



NATA LIGHTING CO.,LTD
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-1680-M	
Luminaire: 92.70.124.00	
Report No: NT2017060503	Voltage(V): 220.1000
Test No: GC2017060503	Current(A): 0.0700
LampCAT: CITIZEN CLU028	Power (W): 14.3000
Lamp flux(lm): 1554.0	PF: 0.9280
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1457.20
Efficiency(%): 93.77%
Lumens(lm)/Power(W): 101.90
Central intensity(cd): 5531.930
Maximum intensity(cd): 5531.930
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.2
 [C90/270]Total=23.2
Field angle(10%Imax): [C0/180]Total=55.0
 [C90/270]Total=55.0
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.38 C90_270=0.38
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.77%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.821%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/5
Humidity(%): 5.0%

Operator: NT07
Distance(m): 7.42

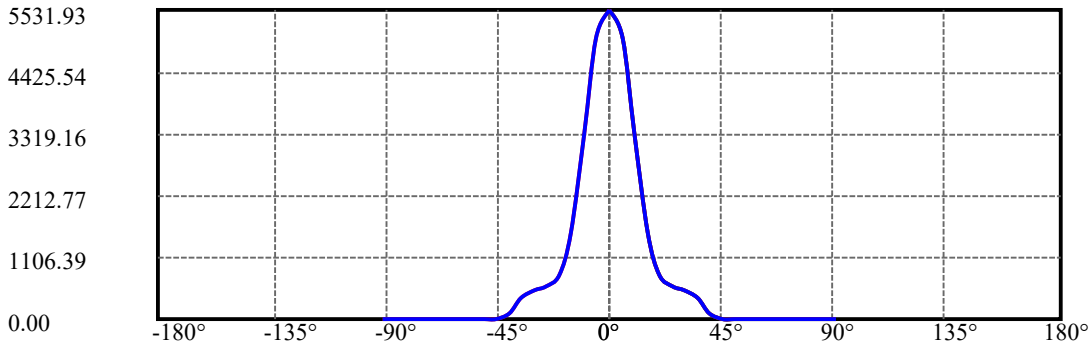
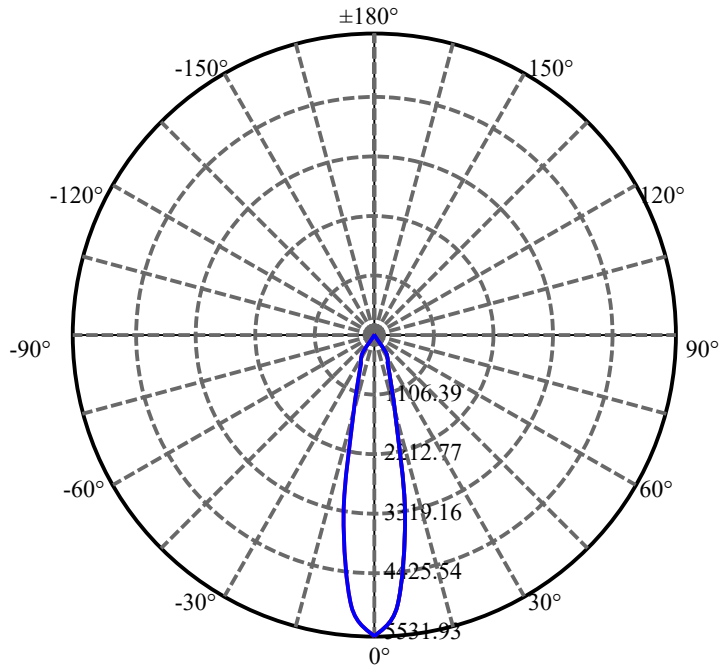
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5531.929	0.000	0	.000%	.000%
5.0	5003.388	125.947	125.947	8.105%	8.643%
10.0	3341.648	298.528	424.475	19.210%	29.129%
15.0	1542.804	289.742	714.217	18.645%	49.013%
20.0	783.597	191.728	905.946	12.338%	62.170%
25.0	585.910	143.636	1049.582	9.243%	72.027%
30.0	521.068	140.089	1189.671	9.015%	81.641%
35.0	392.642	134.550	1324.221	8.658%	90.874%
40.0	115.075	84.709	1408.929	5.451%	96.687%
45.0	8.141	22.814	1431.744	1.468%	98.253%
50.0	6.297	2.918	1434.661	.188%	98.453%
55.0	5.946	2.662	1437.323	.171%	98.636%
60.0	5.740	2.701	1440.024	.174%	98.821%
65.0	5.581	2.752	1442.777	.177%	99.010%
70.0	5.485	2.802	1445.579	.180%	99.202%
75.0	5.430	2.853	1448.432	.184%	99.398%
80.0	5.409	2.900	1451.332	.187%	99.597%
85.0	5.375	2.930	1454.262	.189%	99.798%
90.0	5.361	2.940	1457.202	.189%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1189.67	76.56%	81.64%
0-40	1408.93	90.66%	96.69%
0-60	1440.02	92.67%	98.82%
0-90	1454.26	93.58%	99.80%
0-120	1454.26	93.58%	99.80%
0-180	1457.20	93.77%	100.00%
60-90	16.94	1.09%	1.16%
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%
0-29.15	1165.76	75.02%	80.00%

