



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: 2-2076-M
Luminaire: 92.70.131.00
Report No: NATA0100
Test No: GC2020011401
LampCAT: LUMINUS CXM-14-AC40 LES14.5
Lamp flux(lm): 2541.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C
Voltage(V): 34.2200
Current(A): 0.5970
Power (W): 20.4300
PF: 0.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 2085.95
Efficiency(%): 82.09%
Lumens(lm)/Power(W): 102.10
Central intensity(cd): 14378.910
Maximum intensity(cd): 14378.910
Angle of maximum intensity: $C=0.0$ $\gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=18.5
[C90/270]Total=18.5
Field angle(10%Imax): [C0/180]Total=38.7
[C90/270]Total=38.7
Maximum s/h(1/2): C0_180=0.32 C90_270=0.32
Maximum s/h(1/4): C0_180=0.34 C90_270=0.34
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.09%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.608%

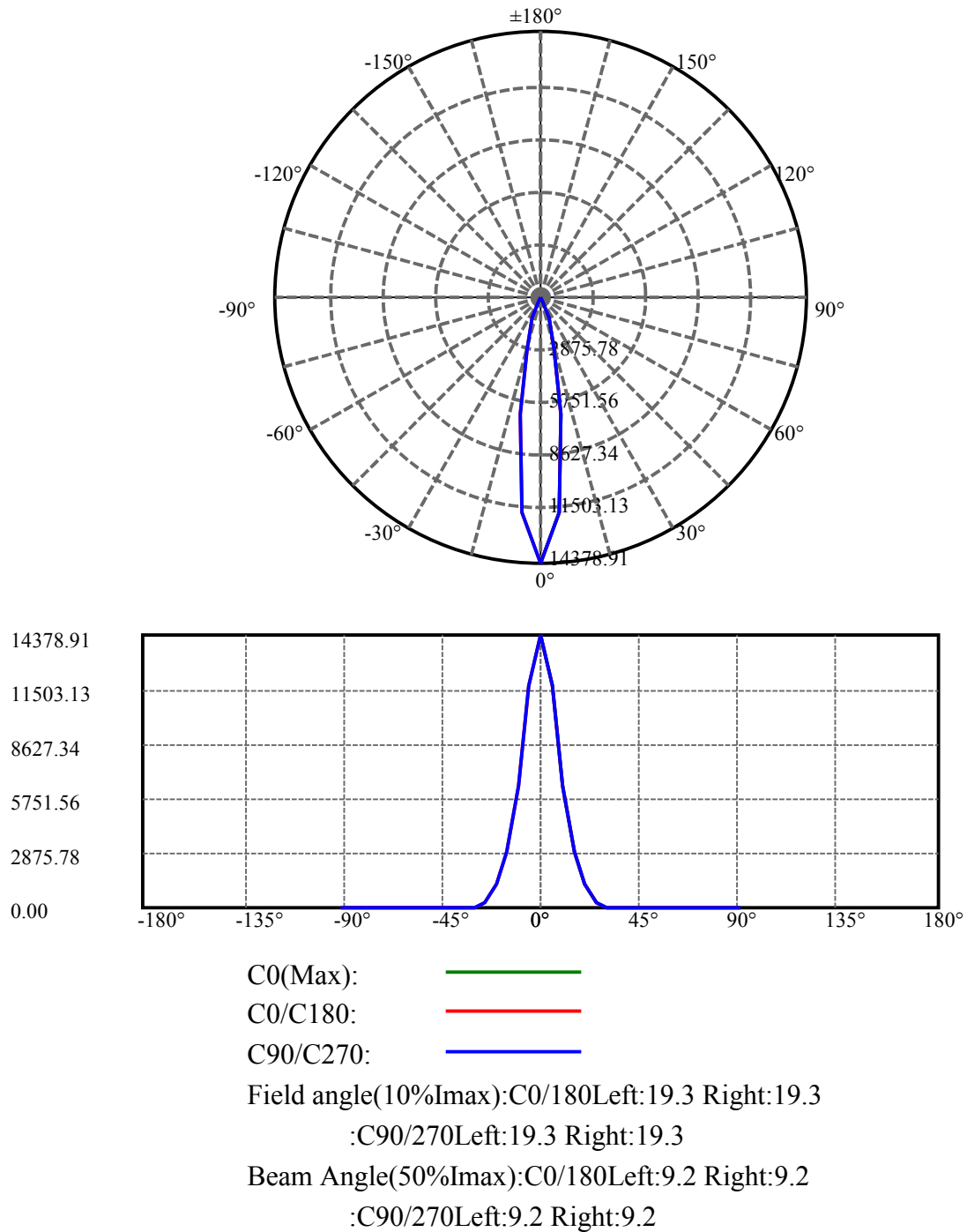
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14378.906	0.000	0	.000%	.000%
5.0	11685.656	311.594	311.594	12.263%	14.938%
10.0	6388.945	646.585	958.18	25.446%	45.935%
15.0	2926.125	552.564	1510.744	21.746%	72.425%
20.0	1206.260	340.567	1851.31	13.403%	88.751%
25.0	229.697	150.605	2001.916	5.927%	95.971%
30.0	14.780	30.939	2032.854	1.218%	97.454%
35.0	11.848	3.921	2036.775	.154%	97.642%
40.0	10.617	3.748	2040.523	.148%	97.822%
45.0	10.041	3.825	2044.348	.151%	98.005%
50.0	9.731	3.995	2048.344	.157%	98.197%
55.0	9.541	4.191	2052.534	.165%	98.398%
60.0	9.415	4.382	2056.916	.172%	98.608%
65.0	9.309	4.552	2061.468	.179%	98.826%
70.0	9.267	4.704	2066.171	.185%	99.052%
75.0	9.225	4.834	2071.005	.190%	99.283%
80.0	9.204	4.931	2075.936	.194%	99.520%
85.0	9.190	4.998	2080.934	.197%	99.759%
90.0	9.148	5.021	2085.955	.198%	100.000%

