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Nata

LumCAT: 1658-N
Luminaire: 92.70.125.00
Report No: NATA0100
Test No: GC2018070507
LampCAT: NICHIA NTCWT012B-V3
Lamp flux(lm): 747.0
Number of Lamps: 1
Length(mm): 47
Phm Type: C

Voltage(V): 38.5000
Current(A): 0.2000
Power (W): 7.7000
PF: 0.0000
Ballast type: DC
Width(mm): 47
Height(mm): 0

Photometric Results

Lumens(lm): 659.03
Efficiency(%): 88.22%
Lumens(lm)/Power(W): 85.59
Central intensity(cd): 1870.816
Maximum intensity(cd): 1870.816
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=30.3
[C90/270]Total=30.3
Field angle(10%Imax): [C0/180]Total=63.5
[C90/270]Total=63.5
Maximum s/h(1/2): C0_180=0.50 C90_270=0.50
Maximum s/h(1/4): C0_180=0.53 C90_270=0.53
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.64%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.124%

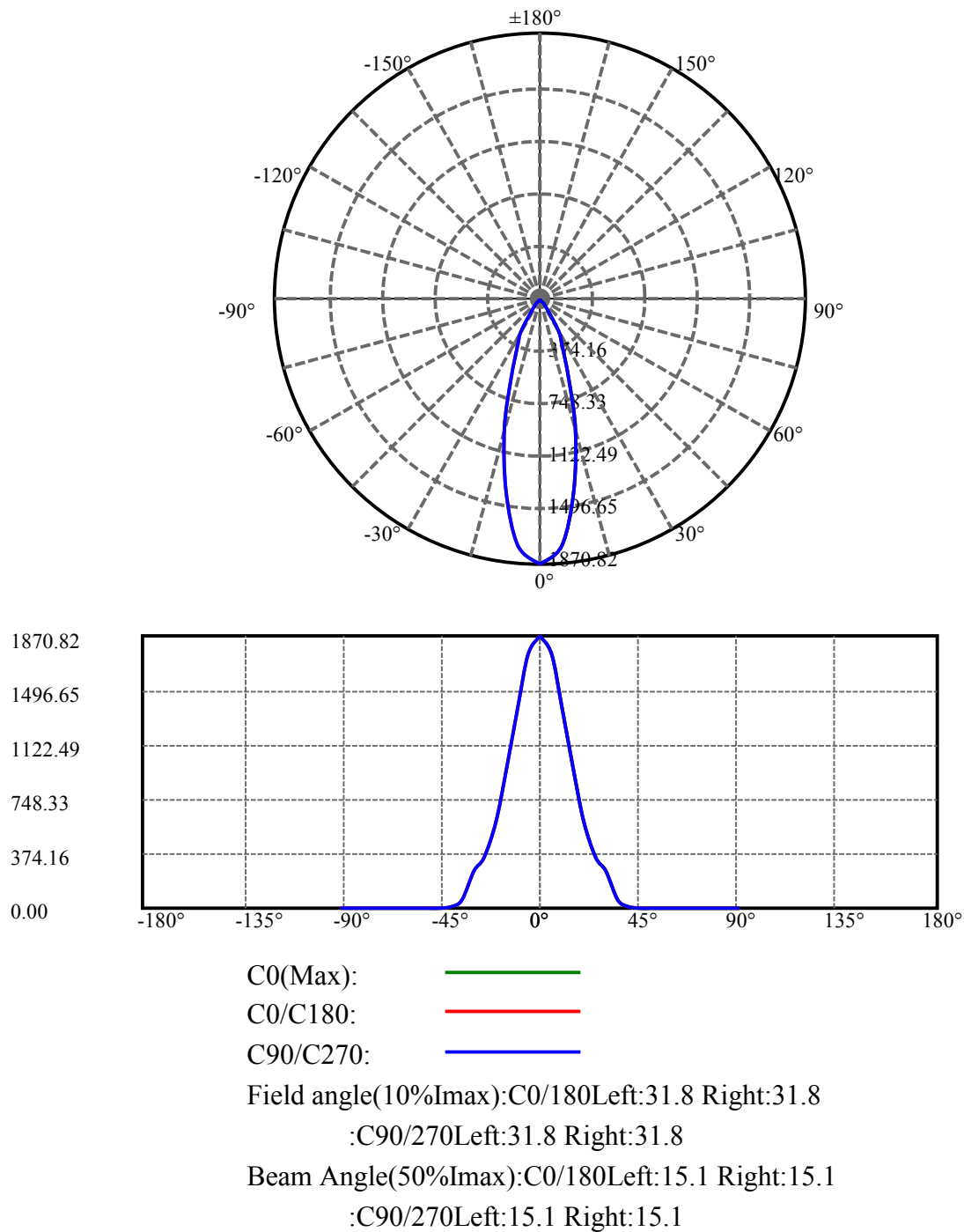
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1870.816	11.188	11.188	1.498%	1.698%
5.0	1743.223	83.280	94.467	11.149%	14.334%
10.0	1382.879	131.627	226.094	17.621%	34.307%
15.0	945.174	134.090	360.184	17.951%	54.653%
20.0	589.778	110.568	470.752	14.802%	71.431%
25.0	353.035	81.782	552.534	10.948%	83.840%
30.0	256.907	70.410	622.944	9.426%	94.524%
35.0	59.571	18.729	641.673	2.507%	97.366%
40.0	7.990	2.815	644.488	.377%	97.793%
45.0	3.751	1.454	645.942	.195%	98.013%
50.0	3.455	1.451	647.393	.194%	98.233%
55.0	3.248	1.459	648.851	.195%	98.455%
60.0	3.138	1.490	650.341	.199%	98.681%
65.0	3.076	1.528	651.869	.205%	98.913%
70.0	3.021	1.556	653.426	.208%	99.149%
75.0	2.987	1.581	655.007	.212%	99.389%
80.0	2.973	1.605	656.612	.215%	99.632%
85.0	2.973	1.623	658.235	.217%	99.879%
90.0	2.918	0.800	659.035	.107%	100.000%

