



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: LN01D04560DA-N

Luminaire: 97.70.234.00

Report No: 201228-B005

Test No: 201228-C005

LampCAT: CXM-9-TC40 LES9.8

Lamp flux(lm): 2079.0

Number of Lamps: 1

Length(mm): 92

Phm Type: C

Voltage(V): 35.0900

Current(A): 0.5000

Power (W): 17.5450

PF: 0.0000

Ballast type: DC

Width(mm): 92

Height(mm): 50

Photometric Results

Lumens(lm): 1725.80

Efficiency(%): 83.01%

Lumens(lm)/Power(W): 98.36

Central intensity(cd): 1669.641

Maximum intensity(cd): 1669.641

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=58.7

[C90/270]Total=58.7

Field angle(10%Imax): [C0/180]Total=94.5

[C90/270]Total=94.5

Maximum s/h(1/2): C0_180=0.88 C90_270=0.88

Maximum s/h(1/4): C0_180=0.90 C90_270=0.90

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.01%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 94.262%

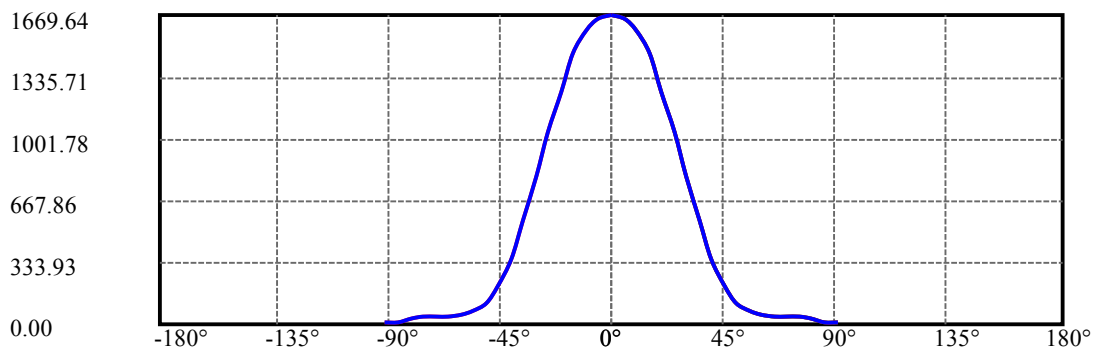
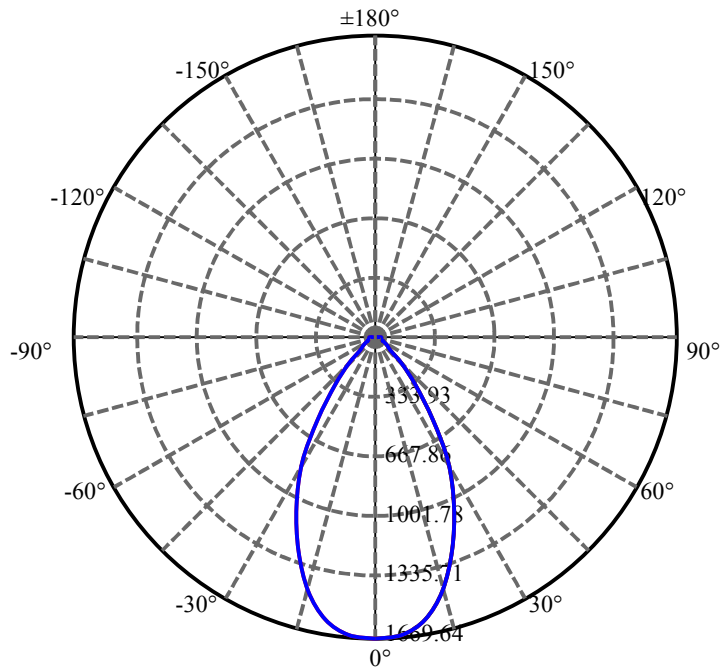
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1669.641	0.000	0	.000%	.000%
5.0	1654.031	39.734	39.734	1.911%	2.302%
10.0	1588.078	115.980	155.714	5.579%	9.023%
15.0	1458.492	180.720	336.435	8.693%	19.494%
20.0	1257.947	223.873	560.307	10.768%	32.466%
25.0	1038.326	240.837	801.144	11.584%	46.422%
30.0	803.412	233.073	1034.217	11.211%	59.927%
35.0	558.120	200.495	1234.712	9.644%	71.544%
40.0	352.308	151.898	1386.61	7.306%	80.346%
45.0	206.831	103.529	1490.139	4.980%	86.345%
50.0	117.647	65.566	1555.705	3.154%	90.144%
55.0	74.243	41.723	1597.428	2.007%	92.561%
60.0	52.713	29.346	1626.774	1.412%	94.262%
65.0	41.998	23.024	1649.798	1.107%	95.596%
70.0	39.080	20.529	1670.327	.987%	96.786%
75.0	36.373	19.722	1690.05	.949%	97.928%
80.0	30.052	17.773	1707.823	.855%	98.958%
85.0	14.189	12.021	1719.844	.578%	99.655%
90.0	7.573	5.959	1725.803	.287%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1034.22	49.75%	59.93%
0-40	1386.61	66.70%	80.35%
0-60	1626.77	78.25%	94.26%
0-90	1719.84	82.72%	99.65%
0-120	1719.84	82.72%	99.65%
0-180	1725.80	83.01%	100.00%
60-90	122.42	5.89%	7.09%
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%
0-39.80	1380.64	66.41%	80.00%