ZONAL LUMEN SUMMARY

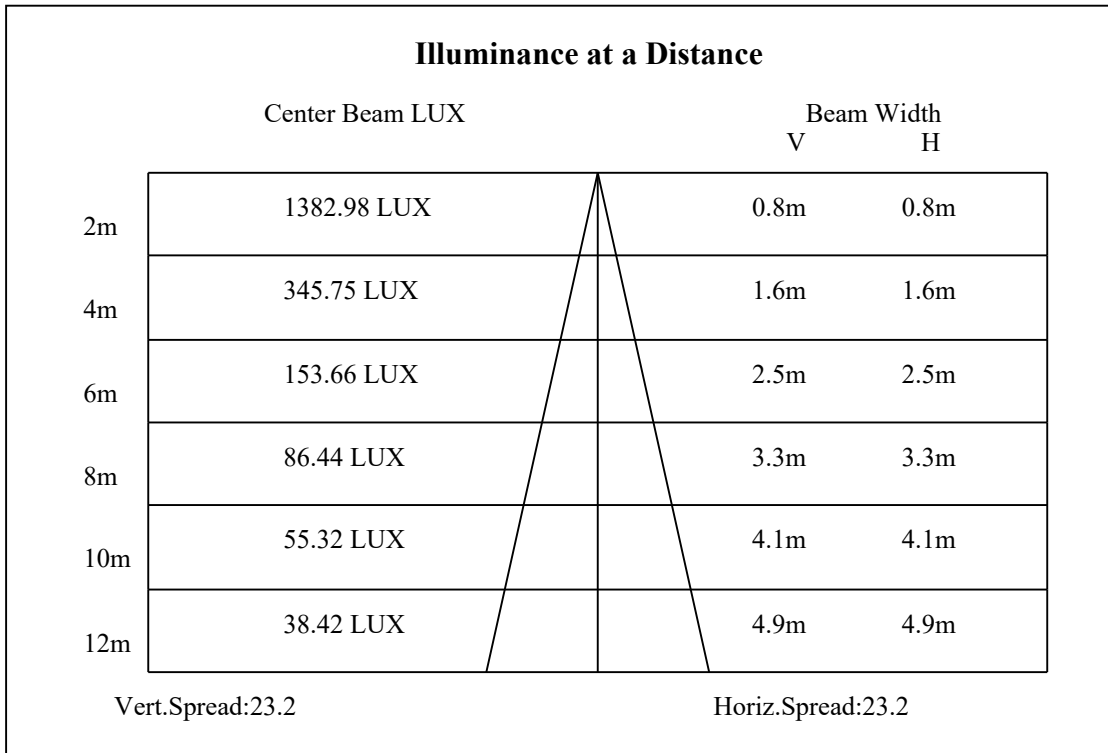
0-10	424.47
10-20	481.47
20-30	283.73
30-40	219.26
40-50	25.73
50-60	5.36
60-70	5.55
70-80	5.75
80-90	2.93
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

