



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-1682-M
Luminaire: 92.70.126.00
Report No: NATA0100
Test No: GC2018082015
LampCAT: LUMINUS CHM-9-AA10
Lamp flux(lm): 1813.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 36.2000
Current(A): 0.3900
Power (W): 14.1180
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1621.50
Efficiency(%): 89.44%
Lumens(lm)/Power(W): 116.28
Central intensity(cd): 3628.217
Maximum intensity(cd): 3628.217
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=35.8
 [C90/270]Total=35.8
Field angle(10%Imax): [C0/180]Total=68.2
 [C90/270]Total=68.2
Maximum s/h(1/2): C0_180=0.58 C90_270=0.58
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(%): 90.55%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.468%

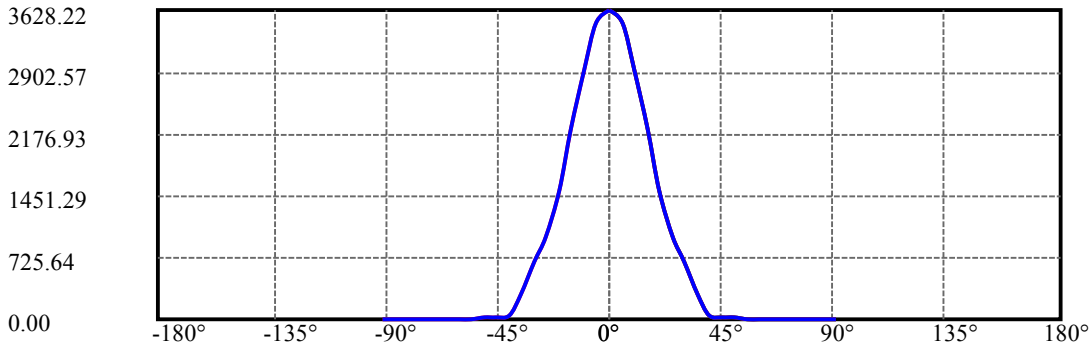
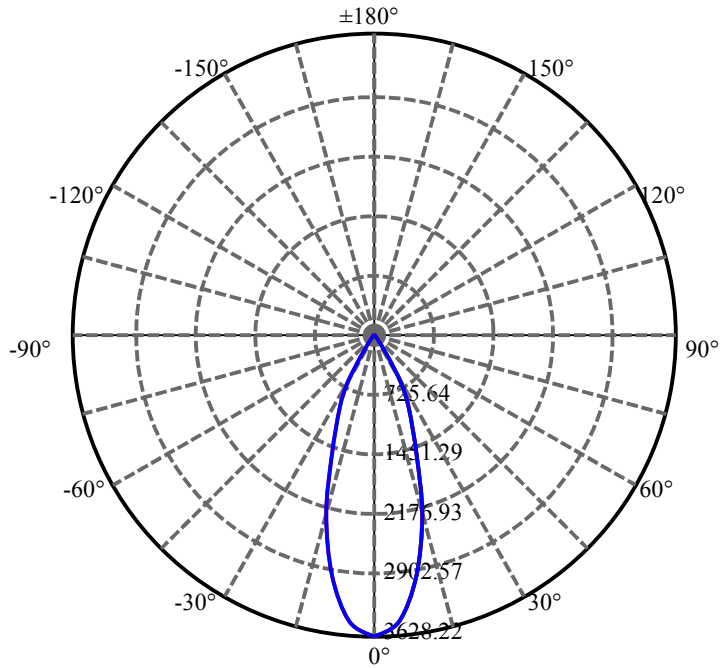
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3628.217	21.697	21.697	1.197%	1.338%
5.0	3463.873	165.481	187.178	9.127%	11.543%
10.0	2927.693	278.667	465.845	15.370%	28.729%
15.0	2228.821	316.199	782.044	17.441%	48.230%
20.0	1519.763	284.916	1066.96	15.715%	65.801%
25.0	960.259	222.447	1289.407	12.270%	79.519%
30.0	670.078	183.647	1473.054	10.129%	90.845%
35.0	297.311	93.474	1566.529	5.156%	96.610%
40.0	40.556	14.289	1580.818	.788%	97.491%
45.0	14.734	5.711	1586.529	.315%	97.843%
50.0	11.892	4.993	1591.523	.275%	98.151%
55.0	9.924	4.456	1595.978	.246%	98.426%
60.0	8.671	4.116	1600.095	.227%	98.680%
65.0	7.852	3.901	1603.996	.215%	98.920%
70.0	7.446	3.835	1607.831	.212%	99.157%
75.0	7.254	3.841	1611.672	.212%	99.394%
80.0	7.254	3.916	1615.587	.216%	99.635%
85.0	7.226	3.946	1619.533	.218%	99.878%
90.0	7.192	1.971	1621.504	.109%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1473.05	81.25%	90.84%
0-40	1580.82	87.19%	97.49%
0-60	1600.09	88.26%	98.68%
0-90	1619.53	89.33%	99.88%
0-120	1619.53	89.33%	99.88%
0-180	1621.50	89.44%	100.00%
60-90	23.55	1.30%	1.45%
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%
0-25.21	1297.20	71.55%	80.00%