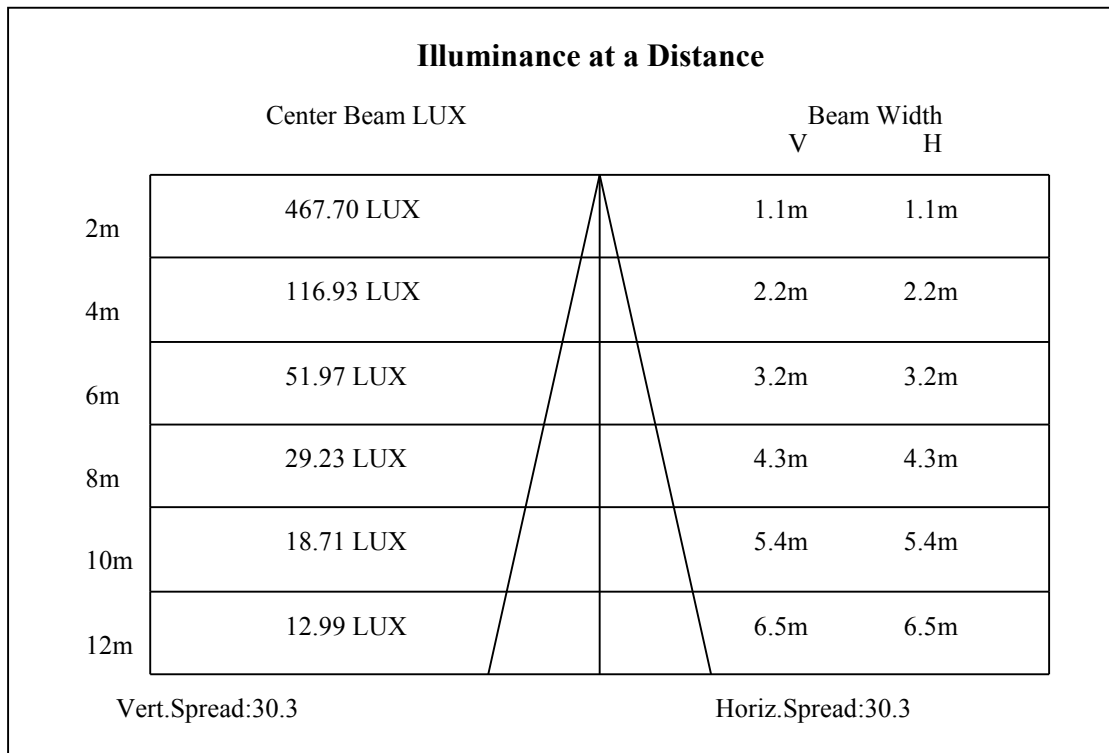
ZONAL LUMEN SUMMARY

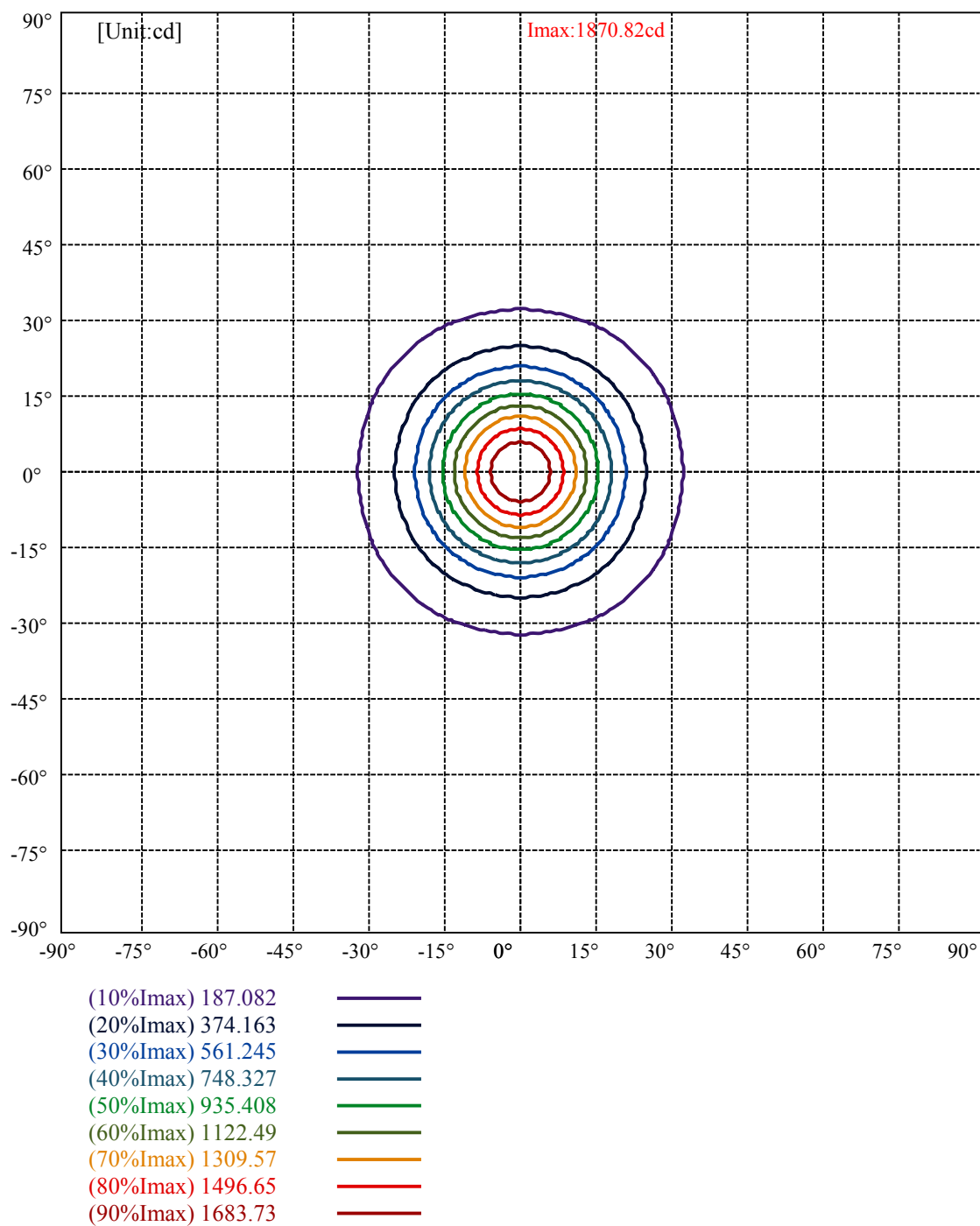
Zone	Lumens	%Lamp	%Fixt
0-30	622.94	83.39%	94.52%
0-40	644.49	86.28%	97.79%
0-60	650.34	87.06%	98.68%
0-90	658.24	88.12%	99.88%
0-120	658.24	88.12%	99.88%
0-180	659.03	88.22%	100.00%
60-90	9.38	1.26%	1.42%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-23.45	527.23	70.58%	80.00%

