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## NATA

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LumCAT: 3-1903-M

Luminaire:

Report No: NATA0100

Voltage(V): 17.6000

Test No:

Current(A): 0.3000

LampCAT: XICATO LES 19MM

Power (W): 10.5600

Lamp flux(lm): 1078.0

PF: 0.0000

Number of Lamps: 1

Ballast type:

Length(mm): 79

Width(mm): 79

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 934.23

Efficiency(%): 86.66%

Lumens(lm)/Power(W): 89.40

Central intensity(cd): 1785.341

Maximum intensity(cd): 1785.341

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=39.8

[C90/270]Total=39.8

Field angle(10%Imax): [C0/180]Total=72.9

[C90/270]Total=72.9

Maximum s/h(1/2): C0\_180=0.64 C90\_270=0.64

Maximum s/h(1/4): C0\_180=0.65 C90\_270=0.65

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.57%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.759%

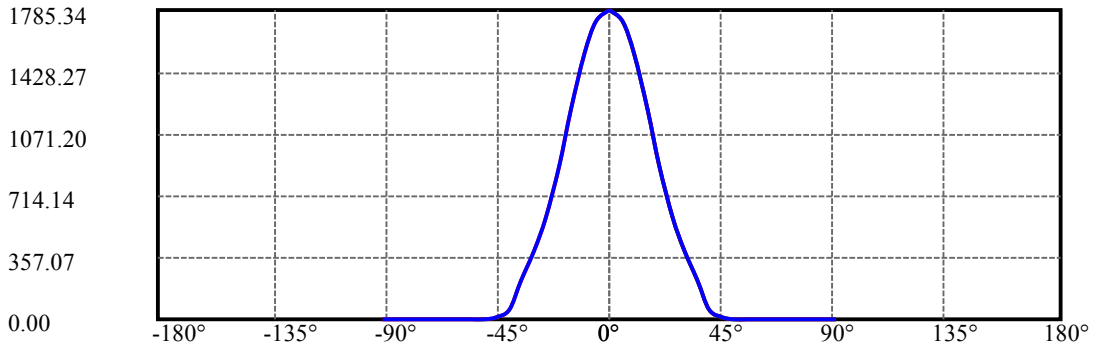
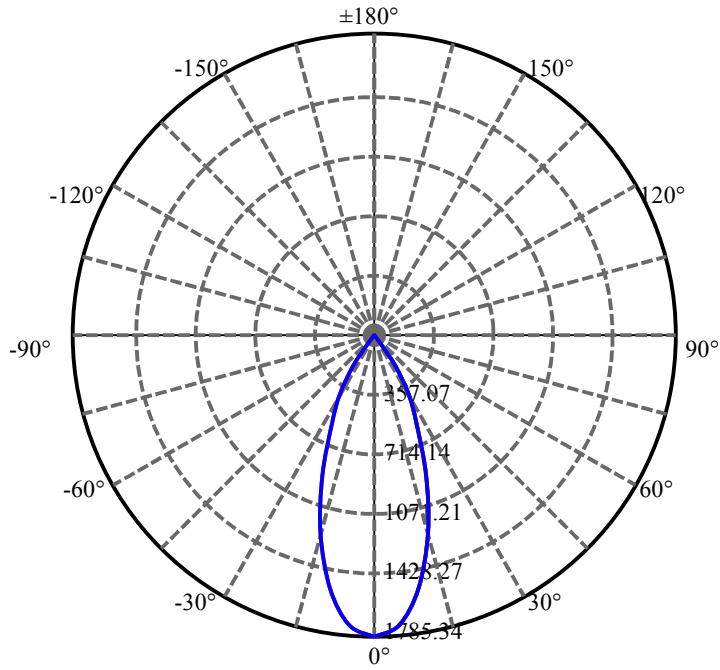
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1785.341	10.677	10.677	.990%	1.143%
5.0	1721.923	82.262	92.939	7.631%	9.948%
10.0	1528.551	145.492	238.431	13.496%	25.522%
15.0	1213.911	172.216	410.647	15.975%	43.956%
20.0	884.584	165.837	576.483	15.384%	61.707%
25.0	582.744	134.994	711.478	12.523%	76.157%
30.0	400.556	109.780	821.257	10.184%	87.908%
35.0	225.525	70.905	892.162	6.577%	95.497%
40.0	60.844	21.438	913.6	1.989%	97.792%
45.0	7.584	2.940	916.539	.273%	98.107%
50.0	5.396	2.266	918.805	.210%	98.349%
55.0	4.590	2.061	920.866	.191%	98.570%
60.0	4.205	1.996	922.862	.185%	98.783%
65.0	4.019	1.997	924.859	.185%	98.997%
70.0	3.930	2.024	926.883	.188%	99.214%
75.0	3.902	2.066	928.949	.192%	99.435%
80.0	3.875	2.092	931.04	.194%	99.659%
85.0	3.902	2.131	933.171	.198%	99.887%
90.0	3.854	1.056	934.227	.098%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	821.26	76.18%	87.91%
0-40	913.60	84.75%	97.79%
0-60	922.86	85.61%	98.78%
0-90	933.17	86.57%	99.89%
0-120	933.17	86.57%	99.89%
0-180	934.23	86.66%	100.00%
60-90	12.31	1.14%	1.32%
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%
0-26.64	747.38	69.33%	80.00%

