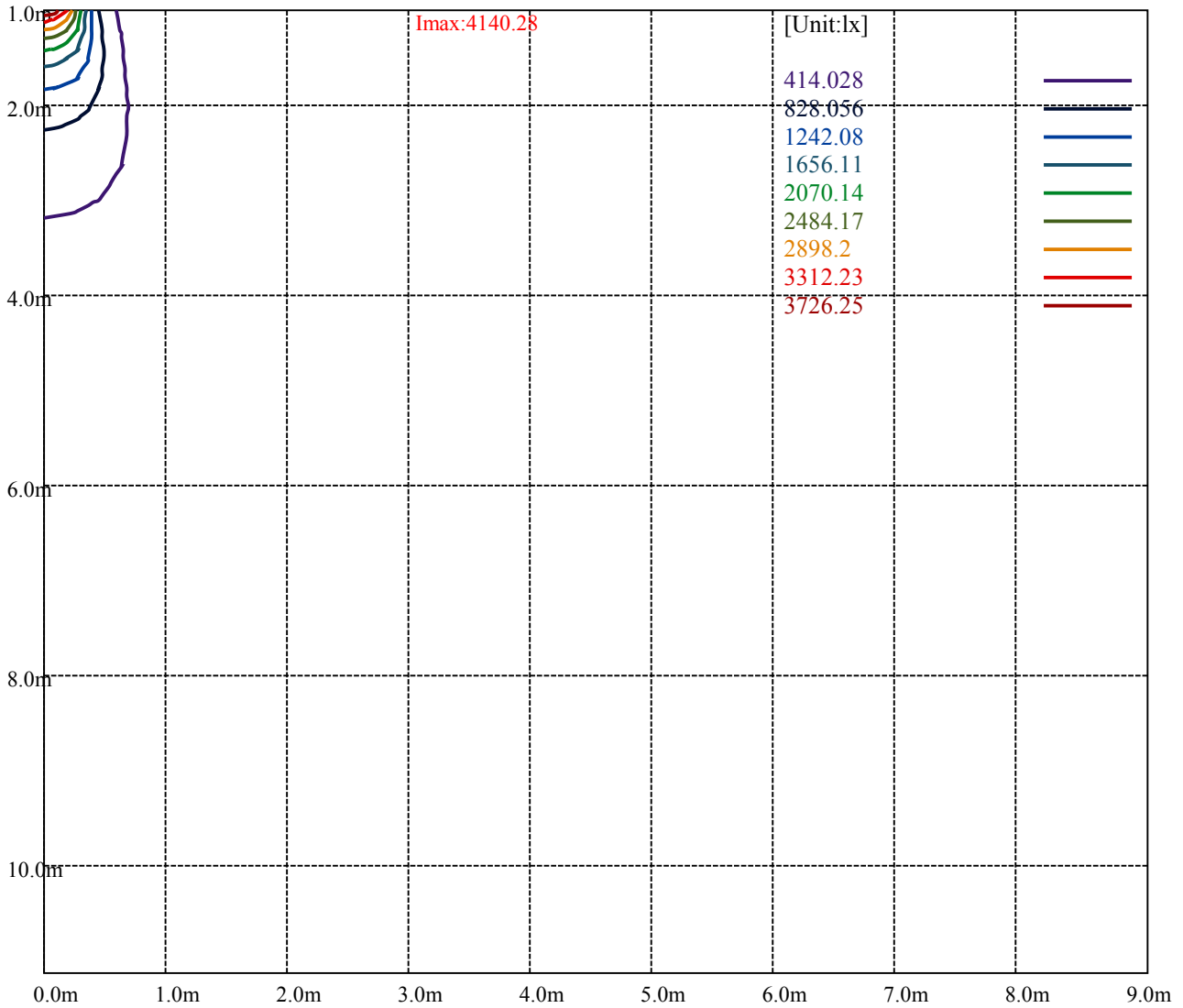
[Unit:cd]

Road

Imax:4140.28

(10%Imax)	414.028	—
(20%Imax)	828.056	—
(30%Imax)	1242.08	—
(40%Imax)	1656.11	—
(50%Imax)	2070.14	—
(60%Imax)	2484.17	—
(70%Imax)	2898.2	—
(80%Imax)	3312.23	—
(90%Imax)	3726.25	—