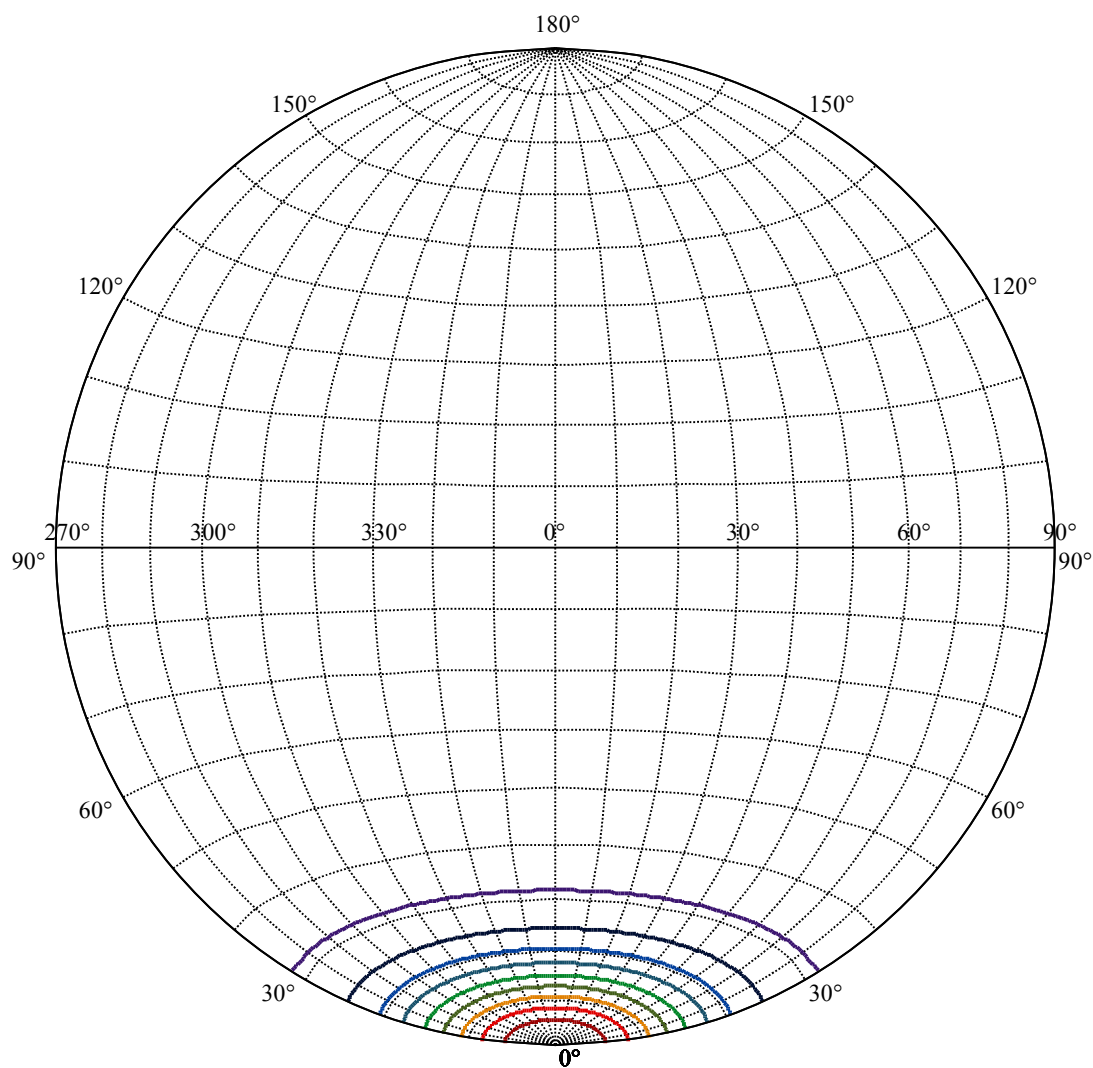
ZONAL LUMEN SUMMARY

0-10	226.09
10-20	244.66
20-30	152.19
30-40	21.54
40-50	2.90
50-60	2.95
60-70	3.08
70-80	3.19
80-90	1.62
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