ZONAL LUMEN SUMMARY

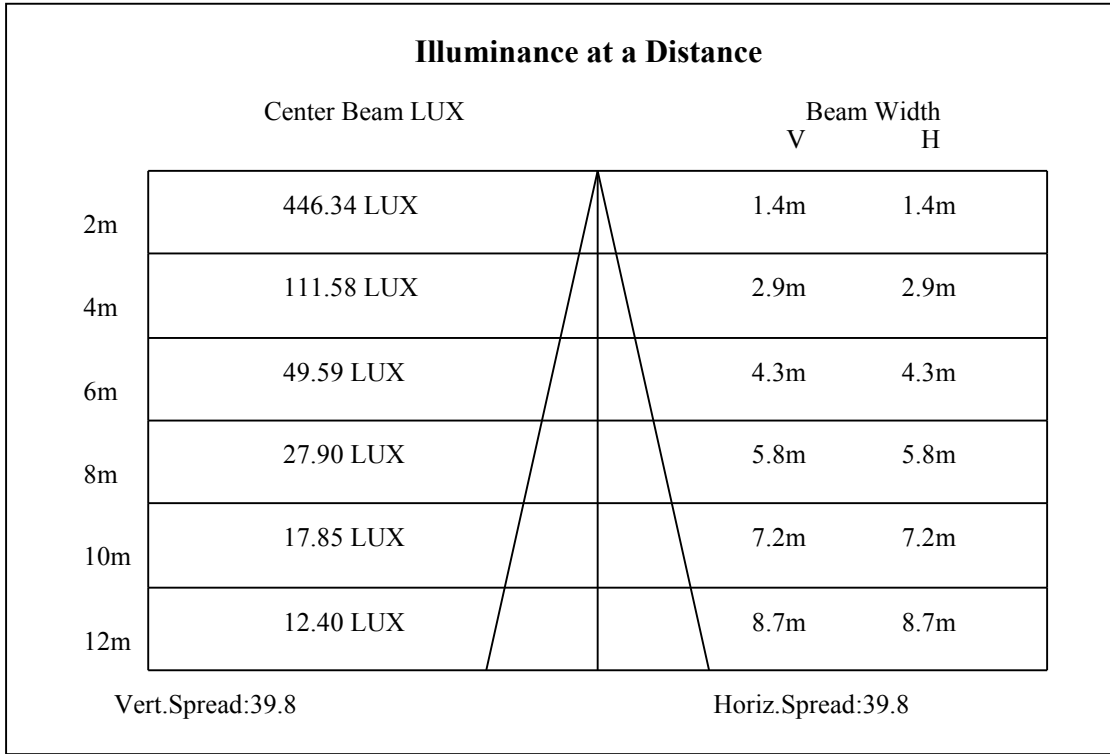
0-10	238.43
10-20	338.05
20-30	244.77
30-40	92.34
40-50	5.21
50-60	4.06
60-70	4.02
70-80	4.16
80-90	2.13
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