ZONAL LUMEN SUMMARY

0-10	465.84
10-20	601.12
20-30	406.09
30-40	107.76
40-50	10.70
50-60	8.57
60-70	7.74
70-80	7.76
80-90	3.95
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: —————

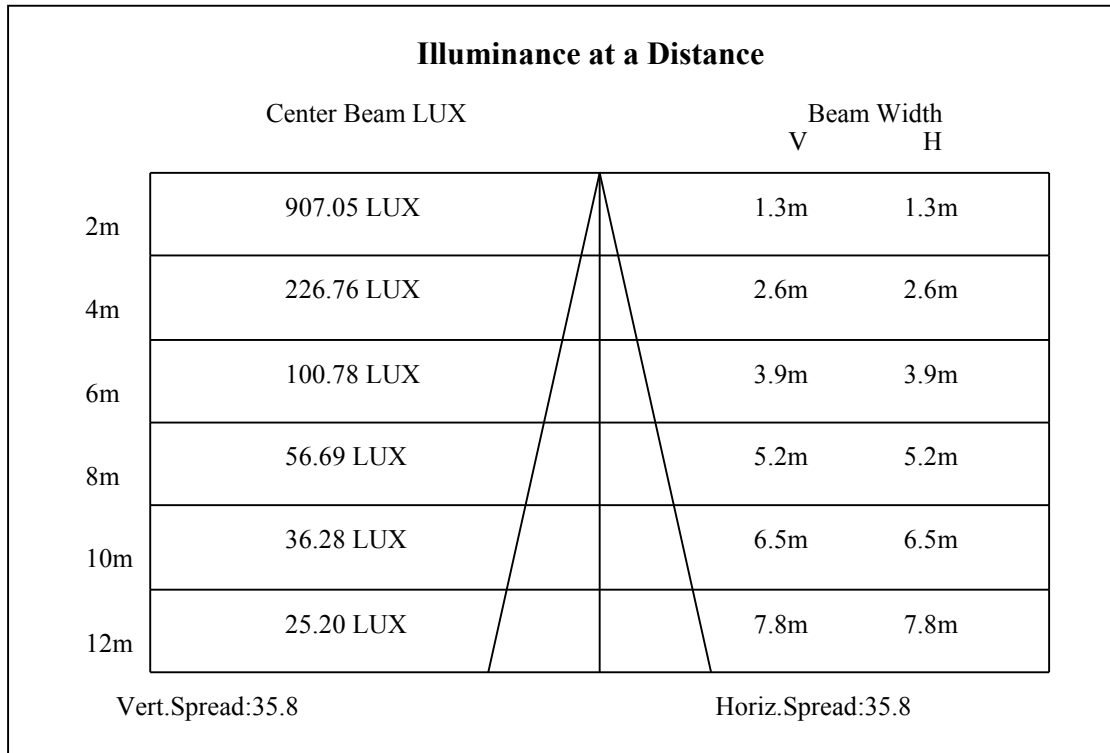