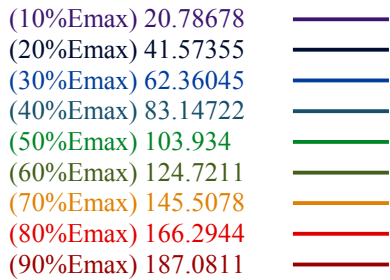
House

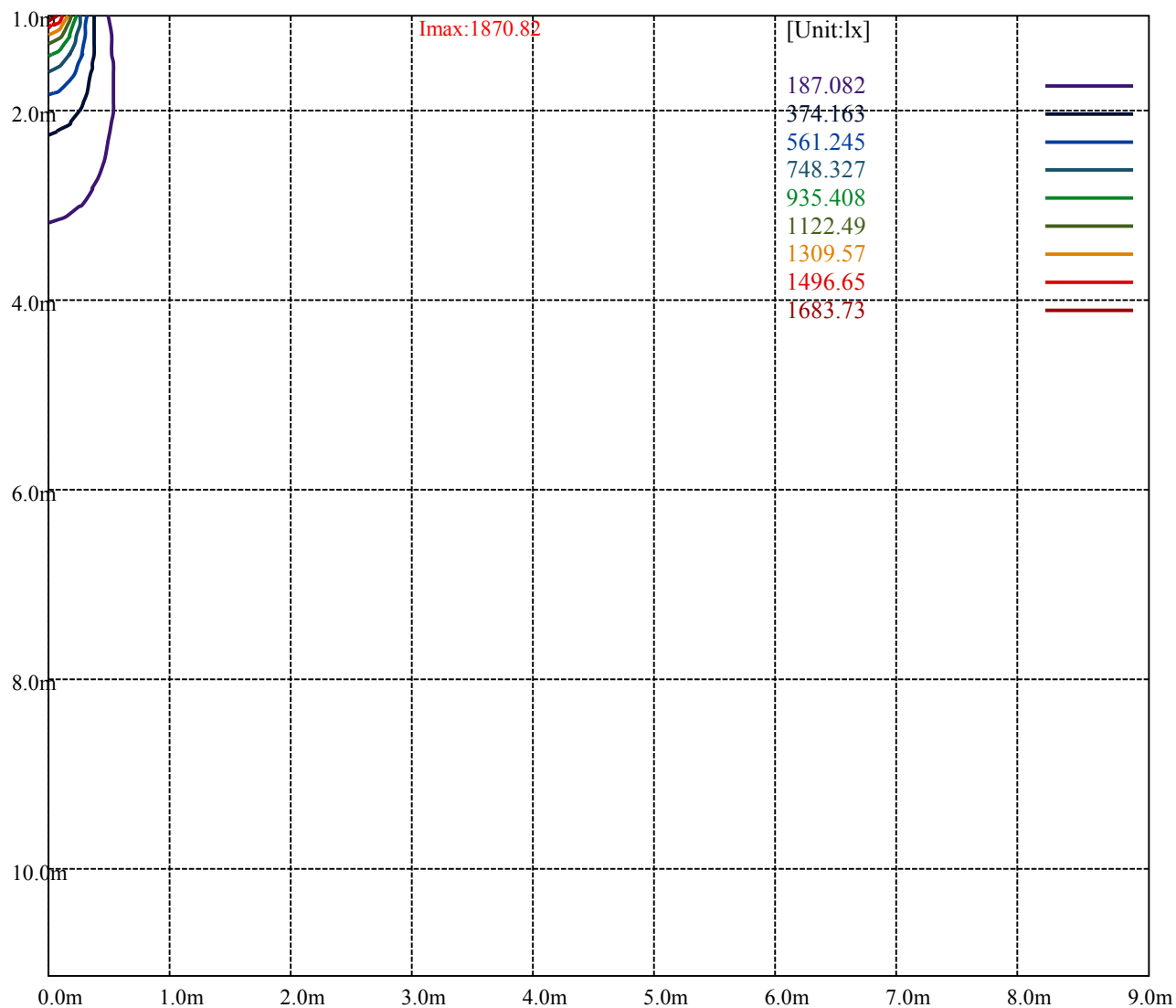
[Unit:cd]

Road

Imax:1870.82

(10%Imax)	187.082	—
(20%Imax)	374.163	—
(30%Imax)	561.245	—
(40%Imax)	748.327	—
(50%Imax)	935.408	—
(60%Imax)	1122.49	—
(70%Imax)	1309.57	—
(80%Imax)	1496.65	—
(90%Imax)	1683.73	—