ZONAL LUMEN SUMMARY

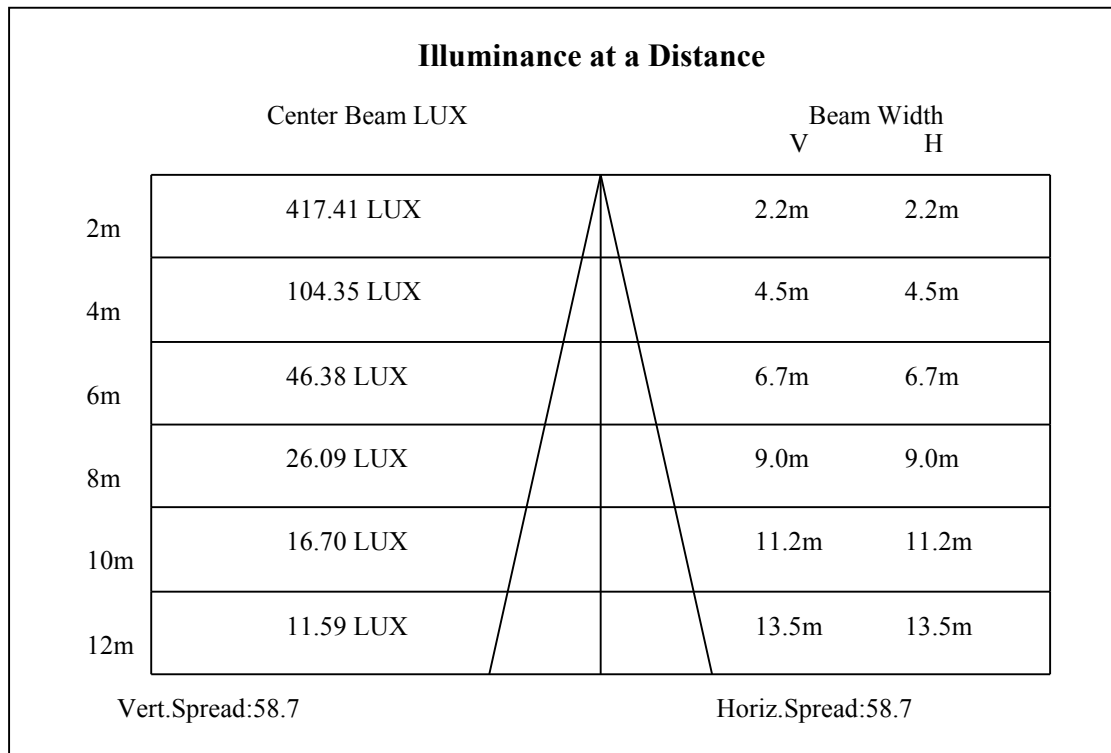
0-10	155.71
10-20	404.59
20-30	473.91
30-40	352.39
40-50	169.09
50-60	71.07
60-70	43.55
70-80	37.50
80-90	12.02
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