C90/C270: —————

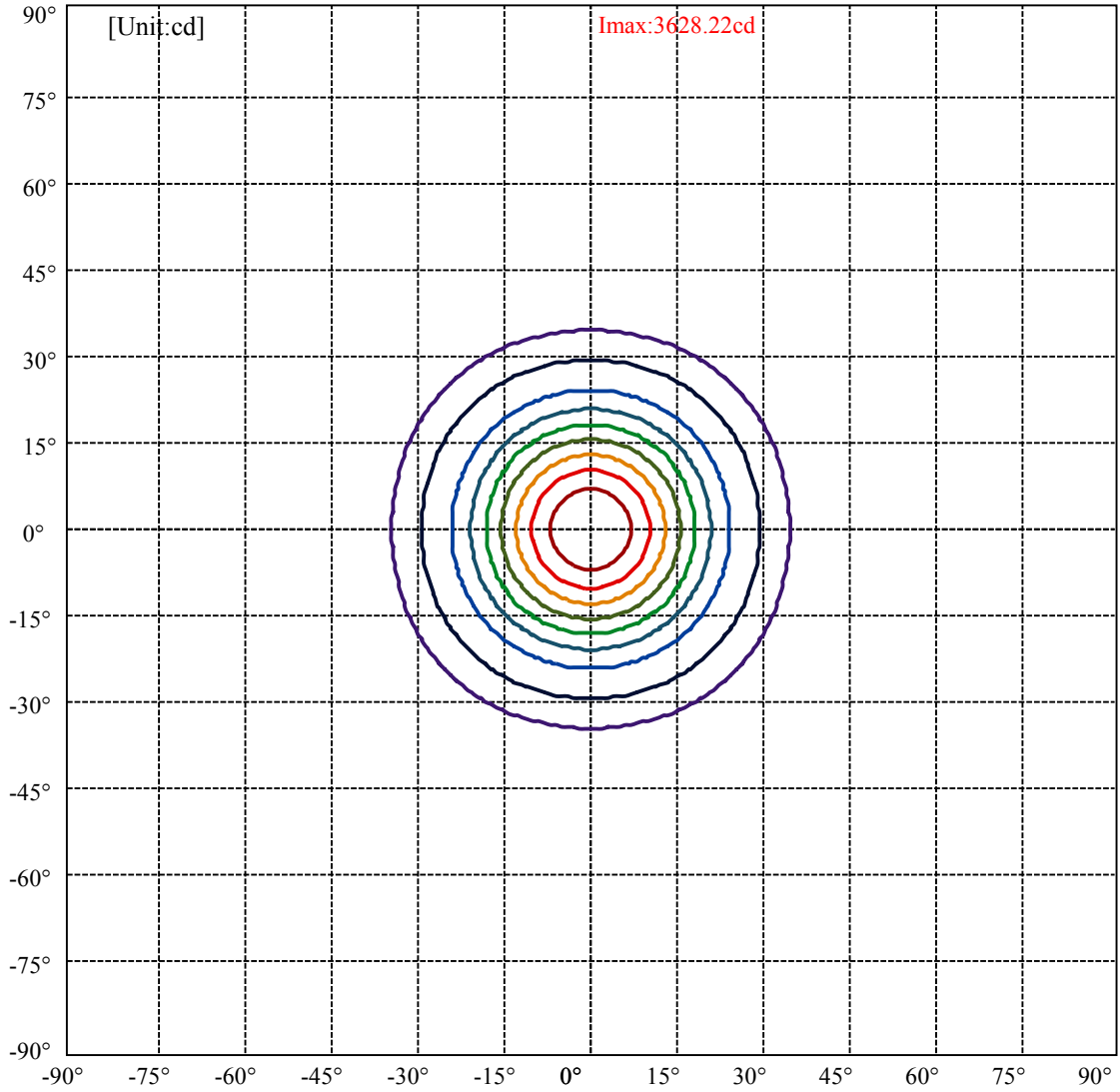
Field angle(10%Imax):C0/180Left:34.1 Right:34.1

:C90/270Left:34.1 Right:34.1

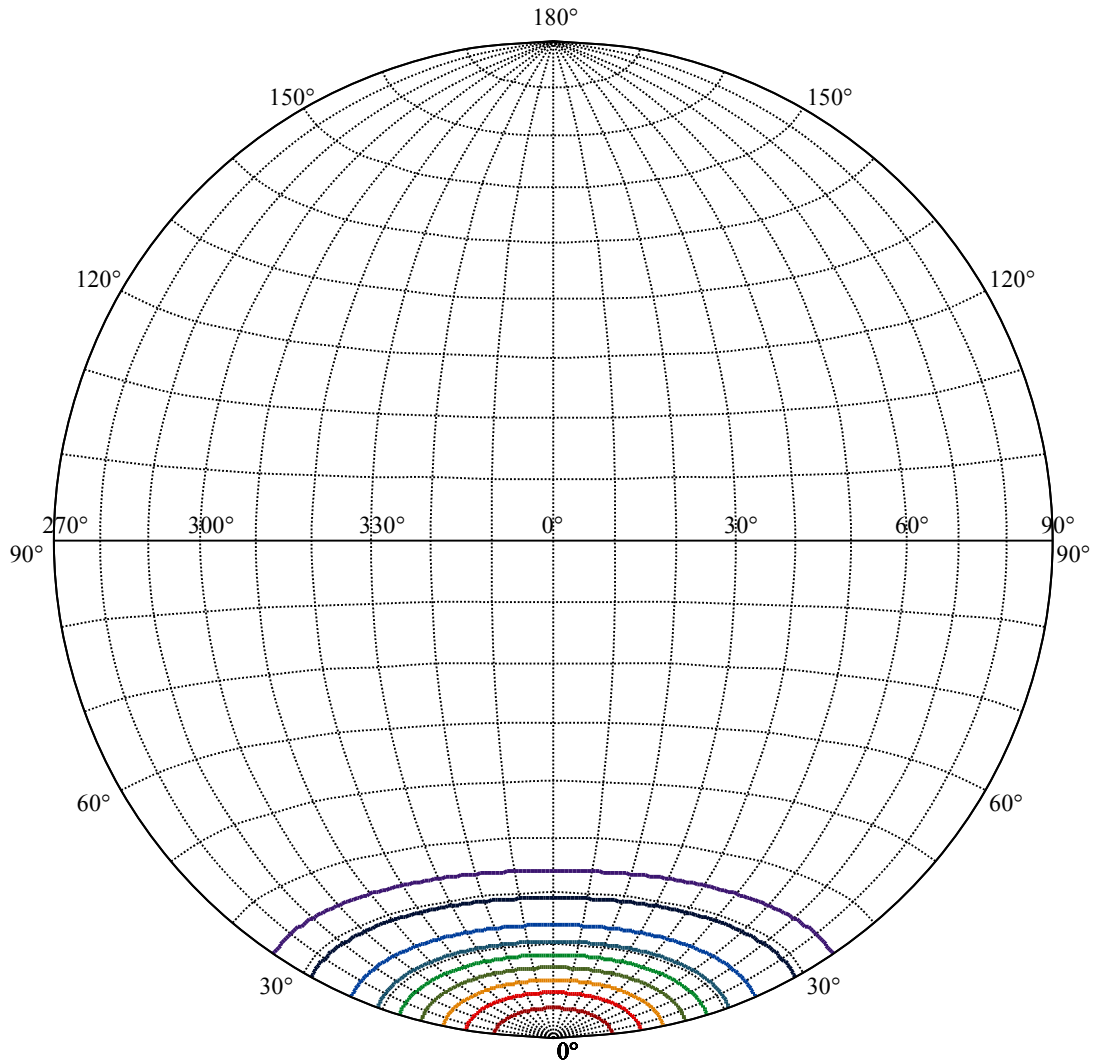
Beam Angle(50%Imax):C0/180Left:17.9 Right:17.9