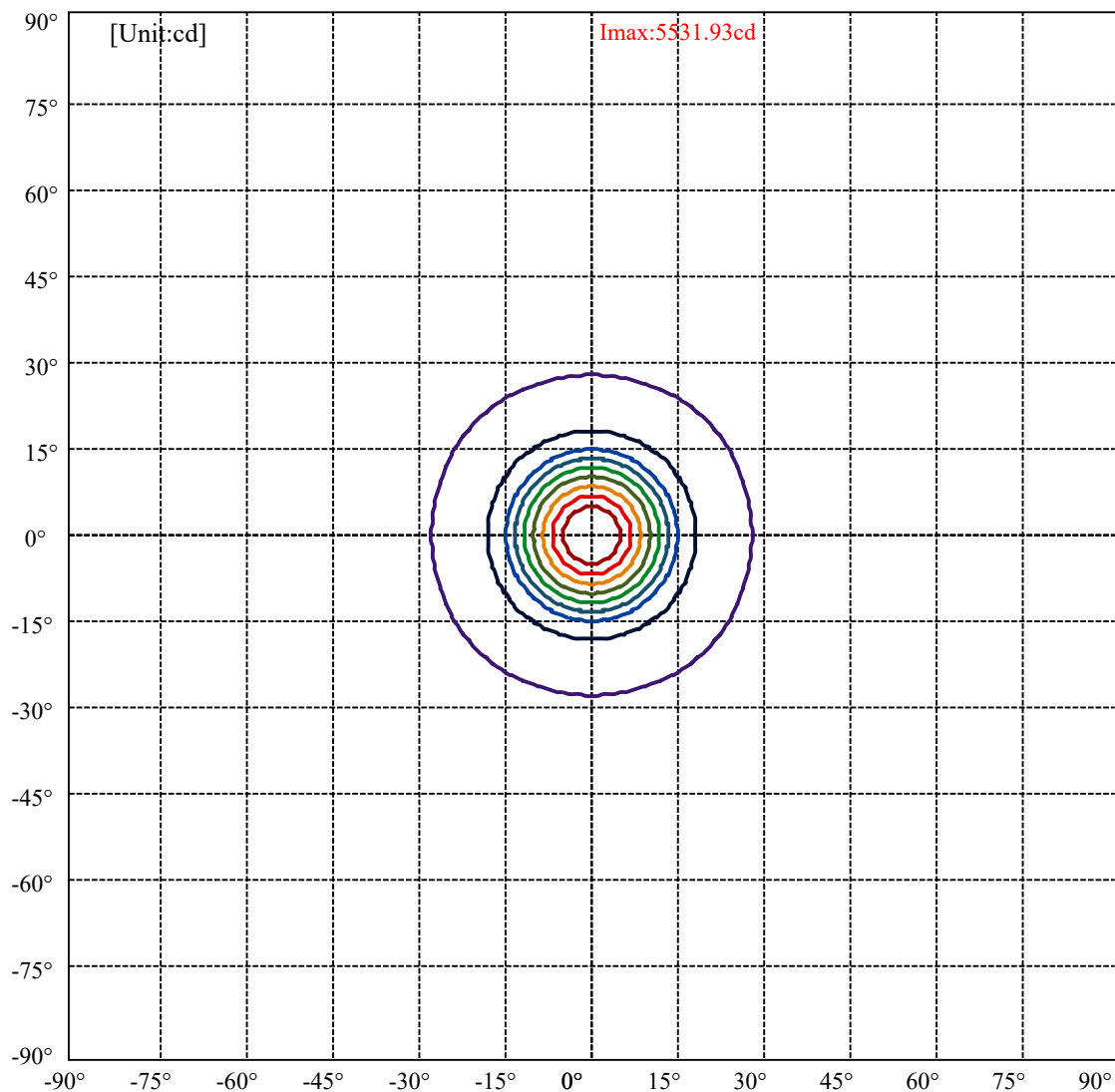


C0(Max): —————
C0/C180: —————
C90/C270: —————

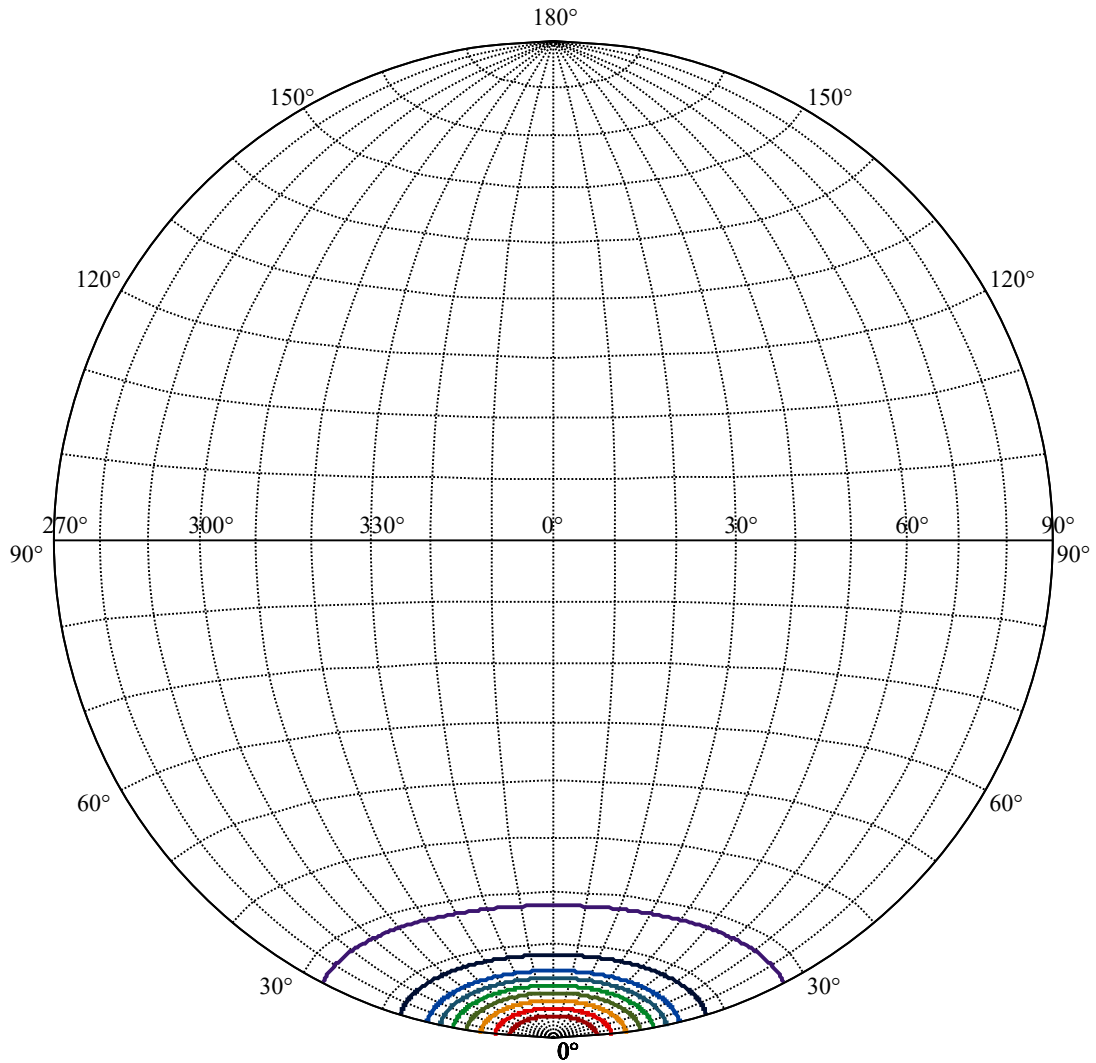
Field angle(10%Imax):C0/180Left:27.5 Right:27.5
:C90/270Left:27.5 Right:27.5