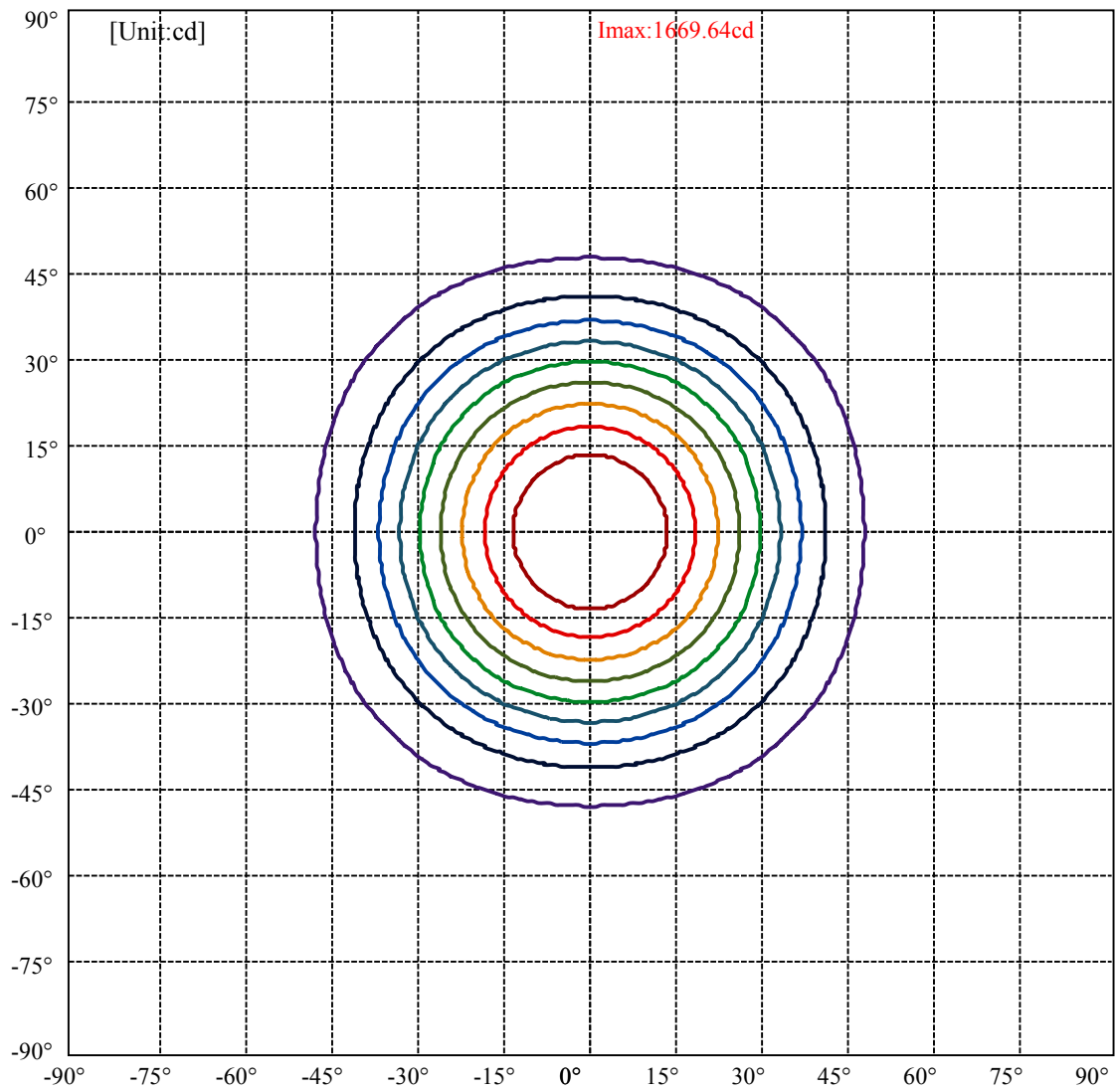
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:47.2 Right:47.2
:C90/270Left:47.2 Right:47.2

Beam Angle(50%Imax):C0/180Left:29.3 Right:29.3
:C90/270Left:29.3 Right:29.3



ISO-Intensity(V-H)