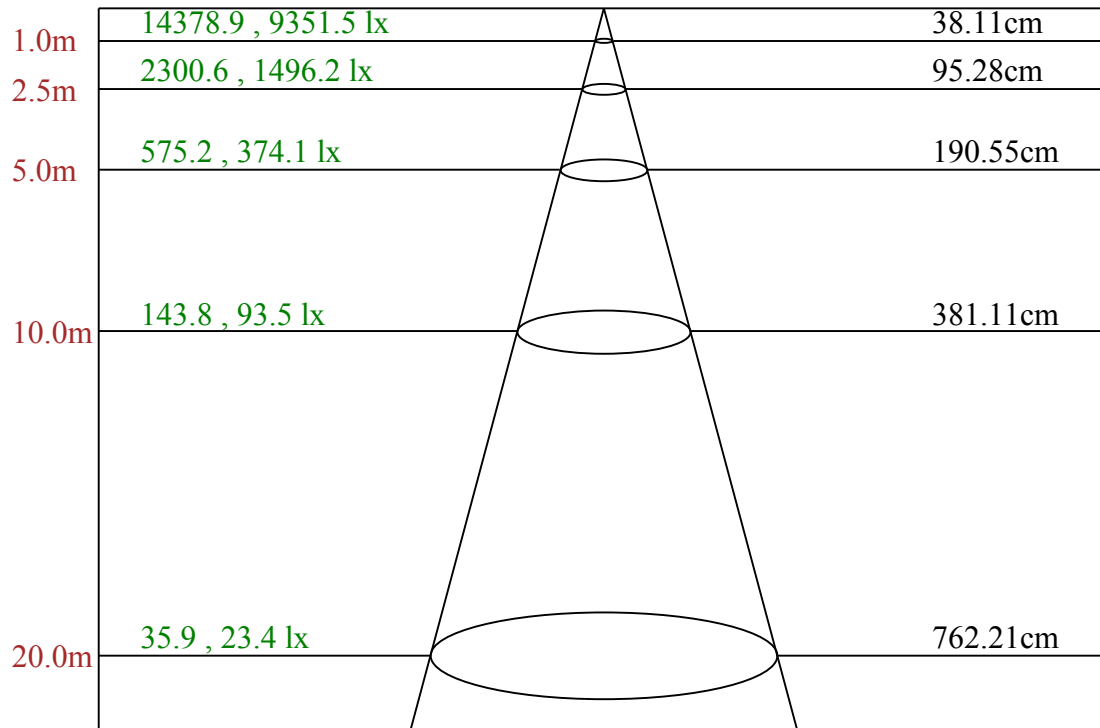
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2032.85	80.00%	97.45%
0-40	2040.52	80.30%	97.82%
0-60	2056.92	80.95%	98.61%
0-90	2080.93	81.89%	99.76%
0-120	2080.93	81.89%	99.76%
0-180	2085.95	82.09%	100.00%
60-90	28.40	1.12%	1.36%
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%
0-17.32	1668.76	65.67%	80.00%