:C90/270Left:17.9 Right:17.9





(10%Imax)	362.822	—
(20%Imax)	725.643	—
(30%Imax)	1088.47	—
(40%Imax)	1451.29	—
(50%Imax)	1814.11	—
(60%Imax)	2176.93	—
(70%Imax)	2539.75	—
(80%Imax)	2902.57	—
(90%Imax)	3265.4	—












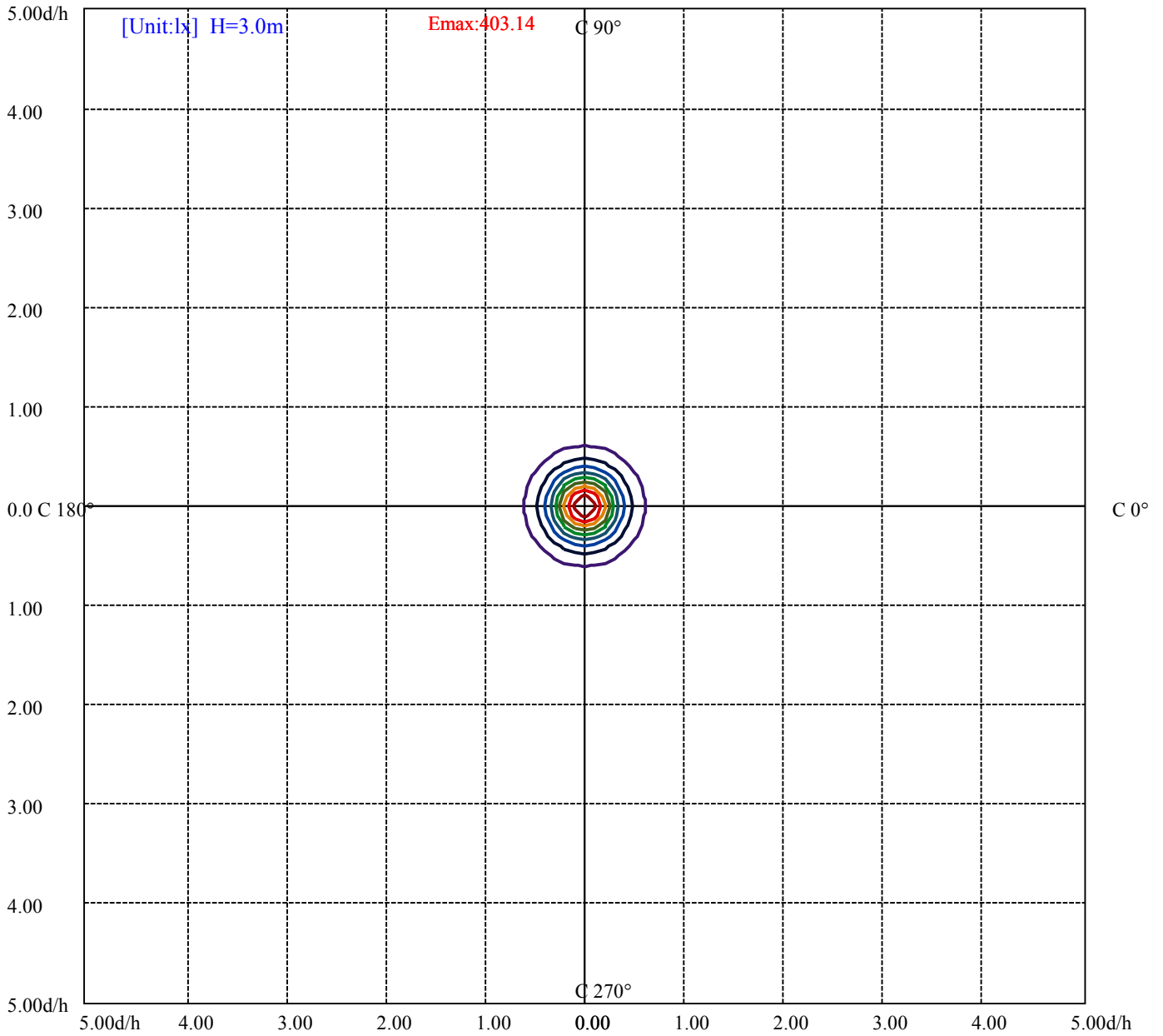
House

[Unit:cd]