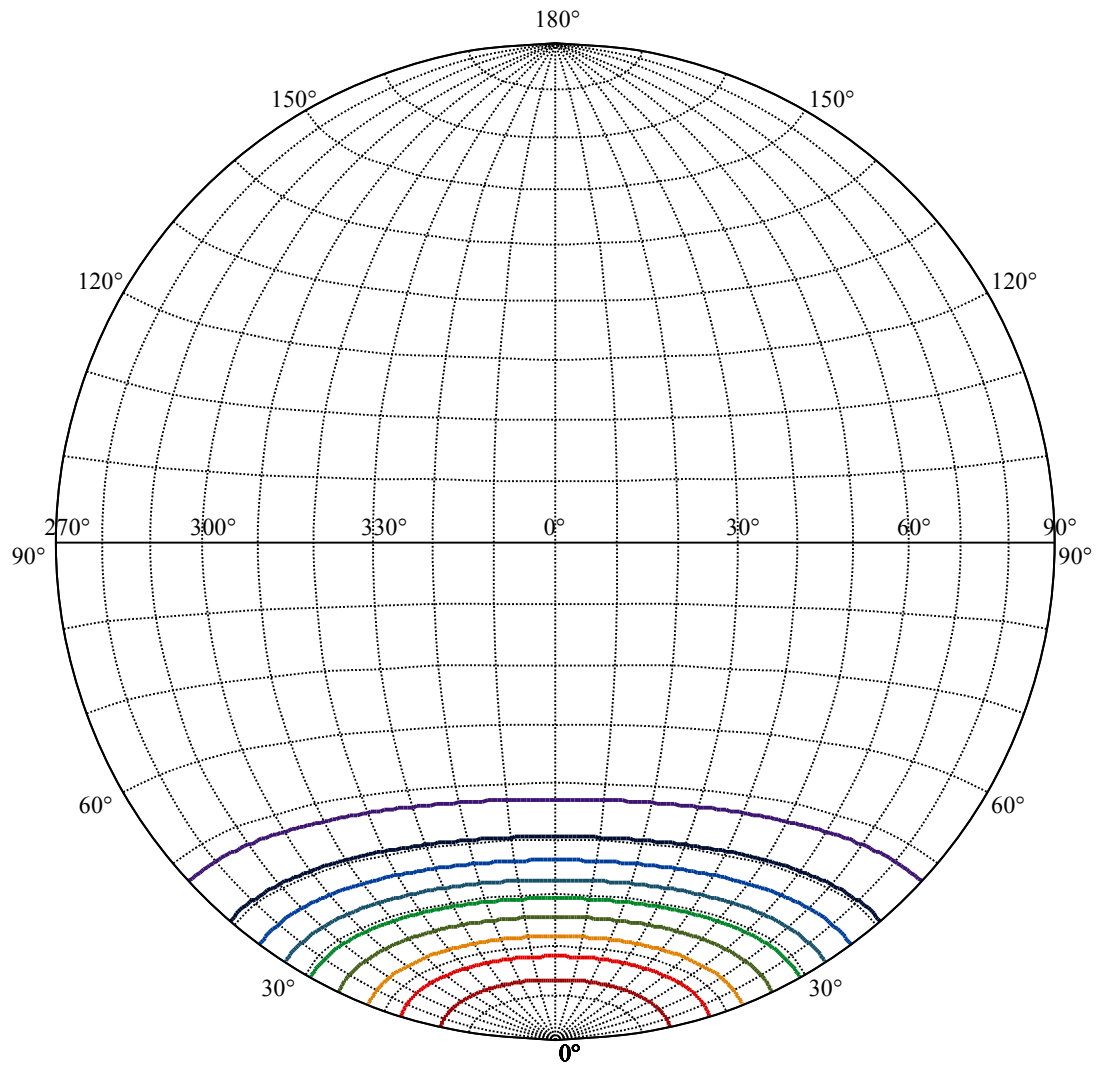


(10%Imax) 166.964	—
(20%Imax) 333.928	—
(30%Imax) 500.892	—
(40%Imax) 667.856	—
(50%Imax) 834.82	—
(60%Imax) 1001.78	—
(70%Imax) 1168.75	—
(80%Imax) 1335.71	—
(90%Imax) 1502.68	—

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/12/28
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50