Beam Angle(50%Imax):C0/180Left:11.6 Right:11.6
:C90/270Left:11.6 Right:11.6





(10%Imax) 553.193	—
(20%Imax) 1106.39	—
(30%Imax) 1659.58	—
(40%Imax) 2212.77	—
(50%Imax) 2765.96	—
(60%Imax) 3319.16	—
(70%Imax) 3872.35	—
(80%Imax) 4425.54	—
(90%Imax) 4978.74	—



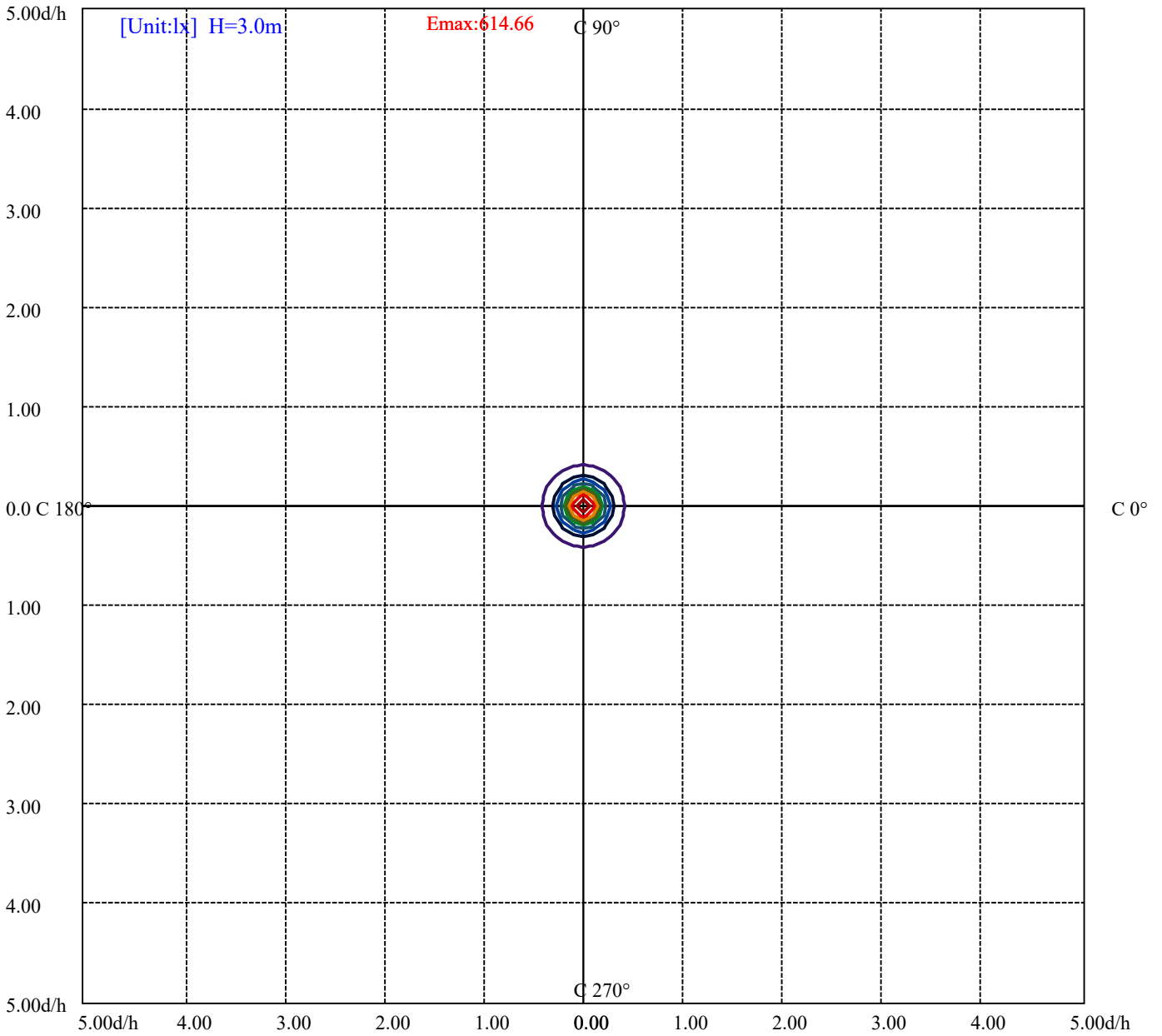
House

[Unit:cd]

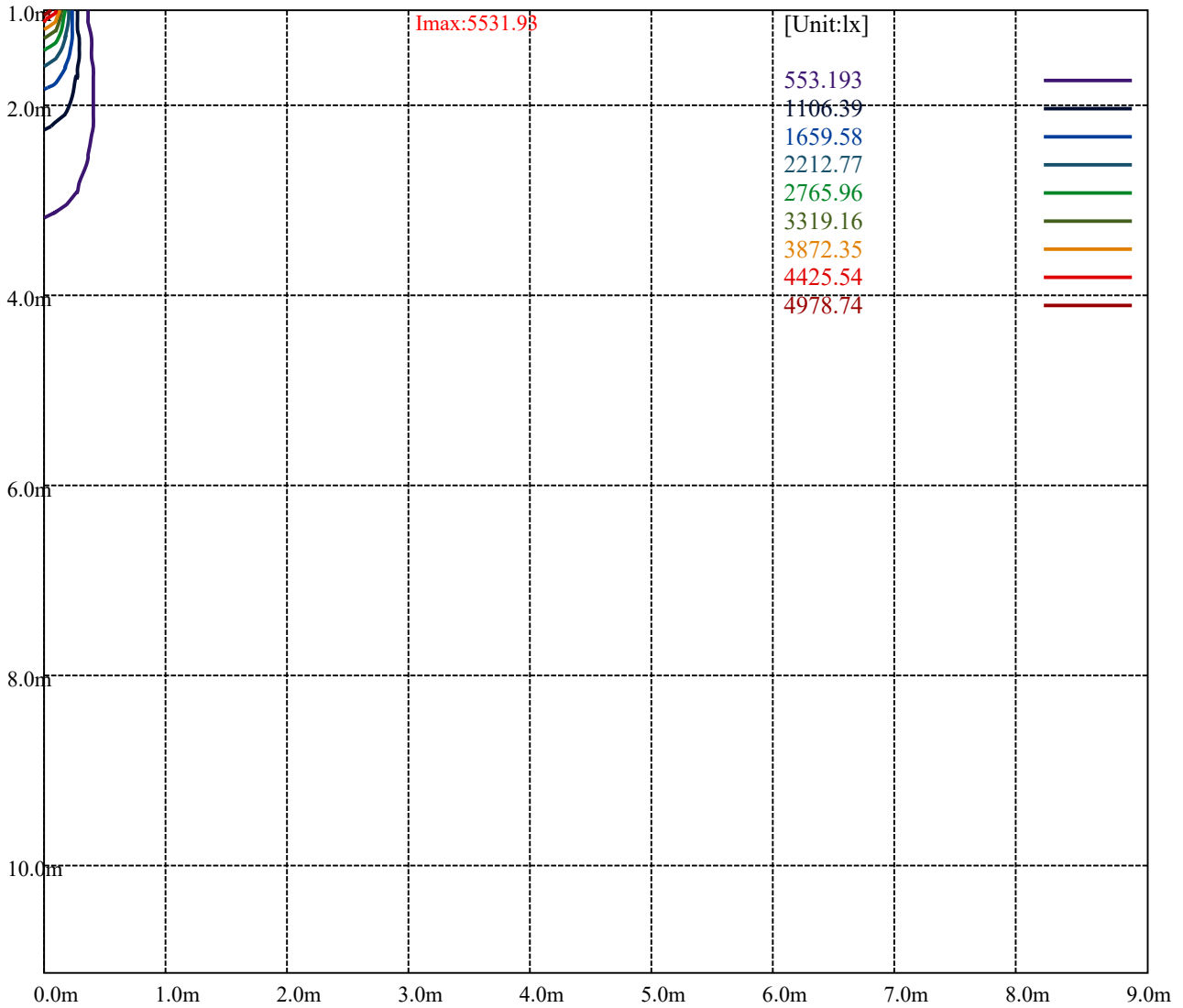
Road

Imax:5531.93

(10%Imax)	553.193	—
(20%Imax)	1106.39	—
(30%Imax)	1659.58	—
(40%Imax)	2212.77	—
(50%Imax)	2765.96	—
(60%Imax)	3319.16	—
(70%Imax)	3872.35	—
(80%Imax)	4425.54	—
(90%Imax)	4978.74	—