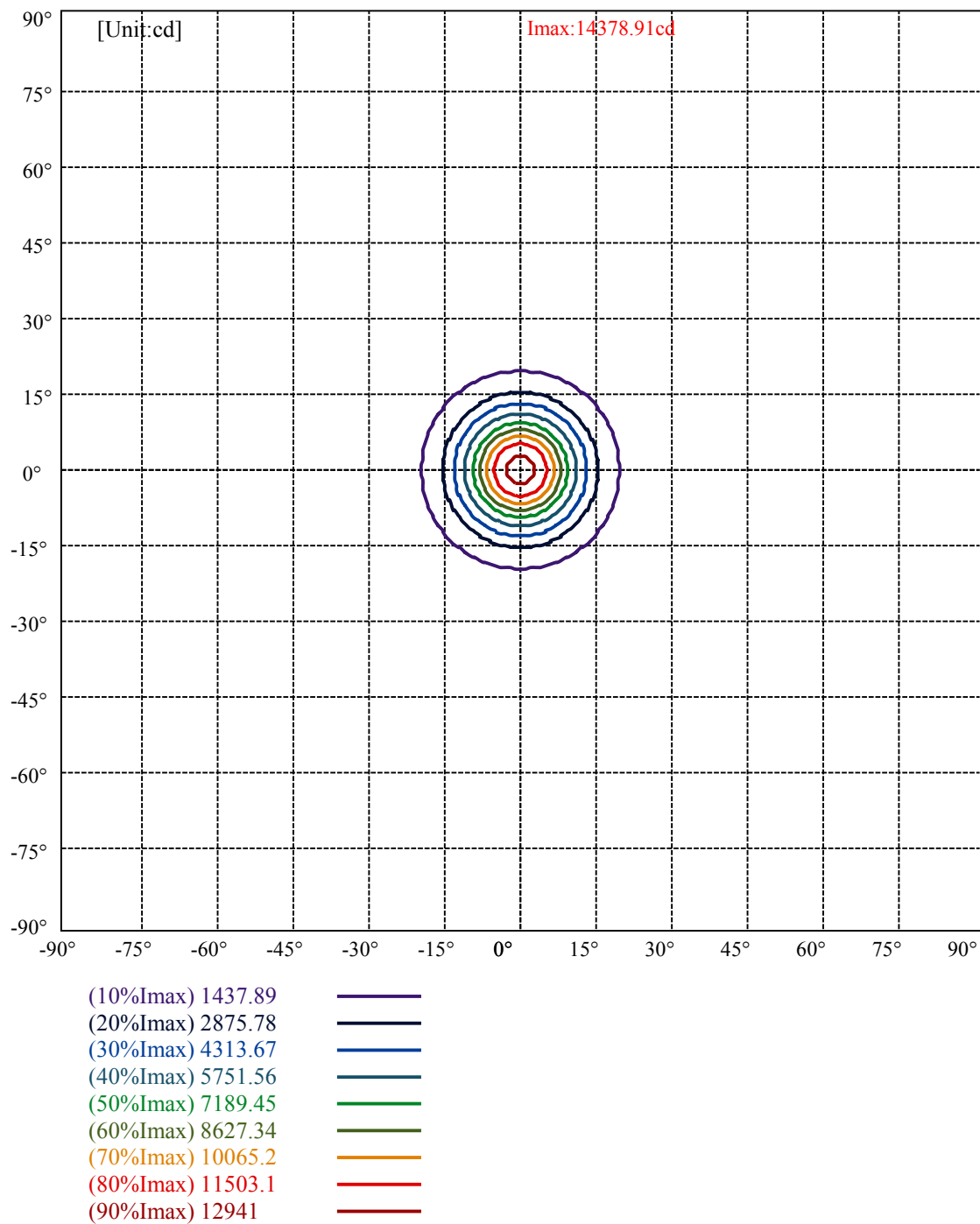
ZONAL LUMEN SUMMARY

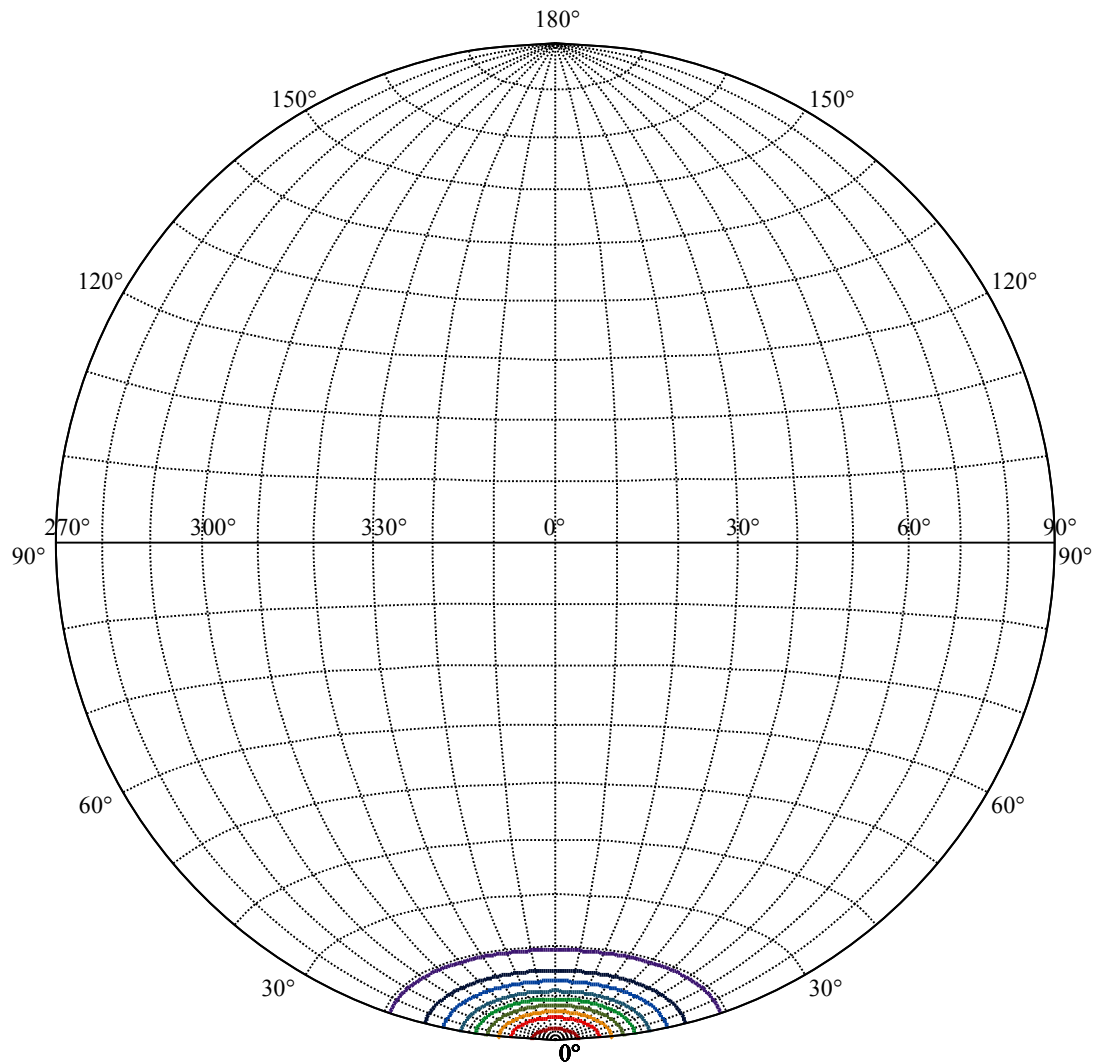
0-10	958.18
10-20	893.13
20-30	181.54
30-40	7.67
40-50	7.82
50-60	8.57
60-70	9.26
70-80	9.76
80-90	5.00
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 21.58