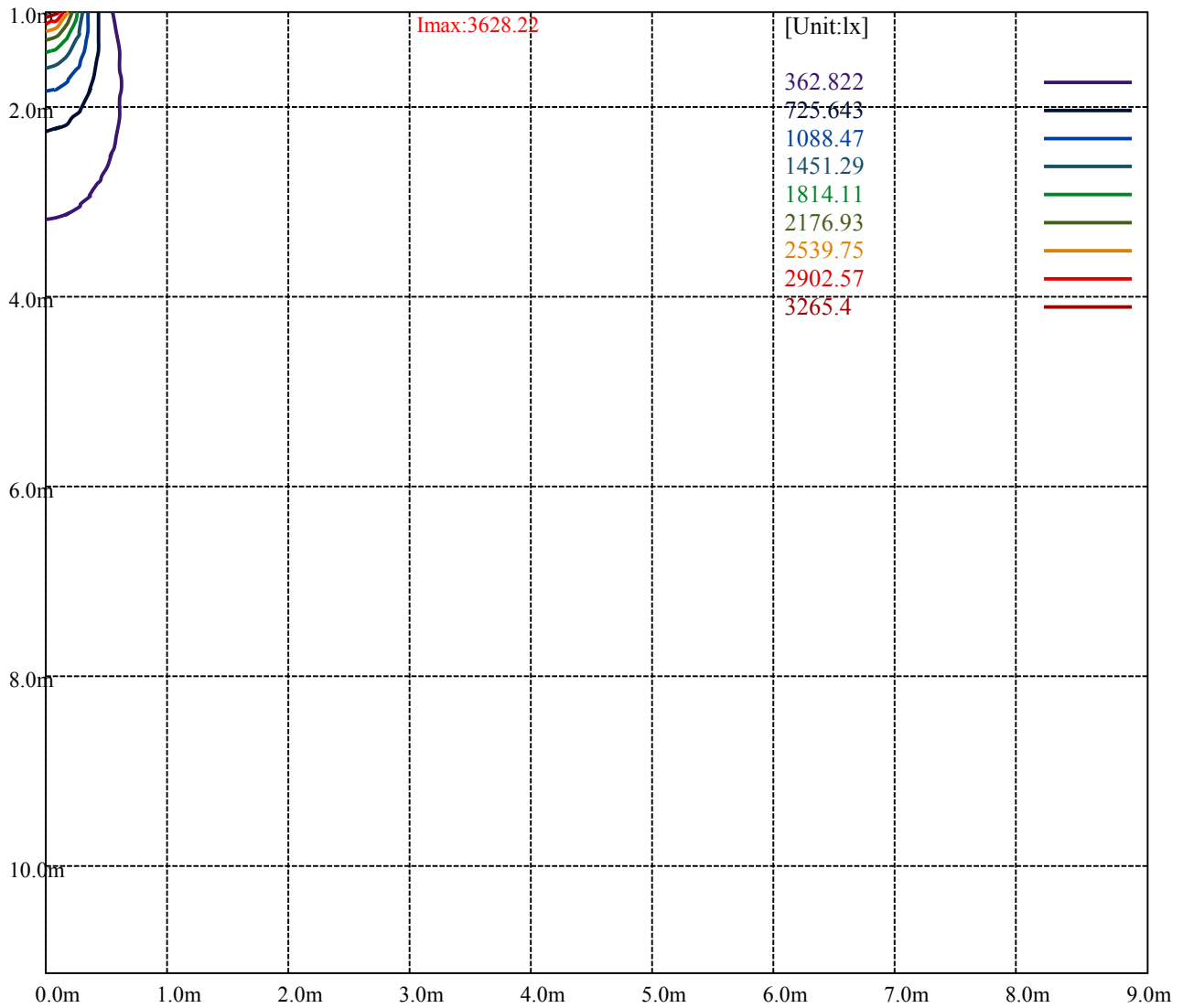
Road

Imax:3628.22

(10%Imax)	362.822	
(20%Imax)	725.643	
(30%Imax)	1088.47	
(40%Imax)	1451.29	
(50%Imax)	1814.11	
(60%Imax)	2176.93	
(70%Imax)	2539.75	
(80%Imax)	2902.57	
(90%Imax)	3265.4	



(10%Emax) 40.31345	—
(20%Emax) 80.62689	—
(30%Emax) 120.94	—
(40%Emax) 161.2533	—
(50%Emax) 201.5678	—