(10%Emax) 61.46566	—
(20%Emax) 122.9311	—
(30%Emax) 184.3967	—
(40%Emax) 245.8633	—
(50%Emax) 307.3289	—
(60%Emax) 368.7944	—
(70%Emax) 430.26	—
(80%Emax) 491.7255	—
(90%Emax) 553.1912	—



Luminance Table

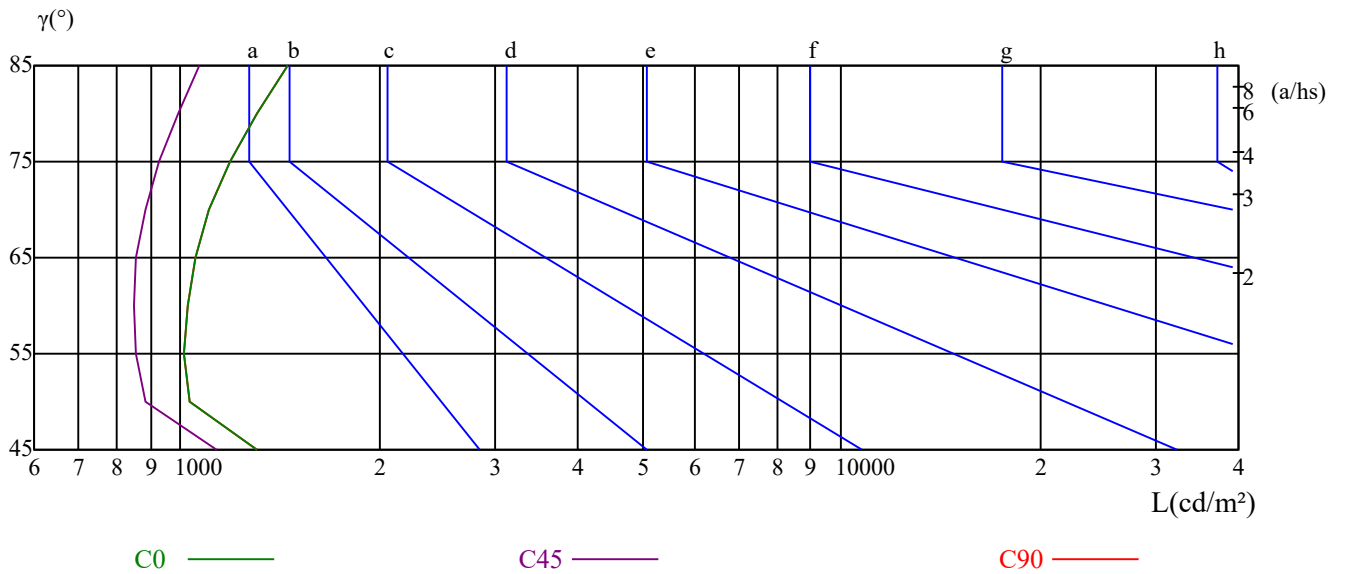
γ	45	50	55	60	65	70	75	80	85
C0	1301	1035	1013	1024	1053	1107	1188	1303	1452
C45	1130	886	854	849	857	883	926	989	1068
C90	1301	1035	1013	1024	1053	1107	1188	1303	1452