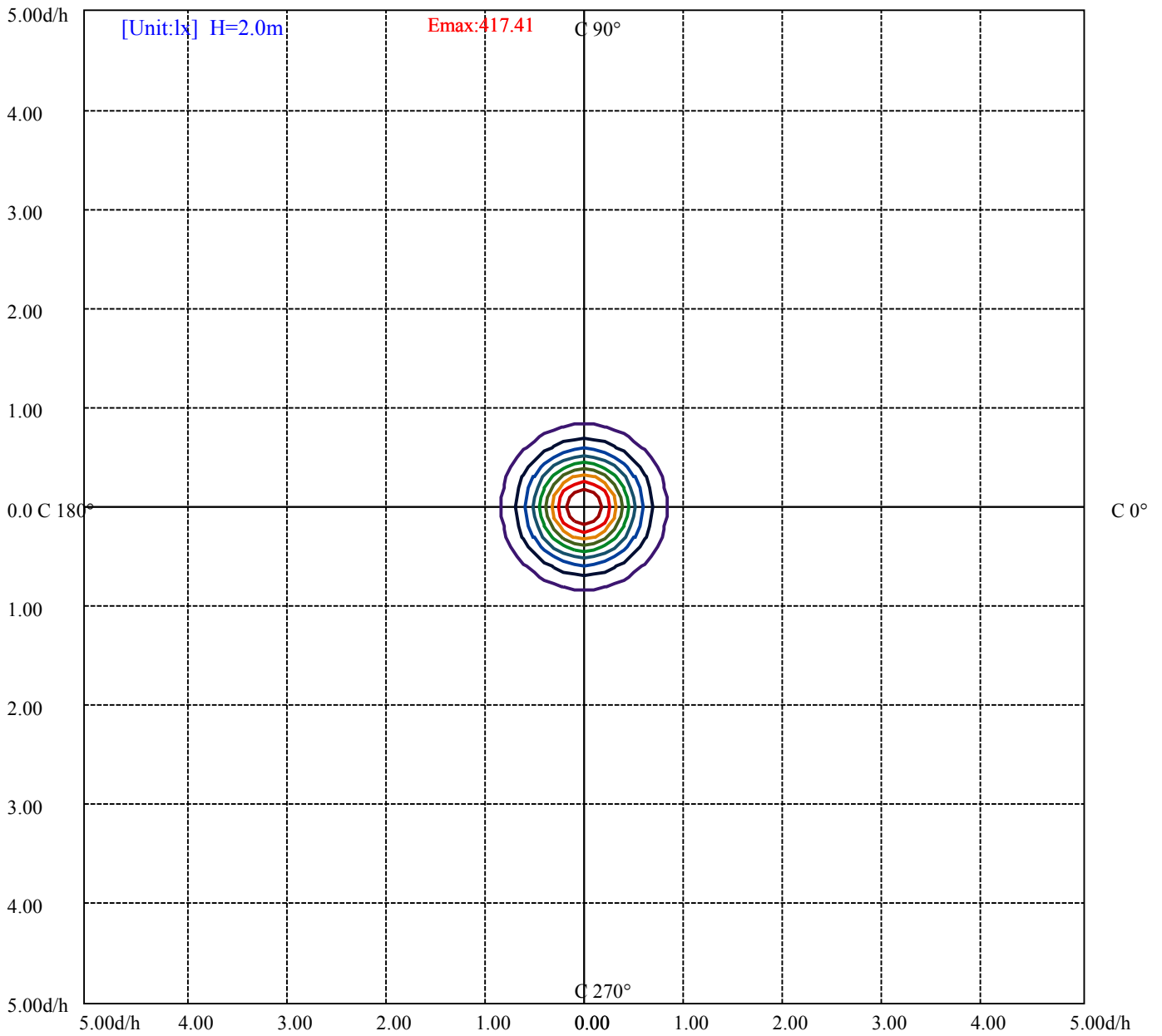
House

[Unit:cd]

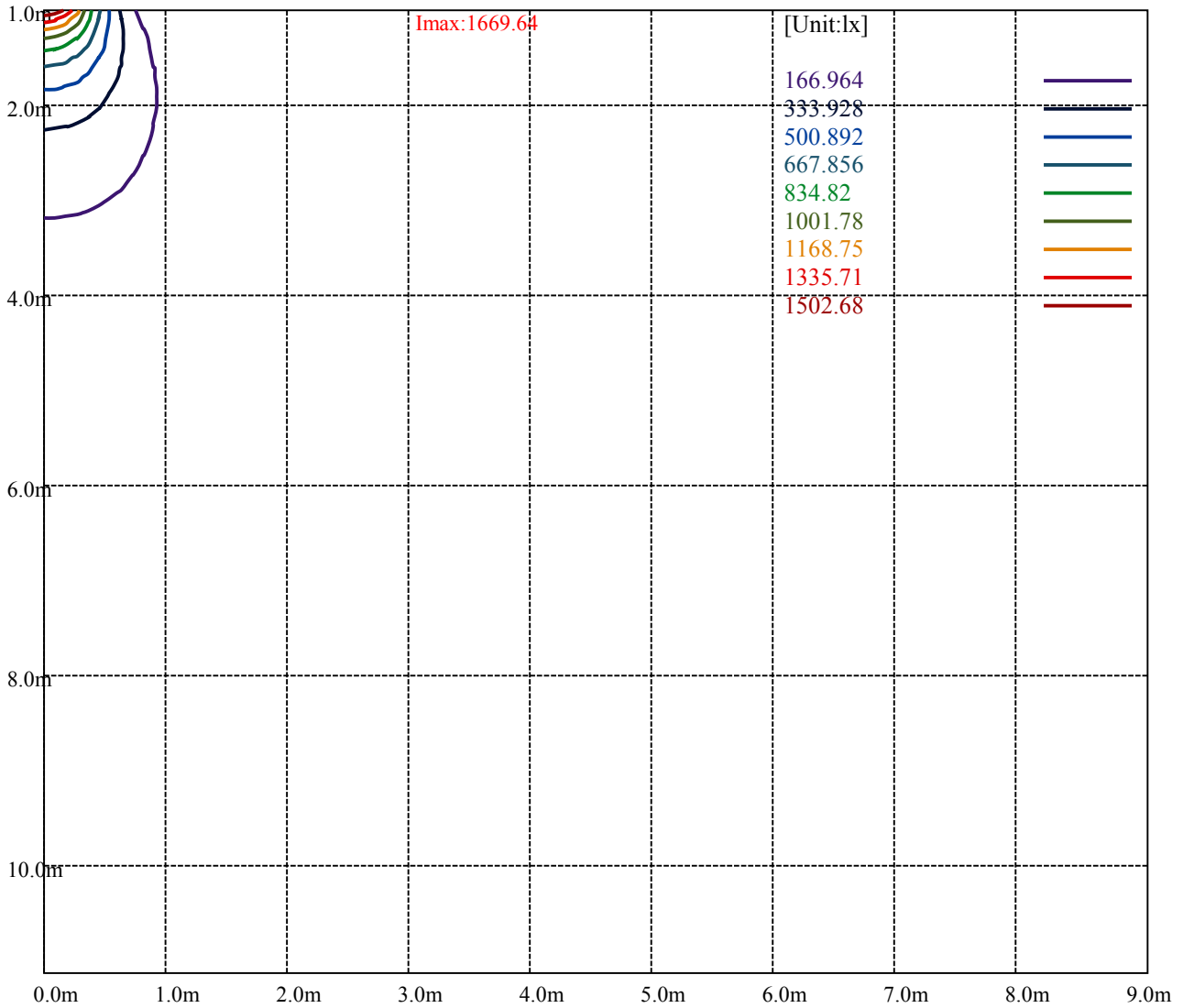
Road

Imax:1669.64

(10%Imax)	166.964	
(20%Imax)	333.928	
(30%Imax)	500.892	
(40%Imax)	667.856	
(50%Imax)	834.82	
(60%Imax)	1001.78	
(70%Imax)	1168.75	
(80%Imax)	1335.71	
(90%Imax)	1502.68	