Luminance Table

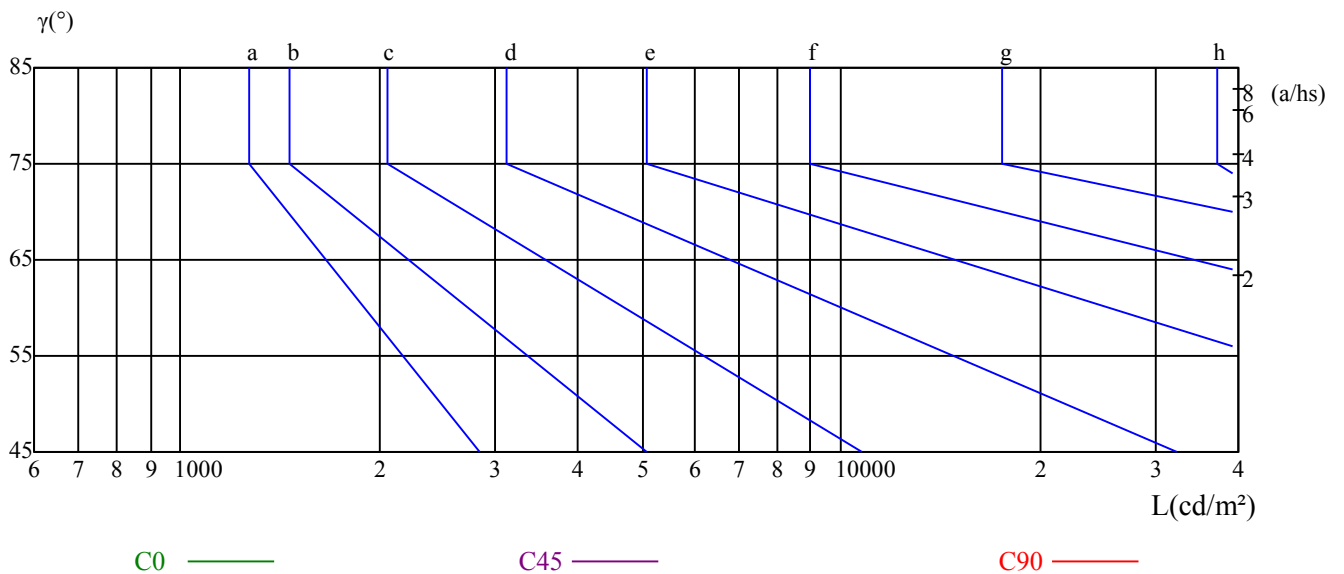
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