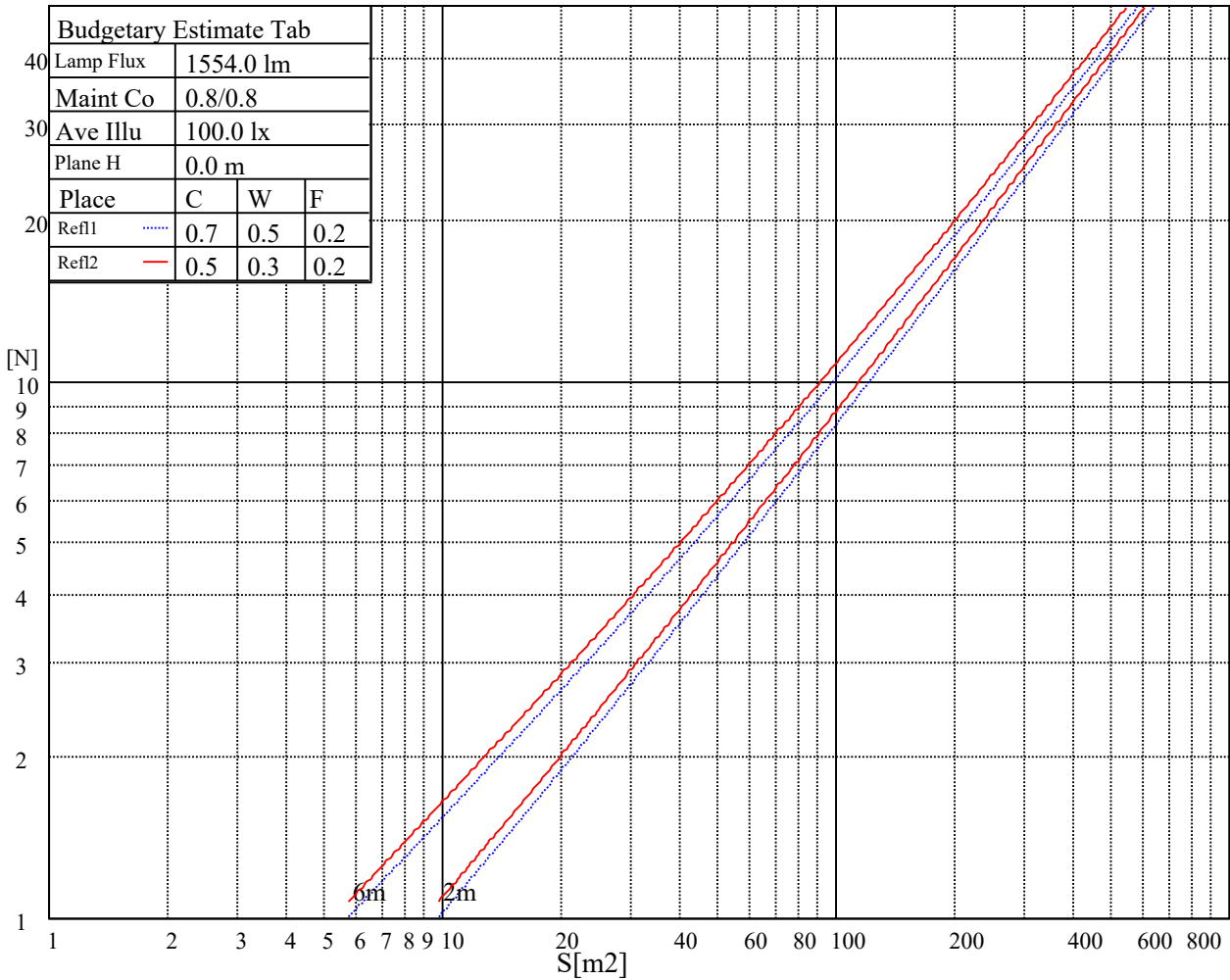
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2348	2348	2348	3730	3730	3730	10964	10964	10964