(60%Emax) 241.8811	—
(70%Emax) 282.1945	—
(80%Emax) 322.5078	—
(90%Emax) 362.8211	—



Luminance Table

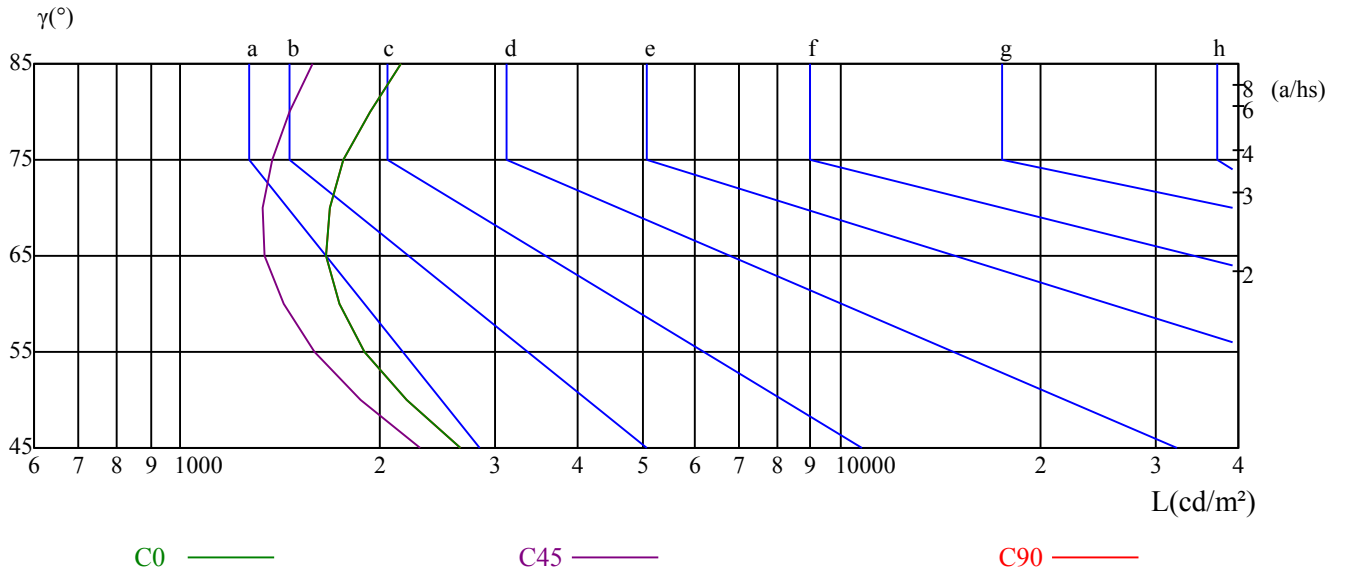
γ	45	50	55	60	65	70	75	80	85
C0	2658	2202	1902	1736	1658	1678	1766	1936	2153
C45	2301	1877	1596	1433	1345	1334	1373	1467	1582
C90	2658	2202	1902	1736	1658	1678	1766	1936	2153