Luminance Table

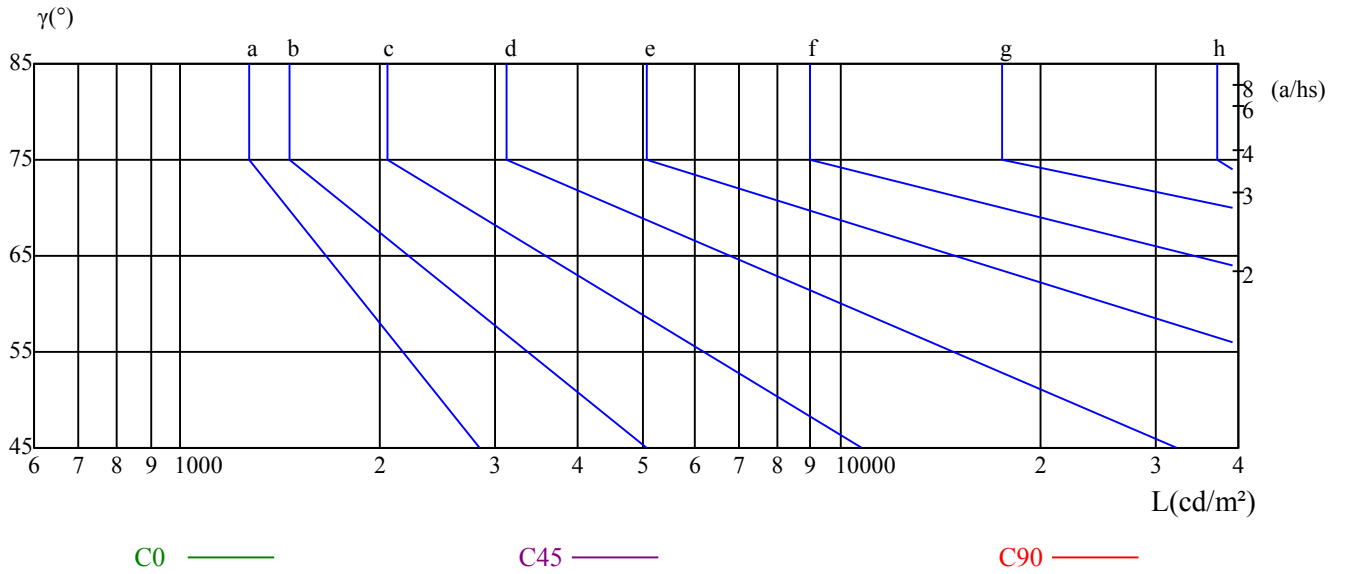
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