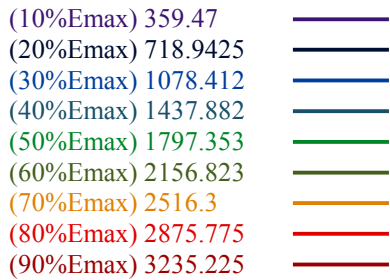
House

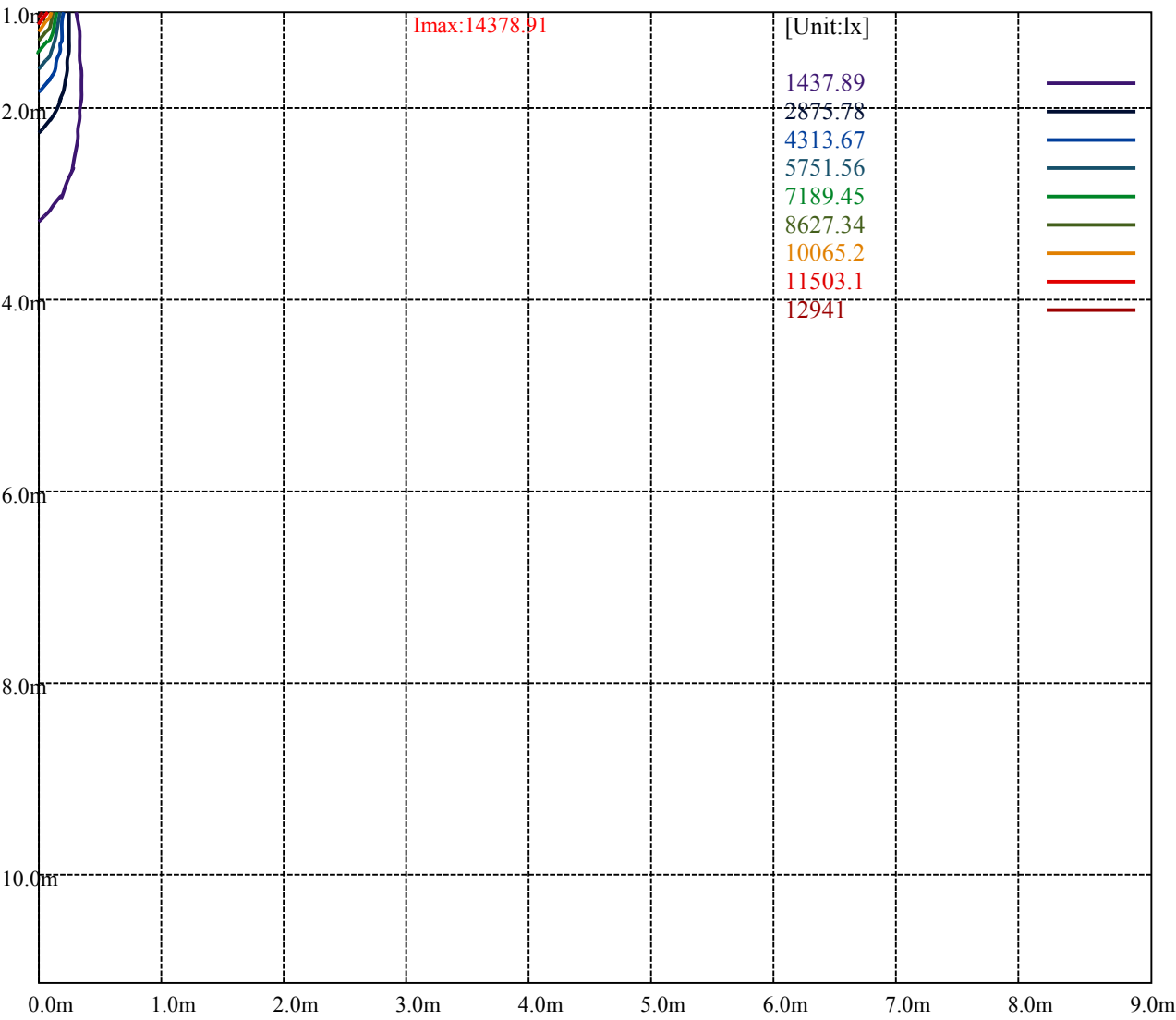
[Unit:cd]

Road

Imax:14378.91

(10%Imax)	1437.89	—
(20%Imax)	2875.78	—
(30%Imax)	4313.67	—
(40%Imax)	5751.56	—
(50%Imax)	7189.45	—
(60%Imax)	8627.34	—
(70%Imax)	10065.2	—
(80%Imax)	11503.1	—
(90%Imax)	12941	—