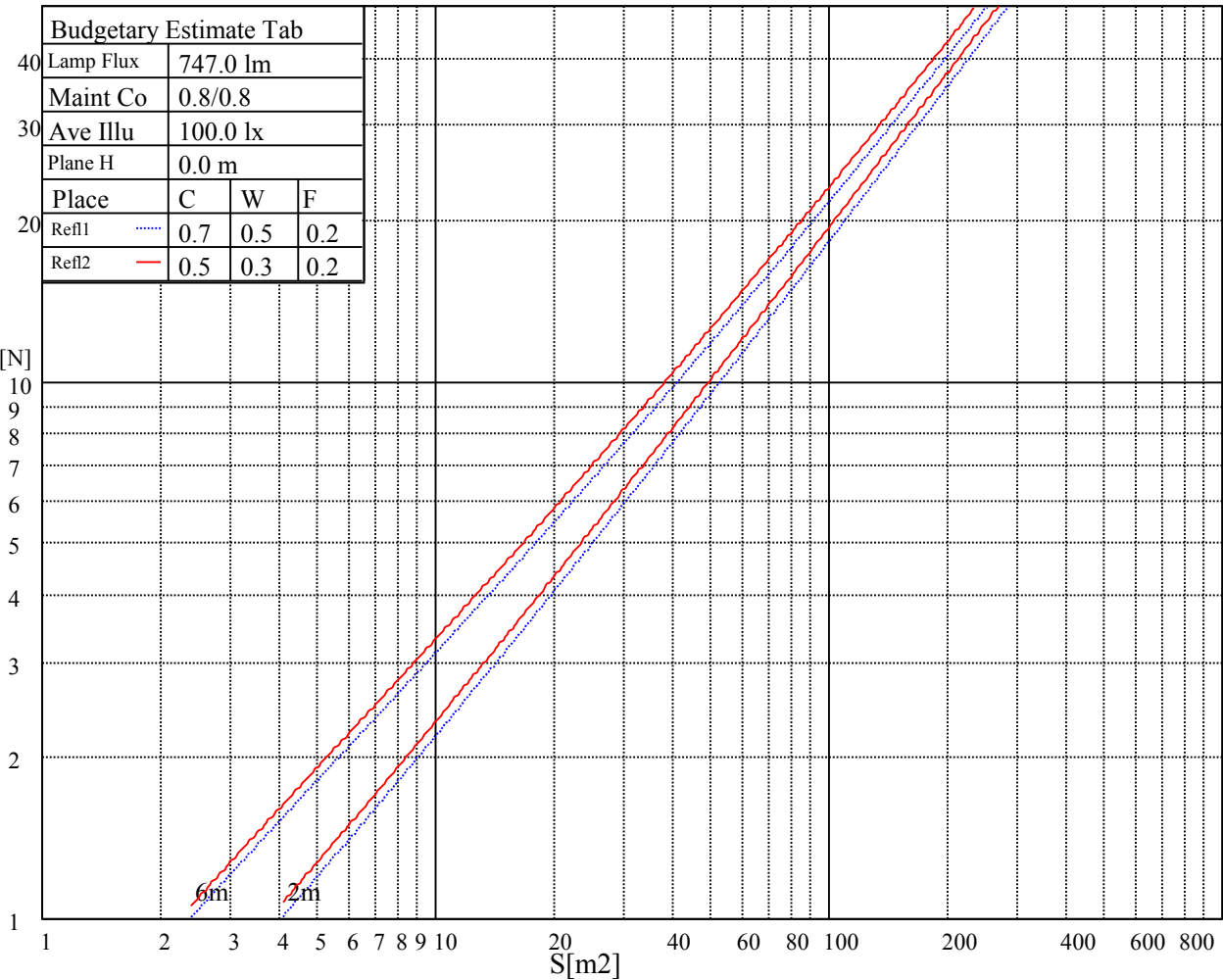
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