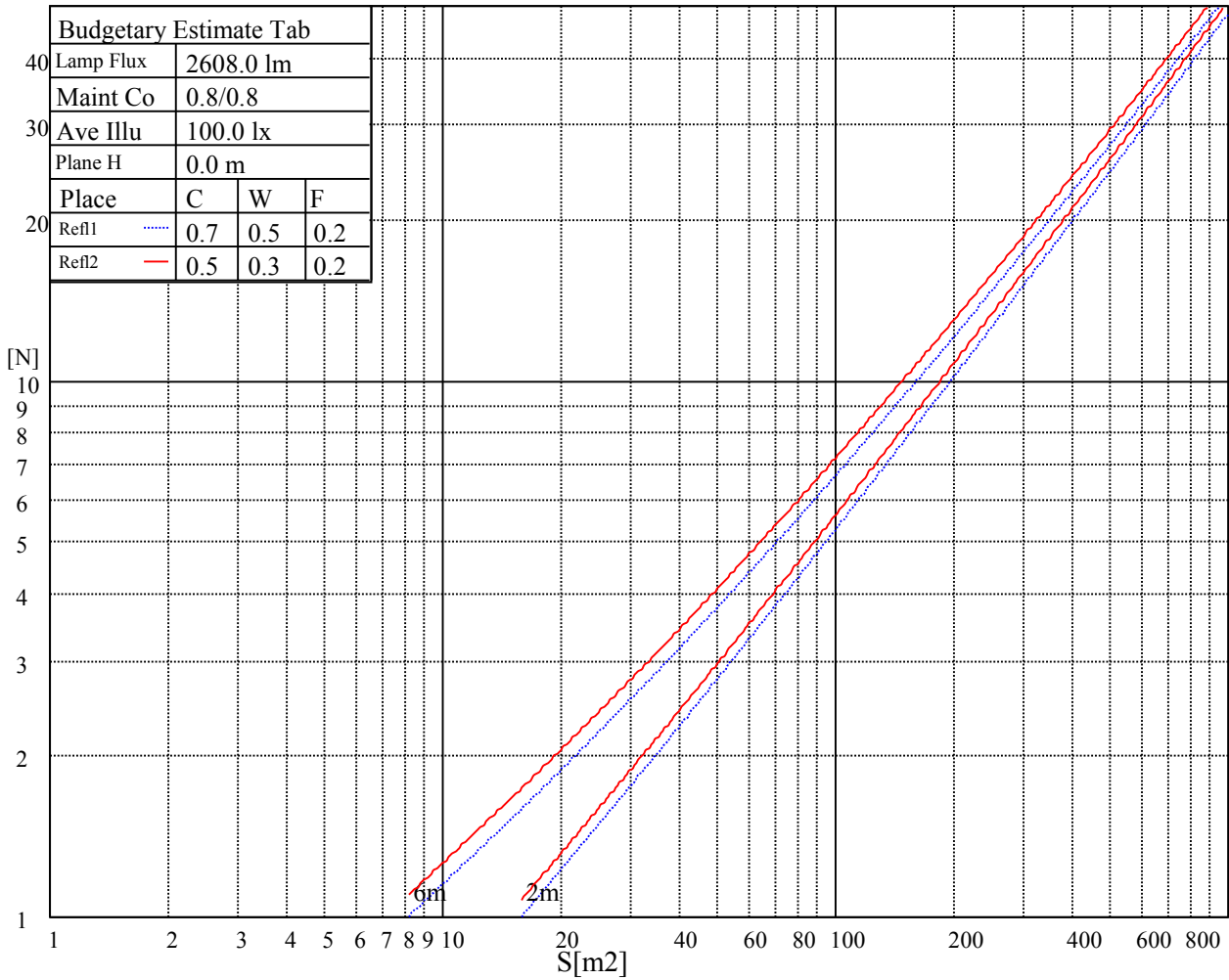
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