(10%Emax) 41.741	—
(20%Emax) 83.482	—
(30%Emax) 125.223	—
(40%Emax) 166.964	—
(50%Emax) 208.705	—
(60%Emax) 250.445	—
(70%Emax) 292.1875	—
(80%Emax) 333.9275	—
(90%Emax) 375.67	—



Luminance Table

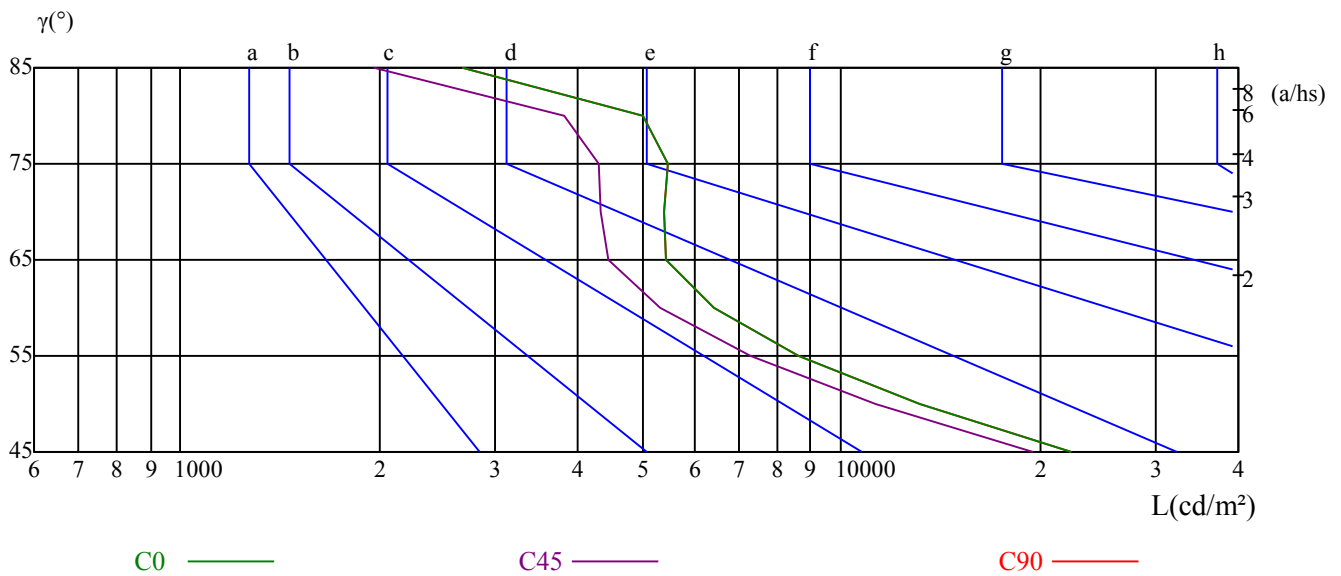
γ	45	50	55	60	65	70	75	80	85
C0	22390	13124	8610	6416	5422	5415	5483	5009	2667
C45	19540	11286	7290	5343	4433	4338	4292	3815	1966
C90	22390	13124	8610	6416	5422	5415	5483	5009	2667