Luminance Table

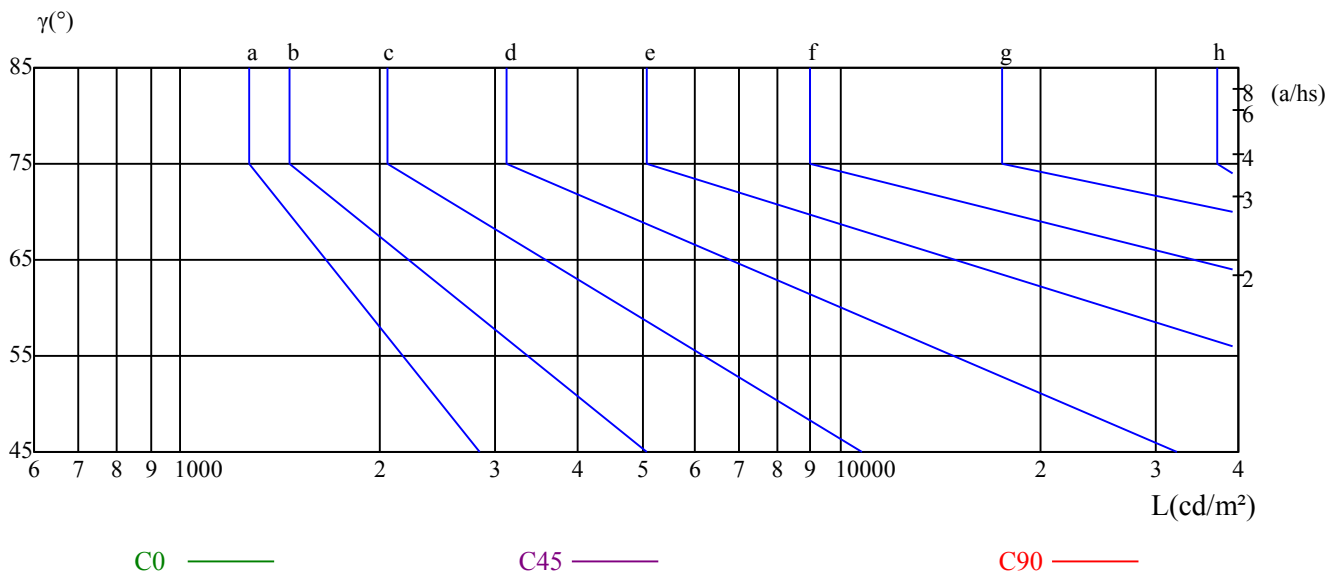
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

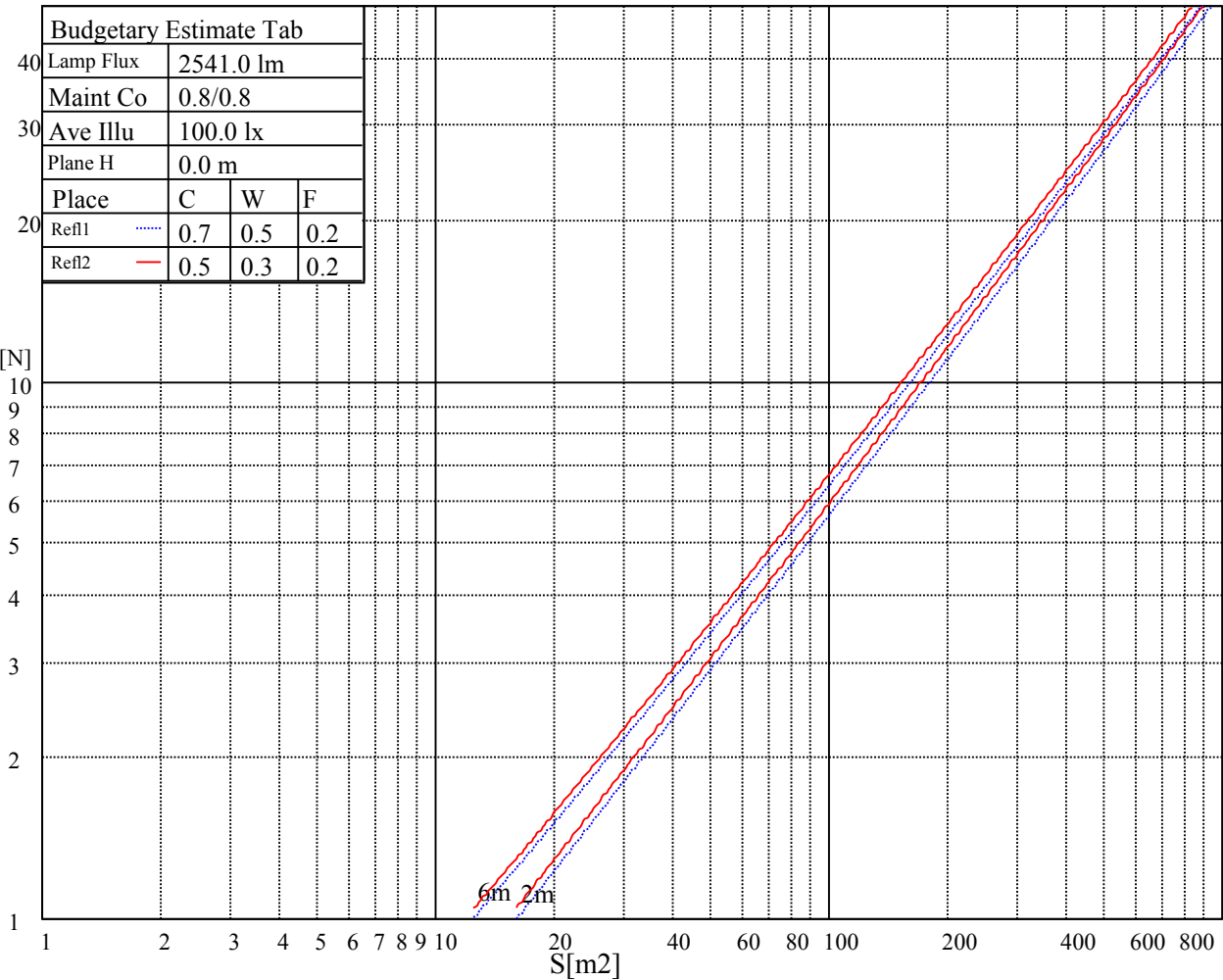
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