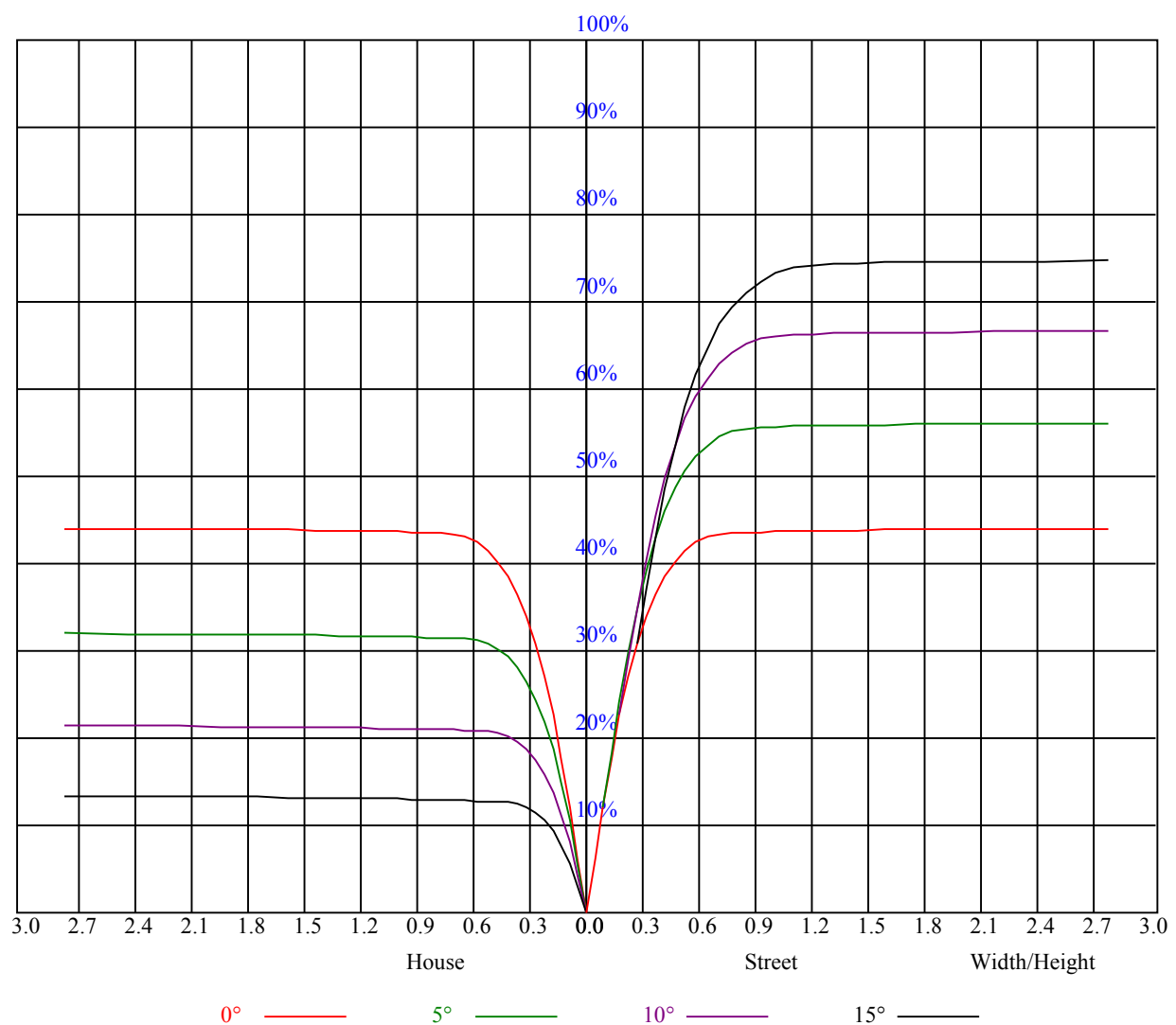
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.96	0.94	0.97	0.95	0.93	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.86	0.85	0.83
2	0.94	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.84	0.83	0.81	0.80
3	0.89	0.85	0.82	0.88	0.85	0.82	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.81	0.78	0.84	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.77	0.75	0.73	0.71
6	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	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	0.67	0.64	0.62	0.67	0.64	0.62	0.61



Nata 1658-N

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	1868.61	1688.03	1324.66	904.03	550.01	332.54	278.59	43.33	6.83		
45.0	1883.48	1715.56	1367.60	910.08	548.91	343.00	257.33	44.49	8.04		
90.0	1870.82	1697.39	1213.44	856.84	507.90	309.80	209.21	29.51	6.44		
135.0	1860.36	1781.07	1450.74	986.06	628.19	362.27	282.99	72.73	8.37		
180.0	1868.61	1792.64	1449.08	986.12	629.62	370.64	257.66	61.33	8.42		
225.0	1883.48	1781.63	1445.78	981.11	611.07	363.15	261.24	73.45	8.53		
270.0	1870.82	1790.98	1486.52	1045.52	680.50	403.01	280.79	107.03	10.02		
315.0	1860.36	1698.49	1325.21	891.64	562.02	339.86	227.44	44.71	7.27		
360.0	1868.61	1688.03	1324.66	904.03	550.01	332.54	278.59	43.33	6.83		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	3.74	3.47	3.25	3.14	3.08	3.03	2.97	2.97	2.97		
45.0	3.80	3.47	3.25	3.14	3.08	3.03	2.92	2.97	2.97		
90.0	3.63	3.47	3.25	3.14	3.08	3.03	3.03	2.97	2.97		
135.0	3.80	3.52	3.30	3.19	3.08	3.03	3.03	3.03	3.03		
180.0	3.74	3.41	3.25	3.14	3.08	3.03	2.97	2.92	2.97		
225.0	3.74	3.41	3.19	3.08	3.03	2.97	2.97	2.92	2.92		
270.0	3.85	3.47	3.25	3.14	3.08	3.03	2.97	2.97	2.97		
315.0	3.69	3.41	3.25	3.14	3.08	3.03	3.03	3.03	2.97		
360.0	3.74	3.47	3.25	3.14	3.08	3.03	2.97	2.97	2.97		
C/γ(°)	90.0										
0.0	2.92										
45.0	2.92										
90.0	2.92										
135.0	2.92										
180.0	2.92										
225.0	2.92										
270.0	2.92										
315.0	2.92										
360.0	2.92										