Glare Table

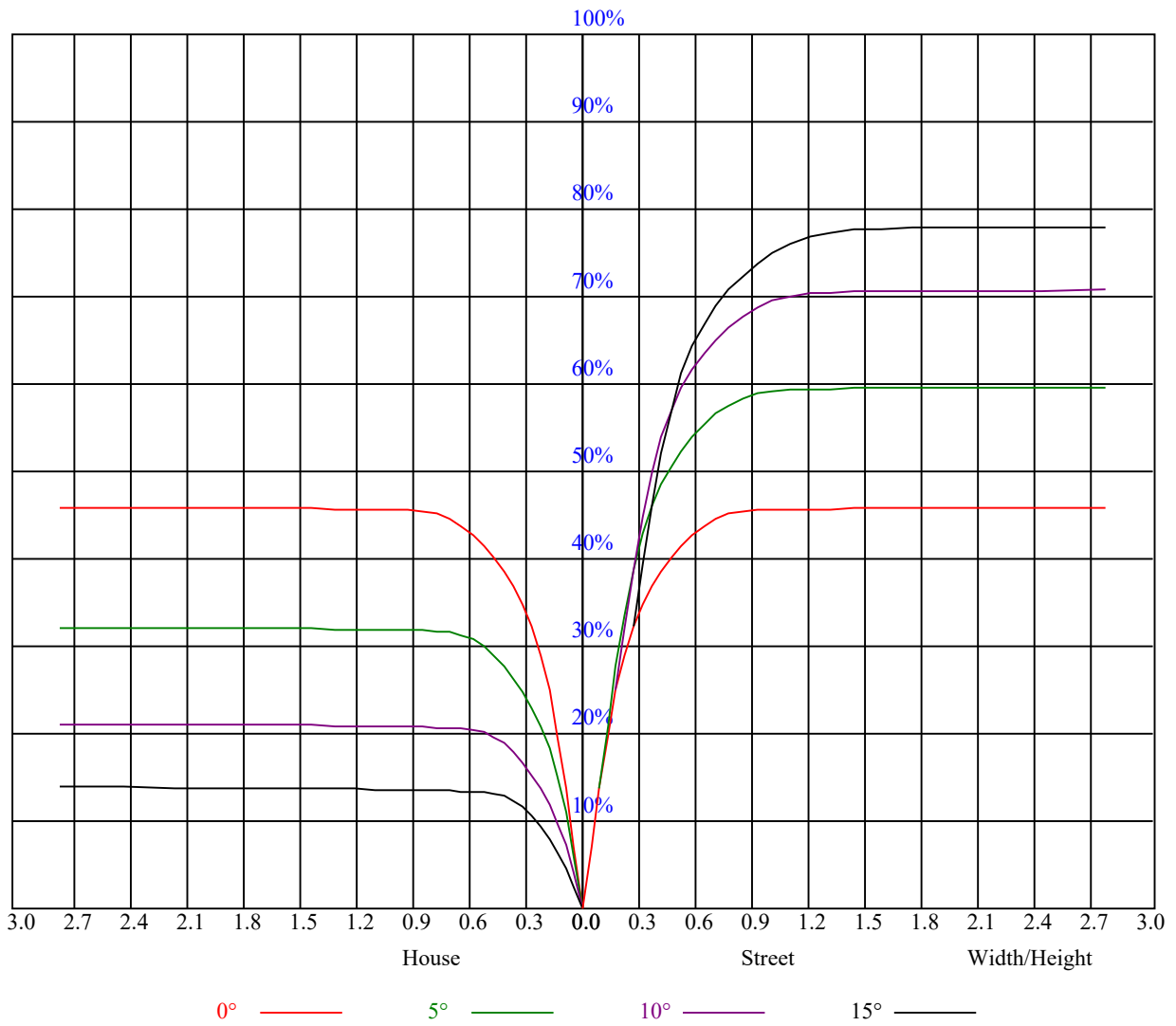
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.05	1.03	1.01	1.03	1.01	0.99	0.99	0.98	0.96	0.96	0.94	0.93	0.92	0.92	0.91	0.89
2	0.99	0.96	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.85
3	0.94	0.90	0.87	0.92	0.89	0.86	0.90	0.87	0.85	0.88	0.85	0.83	0.86	0.84	0.82	0.81
4	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.82	0.79	0.83	0.80	0.78	0.77
5	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.81	0.77	0.73	0.81	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
8	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
9	0.72	0.68	0.65	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.63
10	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.61



Nata 2-1680-M

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	5615.20	5017.84	3334.22	1440.83	733.35	580.85	519.73	385.39	52.25
45.0	5425.81	5501.79	4261.92	2249.60	970.64	621.04	536.25	485.05	280.24
90.0	5539.22	5310.74	3718.51	1724.37	832.78	595.77	522.32	450.09	130.26
135.0	5547.48	5285.96	4084.08	1936.88	893.01	611.68	537.35	481.19	309.42
180.0	5615.20	5077.85	3318.25	1554.79	781.14	587.45	523.53	430.10	80.60
225.0	5425.81	4388.00	2352.56	1034.79	675.49	559.43	505.14	264.11	17.56
270.0	5539.22	4751.92	2888.81	1346.68	706.92	571.49	518.08	355.66	28.74
315.0	5547.48	4693.01	2774.84	1054.50	675.43	559.59	506.13	289.54	21.53
360.0	5615.20	5017.84	3334.22	1440.83	733.35	580.85	519.73	385.39	52.25
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	6.88	6.28	5.95	5.67	5.56	5.51	5.40	5.45	5.45
45.0	12.55	6.44	6.00	5.84	5.62	5.56	5.40	5.45	5.40
90.0	7.76	6.39	6.06	5.78	5.62	5.45	5.45	5.40	5.34
135.0	9.74	6.50	6.11	5.84	5.67	5.51	5.45	5.40	5.34
180.0	8.15	6.28	5.89	5.78	5.56	5.51	5.45	5.45	5.40
225.0	6.55	6.06	5.84	5.62	5.51	5.45	5.45	5.40	5.40
270.0	6.77	6.22	5.89	5.73	5.56	5.51	5.40	5.40	5.34
315.0	6.72	6.22	5.84	5.67	5.56	5.40	5.45	5.34	5.34
360.0	6.88	6.28	5.95	5.67	5.56	5.51	5.40	5.45	5.45
C/γ(°)	90.0								
0.0	5.34								
45.0	5.34								
90.0	5.34								
135.0	5.34								
180.0	5.40								
225.0	5.40								
270.0	5.40								
315.0	5.34								
360.0	5.34								