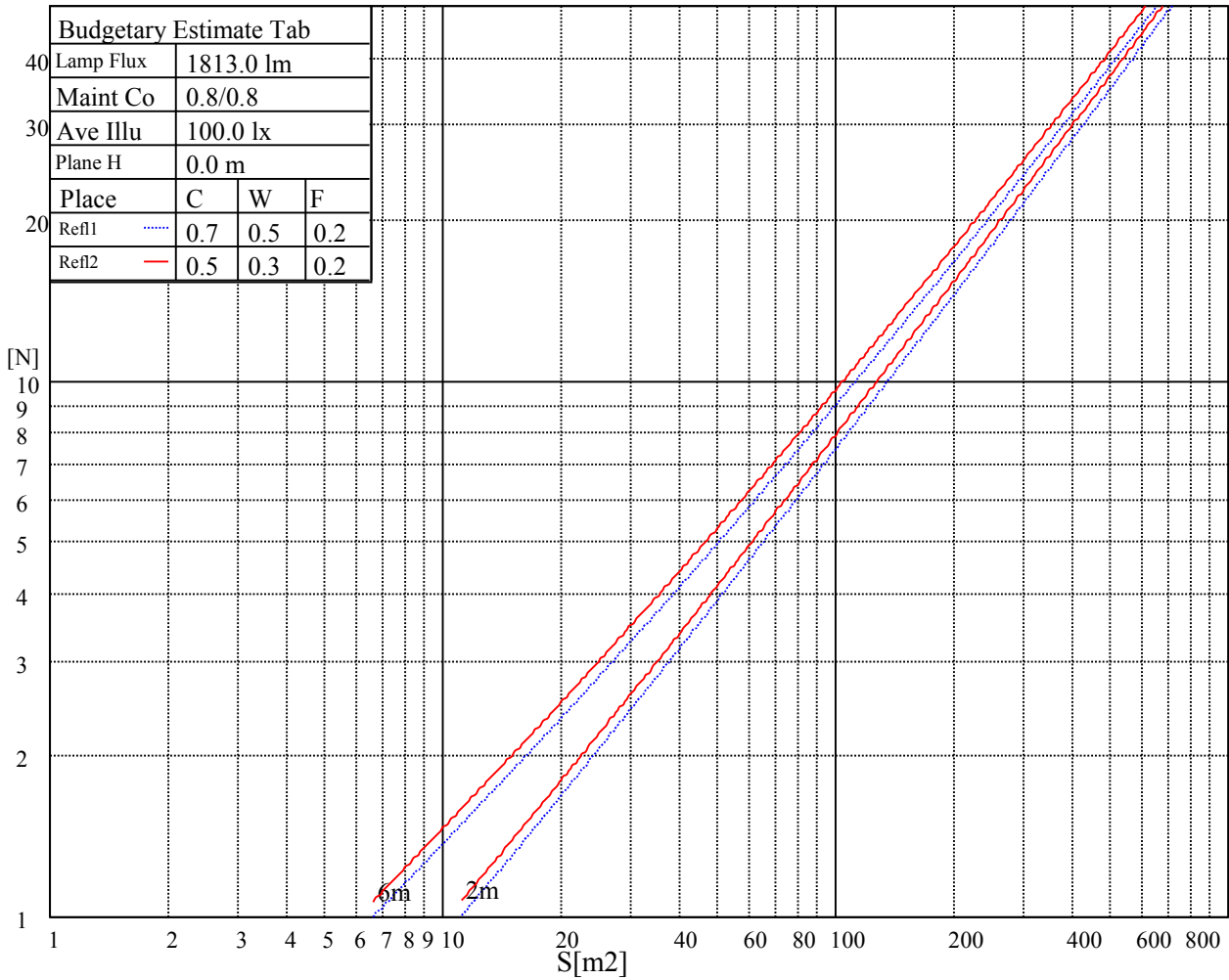
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3792	3792	3792	5720	5720	5720	16921	16921	16921