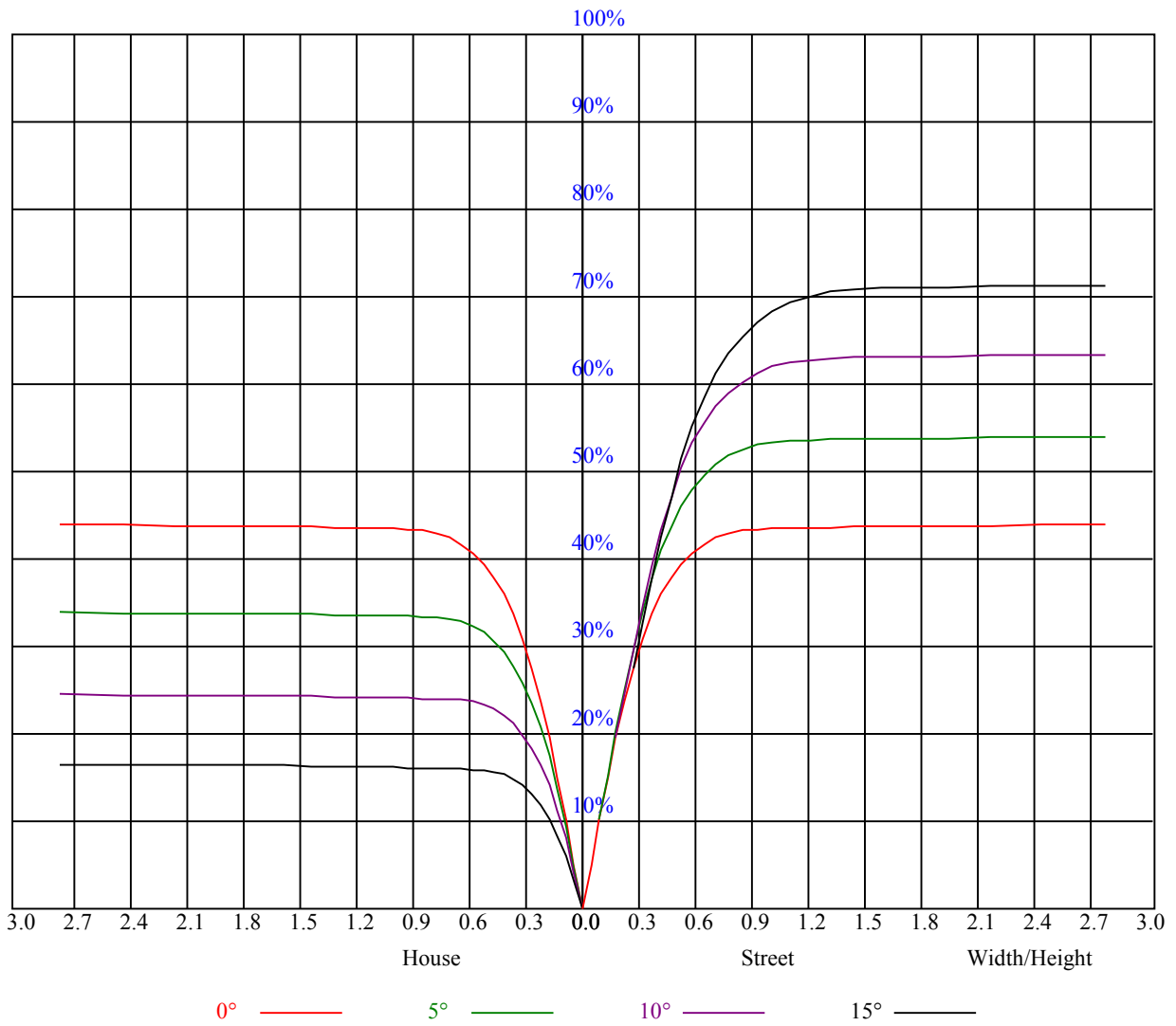
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.99	0.97	0.95	0.97	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.89	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.80	0.79
3	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.74
4	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.70	0.77	0.73	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.66
6	0.74	0.69	0.66	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
7	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.60
8	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.57
9	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.58	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.54
10	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.59	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	4133.25	3995.44	3691.69	2972.25	1902.94	1158.19	849.94	469.13	92.31
45.0	4150.13	4071.94	3820.50	3103.31	2018.81	1215.56	864.00	501.75	190.86
90.0	4151.25	4080.38	3841.31	3160.69	2154.94	1112.34	895.61	573.24	166.39
135.0	4126.50	4122.00	3909.94	3456.56	2548.13	1567.69	1051.31	749.81	334.69
180.0	4133.25	4055.63	3826.69	3332.25	2425.50	1488.38	986.40	695.03	280.52
225.0	4150.13	4022.44	3770.44	3254.63	2331.00	1428.75	972.62	638.38	216.45
270.0	4151.25	4028.06	3750.75	3181.50	2233.13	1374.75	944.44	639.00	299.81
315.0	4126.50	3932.44	3585.94	2742.75	1717.88	1101.71	825.98	384.36	61.43
360.0	4133.25	3995.44	3691.69	2972.25	1902.94	1158.19	849.94	469.13	92.31

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	17.38	13.73	12.49	11.76	11.25	10.91	10.63	10.46	10.41
45.0	18.96	14.18	12.94	12.09	11.53	11.19	10.91	10.69	10.58
90.0	21.49	15.02	13.44	12.38	11.70	11.31	10.91	10.74	10.63
135.0	29.48	15.86	13.73	12.60	11.81	11.31	10.91	10.69	10.52
180.0	27.73	14.96	13.28	12.26	11.53	11.14	10.80	10.58	10.46
225.0	25.20	14.85	13.28	12.26	11.64	11.25	10.97	10.74	10.63
270.0	21.83	15.24	13.44	12.43	11.76	11.31	10.97	10.80	10.63
315.0	16.82	13.89	12.77	11.93	11.36	10.97	10.69	10.58	10.46
360.0	17.38	13.73	12.49	11.76	11.25	10.91	10.63	10.46	10.41

C/ γ (°)	90.0
0.0	10.41
45.0	10.52
90.0	10.52
135.0	10.46
180.0	10.41
225.0	10.52
270.0	10.52
315.0	10.46
360.0	10.41