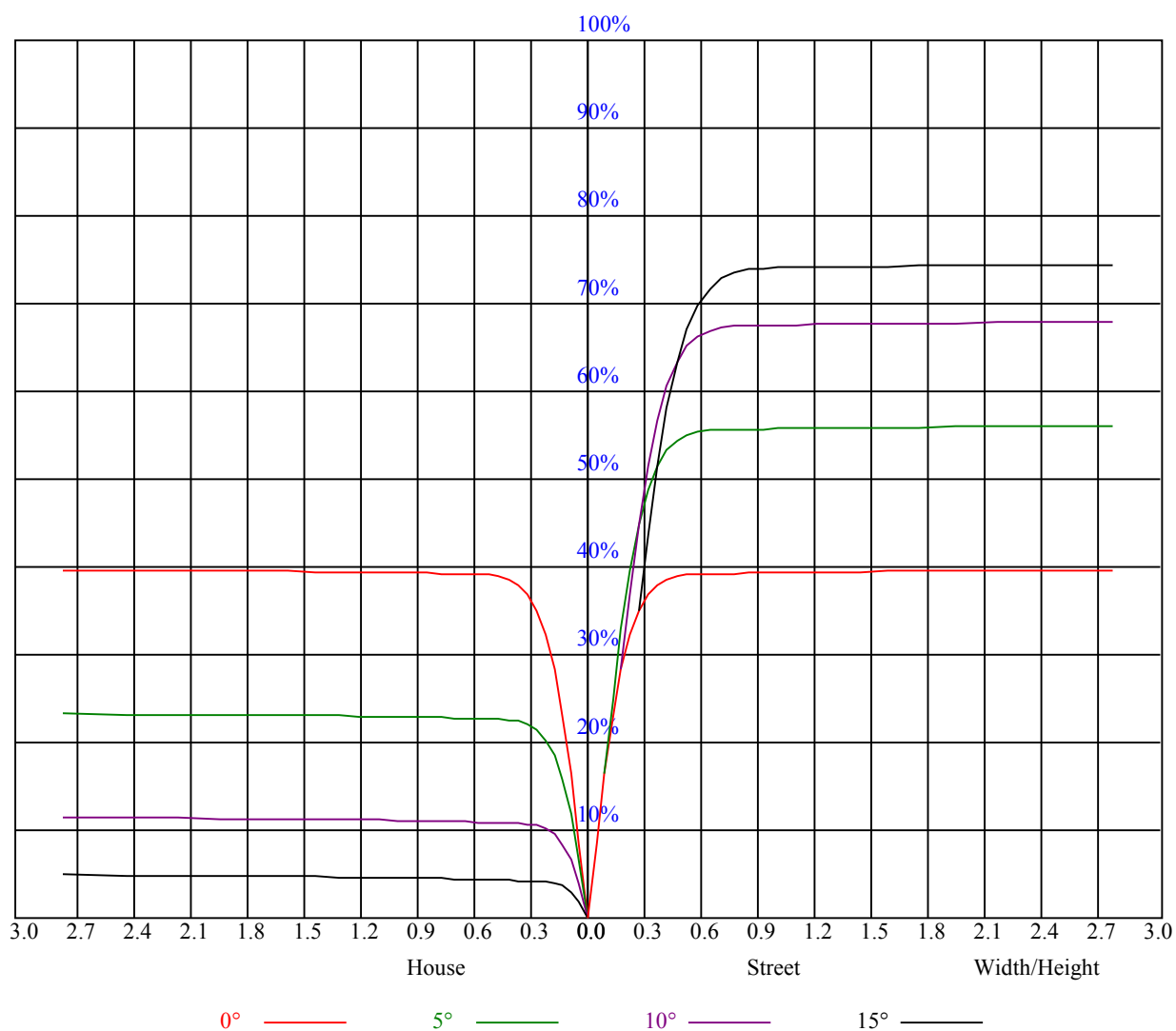
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.98	0.98	0.98	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.82
1	0.93	0.91	0.90	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.79
2	0.89	0.86	0.84	0.87	0.85	0.84	0.85	0.83	0.82	0.83	0.81	0.80	0.80	0.79	0.78	0.77
3	0.85	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.81	0.79	0.77	0.79	0.78	0.76	0.75
4	0.83	0.80	0.77	0.82	0.79	0.77	0.80	0.78	0.76	0.79	0.77	0.75	0.77	0.76	0.74	0.73
5	0.80	0.77	0.75	0.79	0.77	0.74	0.78	0.76	0.74	0.77	0.75	0.73	0.76	0.74	0.73	0.72
6	0.78	0.75	0.73	0.77	0.74	0.72	0.76	0.74	0.72	0.75	0.73	0.72	0.74	0.73	0.71	0.70
7	0.76	0.73	0.71	0.75	0.73	0.71	0.75	0.72	0.70	0.74	0.72	0.70	0.73	0.71	0.70	0.69
8	0.74	0.71	0.69	0.74	0.71	0.69	0.73	0.70	0.69	0.72	0.70	0.68	0.72	0.70	0.68	0.67
9	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.67	0.66
10	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.68	0.66	0.70	0.67	0.66	0.69	0.67	0.66	0.65