Glare Table

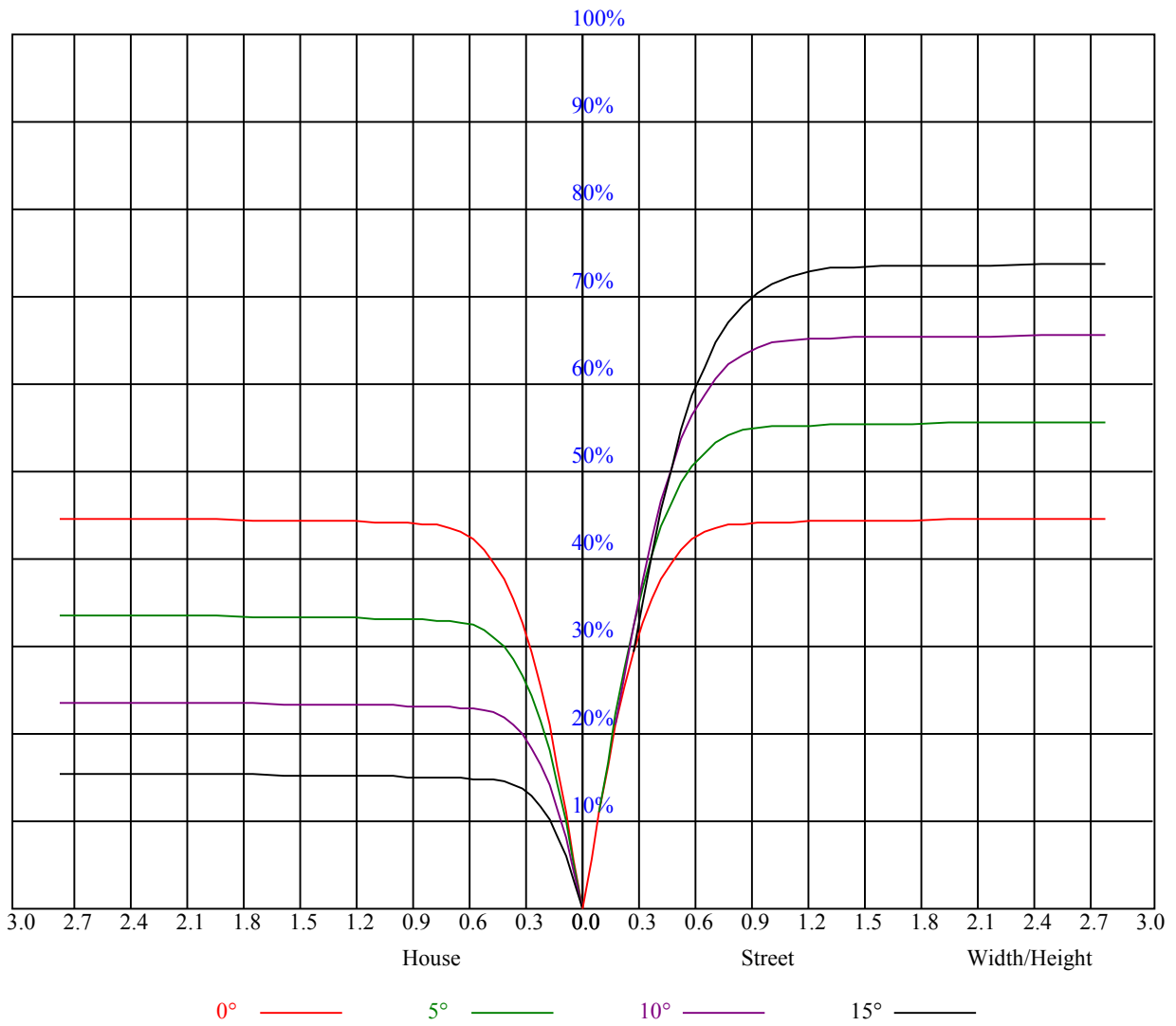
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.00	0.98	0.95	0.98	0.96	0.94	0.94	0.93	0.91	0.91	0.89	0.88	0.88	0.87	0.86	0.84
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.80
3	0.90	0.86	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.81	0.78	0.84	0.80	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
6	0.78	0.74	0.71	0.78	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
8	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.63
9	0.70	0.65	0.63	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59



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	3637.58	3509.85	3019.84	2349.26	1637.38	1043.32	726.19	373.83	55.83
45.0	3619.41	3517.55	3042.97	2380.64	1640.13	1024.05	721.24	360.07	53.74
90.0	3629.32	3484.52	2960.38	2257.31	1506.34	933.54	668.38	288.55	34.25
135.0	3626.57	3526.36	3025.35	2311.82	1645.09	993.22	694.26	330.89	50.38
180.0	3637.58	3437.17	2831.00	2106.46	1396.78	872.64	603.86	232.34	30.61
225.0	3619.41	3392.58	2819.44	2099.85	1379.71	893.51	622.30	232.83	31.22
270.0	3629.32	3432.22	2918.54	2224.28	1509.10	1002.03	688.21	302.81	37.93
315.0	3626.57	3410.74	2804.02	2100.95	1443.58	919.77	636.18	257.17	30.50
360.0	3637.58	3509.85	3019.84	2349.26	1637.38	1043.32	726.19	373.83	55.83
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	15.53	12.44	10.19	8.75	7.87	7.43	7.21	7.21	7.16
45.0	15.20	11.78	9.86	8.70	7.93	7.49	7.27	7.27	7.21
90.0	14.87	11.73	9.80	8.64	7.87	7.49	7.27	7.32	7.27
135.0	14.65	11.95	10.02	8.75	7.87	7.49	7.21	7.21	7.16
180.0	13.82	11.45	9.74	8.59	7.76	7.38	7.21	7.16	7.16
225.0	14.42	11.89	9.97	8.59	7.76	7.38	7.27	7.21	7.21
270.0	14.98	12.22	10.08	8.86	7.98	7.54	7.38	7.43	7.43
315.0	14.42	11.67	9.74	8.48	7.76	7.38	7.21	7.21	7.21
360.0	15.53	12.44	10.19	8.75	7.87	7.43	7.21	7.21	7.16
C/ γ (°)	90.0								
0.0	7.16								
45.0	7.21								
90.0	7.16								
135.0	7.16								
180.0	7.21								
225.0	7.21								
270.0	7.21								
315.0	7.21								
360.0	7.16								