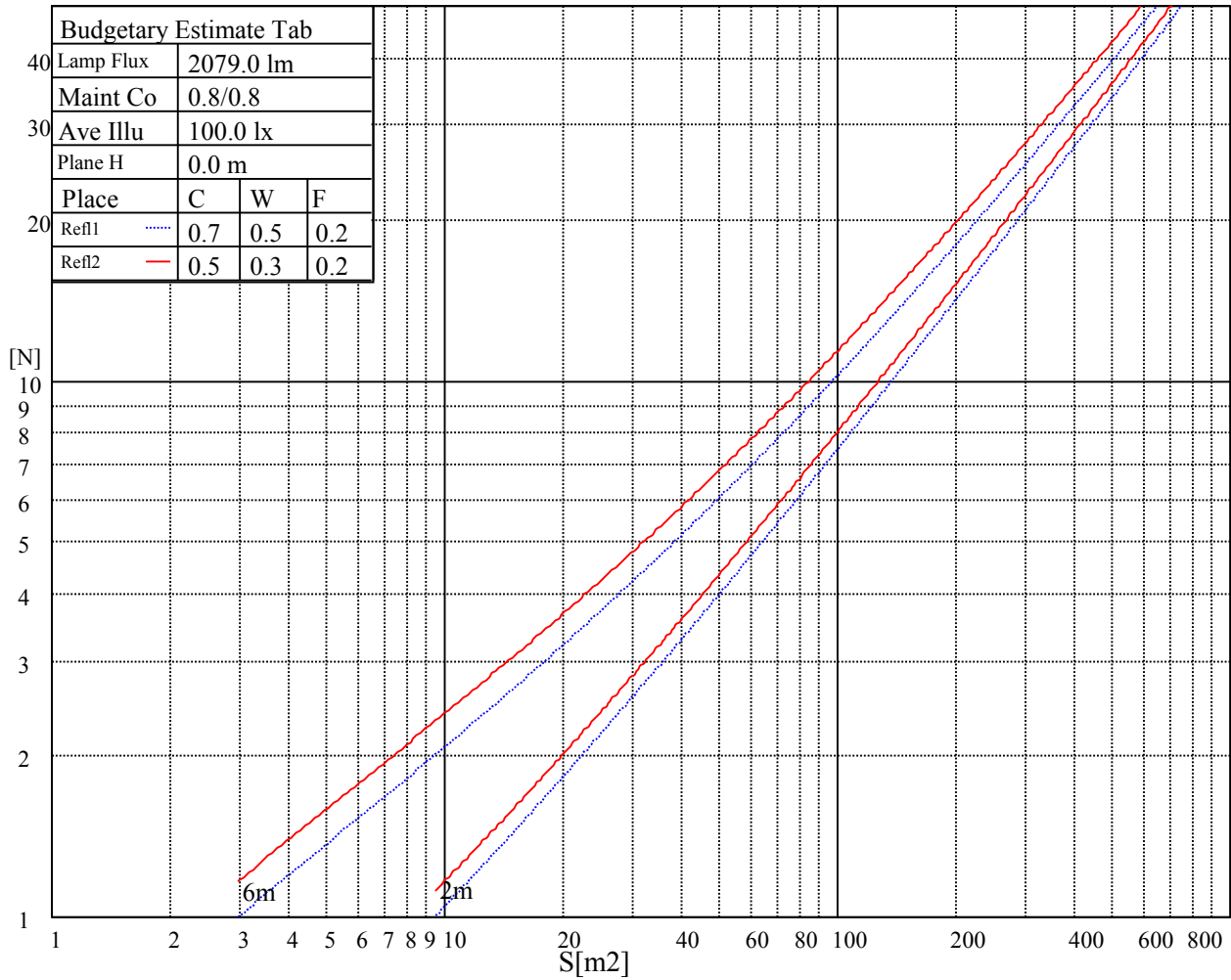
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11741	11741	11741	16604	16604	16604	19235	19235	19235