NATA 2-2076-M

Intensity data(cd)										Appendix Page: 14 Total:14	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	14377.50	11790.00	6210.00	2919.38	1229.06	317.81	15.08	11.87	10.63		
45.0	14400.00	12178.13	6193.13	2891.25	1278.56	301.50	13.89	11.53	10.52		
90.0	14360.63	10982.81	5491.13	2463.75	1012.67	96.86	13.56	11.48	10.46		
135.0	14377.50	12386.25	7048.13	3144.38	1346.06	300.94	14.96	12.04	10.86		
180.0	14377.50	11216.81	6454.13	2874.38	1111.56	181.91	14.18	11.81	10.63		
225.0	14400.00	10936.69	6518.81	3030.75	1072.41	192.43	15.41	11.93	10.52		
270.0	14360.63	12870.00	7256.25	3414.38	1524.38	307.13	16.31	12.38	10.80		
315.0	14377.50	11124.56	5940.00	2670.75	1075.39	138.99	14.85	11.76	10.52		
360.0	14377.50	11790.00	6210.00	2919.38	1229.06	317.81	15.08	11.87	10.63		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	10.01	9.73	9.51	9.39	9.28	9.23	9.23	9.17	9.17		
45.0	9.90	9.68	9.45	9.34	9.23	9.17	9.17	9.11	9.11		
90.0	10.01	9.68	9.56	9.39	9.34	9.39	9.34	9.39	9.28		
135.0	10.18	9.84	9.68	9.51	9.39	9.34	9.28	9.23	9.23		
180.0	10.07	9.79	9.56	9.45	9.34	9.28	9.23	9.17	9.17		
225.0	9.96	9.62	9.45	9.34	9.23	9.17	9.11	9.11	9.11		
270.0	10.13	9.79	9.56	9.45	9.34	9.28	9.23	9.23	9.28		
315.0	10.07	9.73	9.56	9.45	9.34	9.28	9.23	9.23	9.17		
360.0	10.01	9.73	9.51	9.39	9.28	9.23	9.23	9.17	9.17		
C/ γ (°)	90.0										
0.0	9.17										
45.0	9.06										
90.0	9.17										
135.0	9.23										
180.0	9.17										
225.0	9.06										
270.0	9.17										
315.0	9.17										
360.0	9.17										