Glare Table

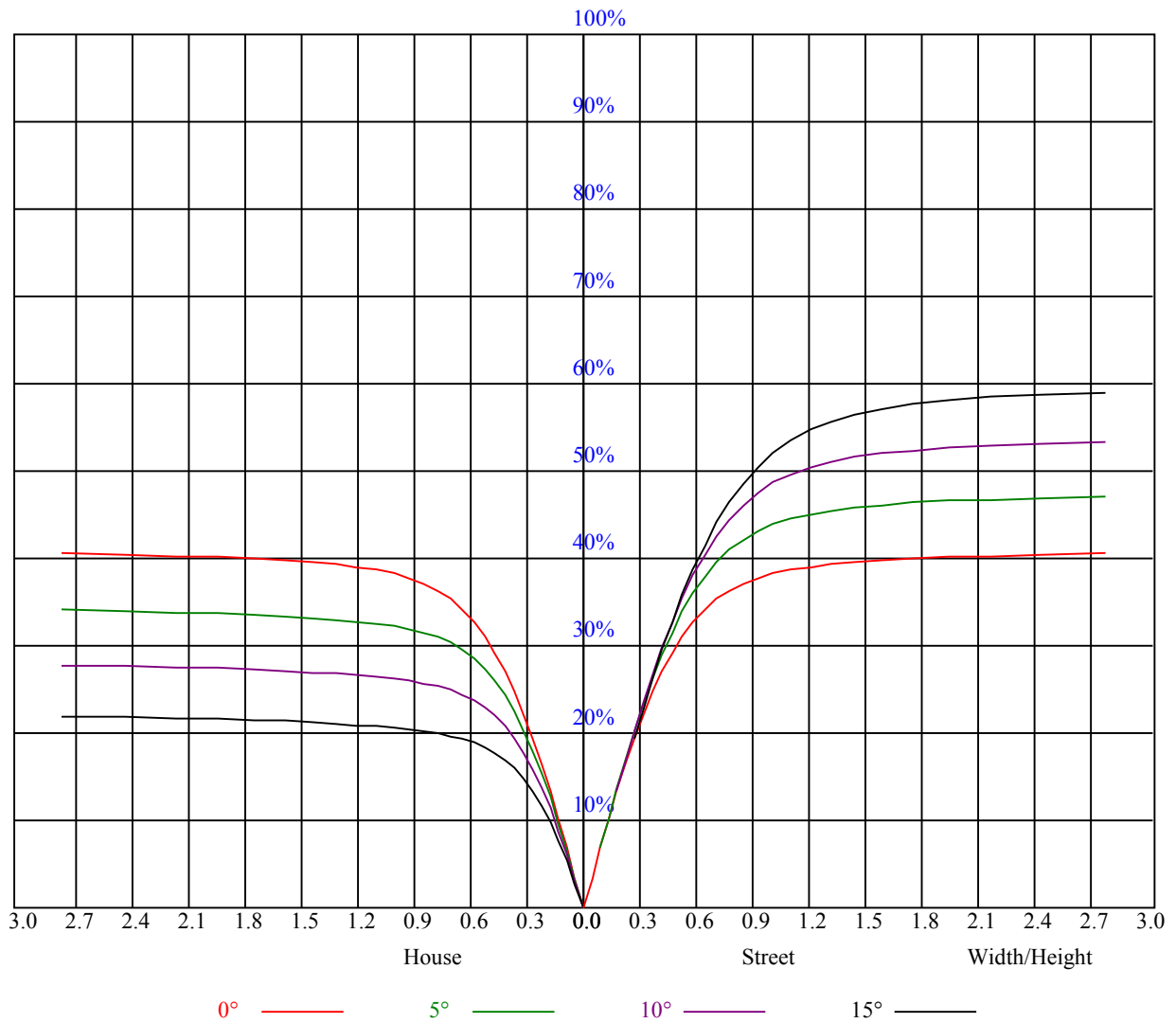
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.99	0.99	0.99	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.78	0.77	0.75
2	0.83	0.79	0.75	0.81	0.78	0.75	0.79	0.76	0.73	0.76	0.74	0.71	0.74	0.72	0.70	0.68
3	0.76	0.71	0.68	0.75	0.71	0.67	0.73	0.69	0.66	0.71	0.68	0.65	0.69	0.66	0.64	0.62
4	0.70	0.65	0.61	0.69	0.65	0.61	0.68	0.63	0.60	0.66	0.62	0.59	0.64	0.61	0.59	0.57
5	0.65	0.60	0.56	0.65	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.60	0.57	0.54	0.53
6	0.61	0.55	0.51	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.50	0.57	0.53	0.50	0.49
7	0.57	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.53	0.49	0.46	0.45
8	0.53	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.50	0.46	0.43	0.42
9	0.50	0.45	0.41	0.50	0.44	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.47	0.43	0.41	0.39
10	0.47	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.38	0.45	0.41	0.38	0.45	0.41	0.38	0.37



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	1668.94	1645.88	1559.25	1419.75	1226.81	1020.38	789.19	540.56	340.31
45.0	1673.44	1658.25	1591.31	1460.25	1261.13	1014.75	770.63	532.69	329.06
90.0	1670.06	1661.06	1589.63	1446.19	1242.56	1004.23	764.44	519.53	331.03
135.0	1666.13	1662.75	1609.31	1497.94	1312.88	1100.81	851.63	613.13	386.44
180.0	1668.94	1652.63	1580.63	1453.50	1275.75	1050.41	833.51	585.00	370.69
225.0	1673.44	1668.38	1621.69	1501.88	1320.19	1064.98	822.15	571.78	373.84
270.0	1670.06	1653.19	1600.31	1485.00	1308.38	1074.38	848.25	596.25	376.88
315.0	1666.13	1630.13	1552.50	1403.44	1115.89	976.67	747.51	506.03	310.22
360.0	1668.94	1645.88	1559.25	1419.75	1226.81	1020.38	789.19	540.56	340.31
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	186.64	110.93	71.78	51.24	38.70	31.84	25.20	19.74	13.33
45.0	180.17	110.98	70.37	50.57	38.87	31.22	24.86	19.41	12.49
90.0	184.61	109.74	69.47	50.96	51.08	63.11	69.19	55.97	13.44
135.0	286.88	128.25	78.58	56.03	41.57	33.13	27.68	23.06	14.74
180.0	208.07	126.11	78.02	54.06	41.79	33.41	26.72	21.32	15.08
225.0	213.41	122.34	80.27	55.35	41.01	32.91	26.38	20.93	15.08
270.0	216.17	126.45	77.63	55.13	45.73	57.49	64.69	60.58	17.16
315.0	178.71	106.37	67.84	48.38	37.24	29.53	26.27	19.41	12.21
360.0	186.64	110.93	71.78	51.24	38.70	31.84	25.20	19.74	13.33
C/ γ (°)	90.0								
0.0	7.82								
45.0	7.71								
90.0	6.92								
135.0	7.20								
180.0	8.21								
225.0	8.72								
270.0	7.03								
315.0	6.98								
360.0	7.82								