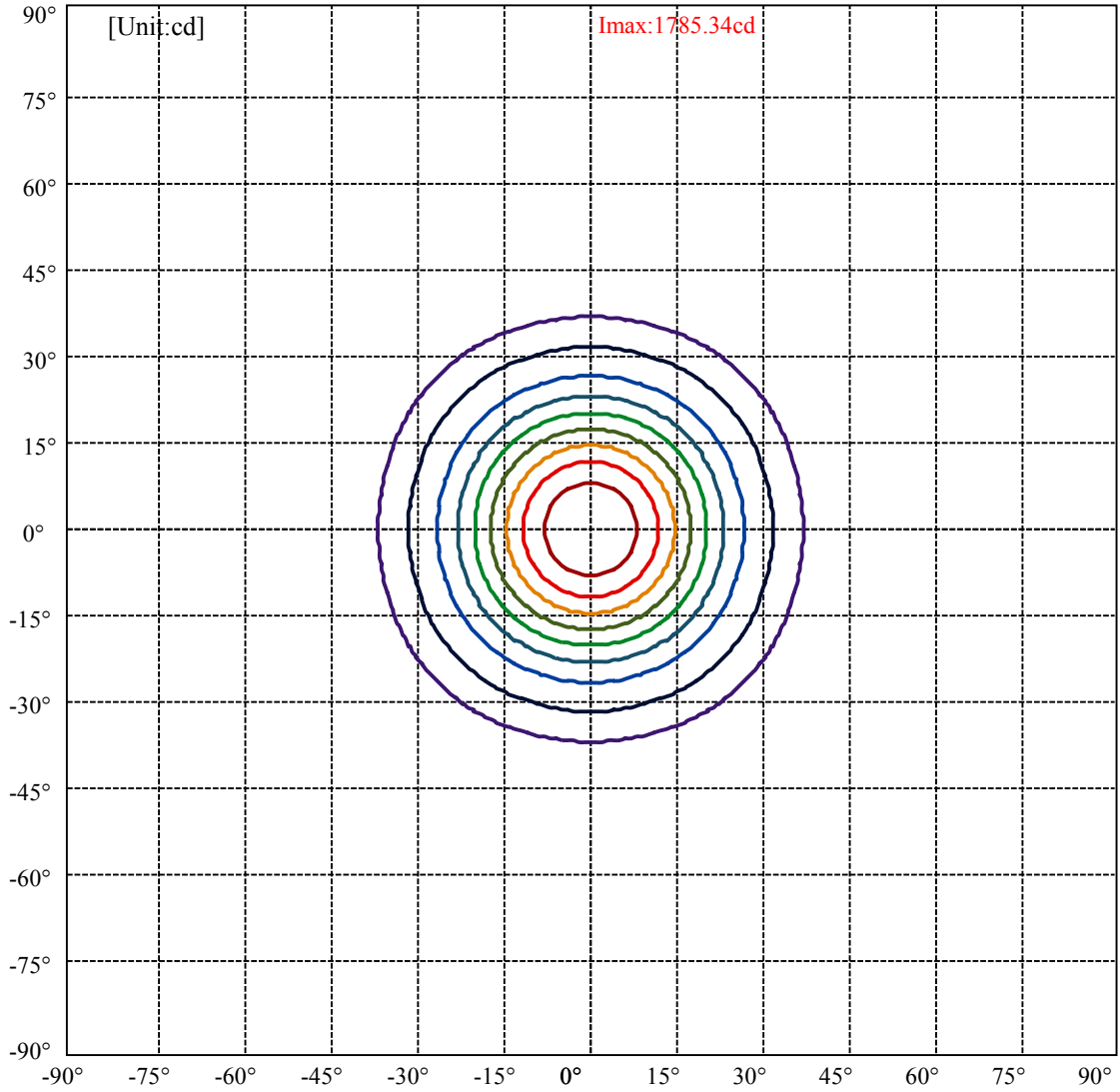


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

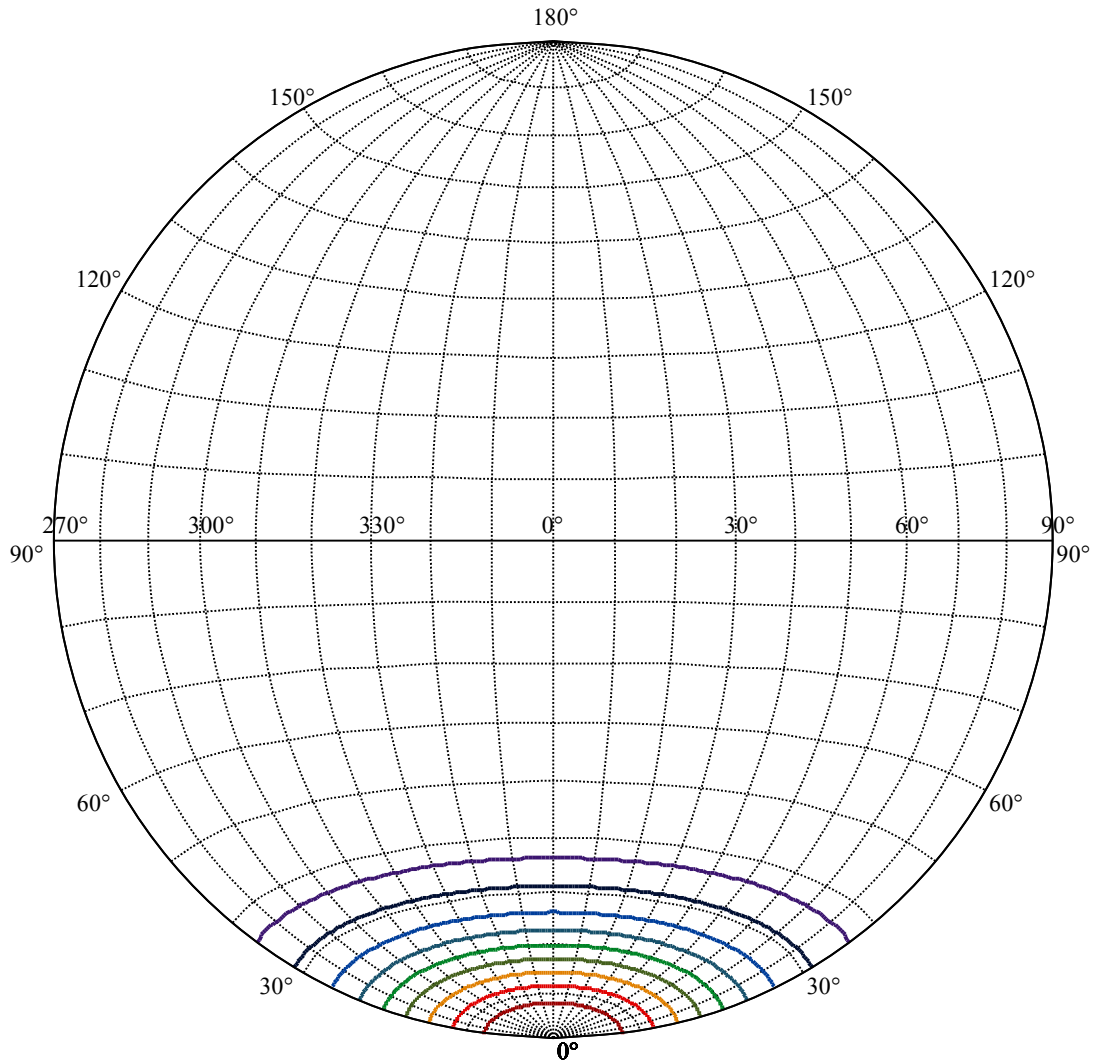
Field angle(10%Imax):C0/180Left:36.4 Right:36.4  
:C90/270Left:36.4 Right:36.4

Beam Angle(50%Imax):C0/180Left:19.9 Right:19.9  
:C90/270Left:19.9 Right:19.9





(10%Imax) 178.534	—
(20%Imax) 357.068	—
(30%Imax) 535.602	—
(40%Imax) 714.137	—
(50%Imax) 892.671	—
(60%Imax) 1071.2	—
(70%Imax) 1249.74	—
(80%Imax) 1428.27	—
(90%Imax) 1606.81	—



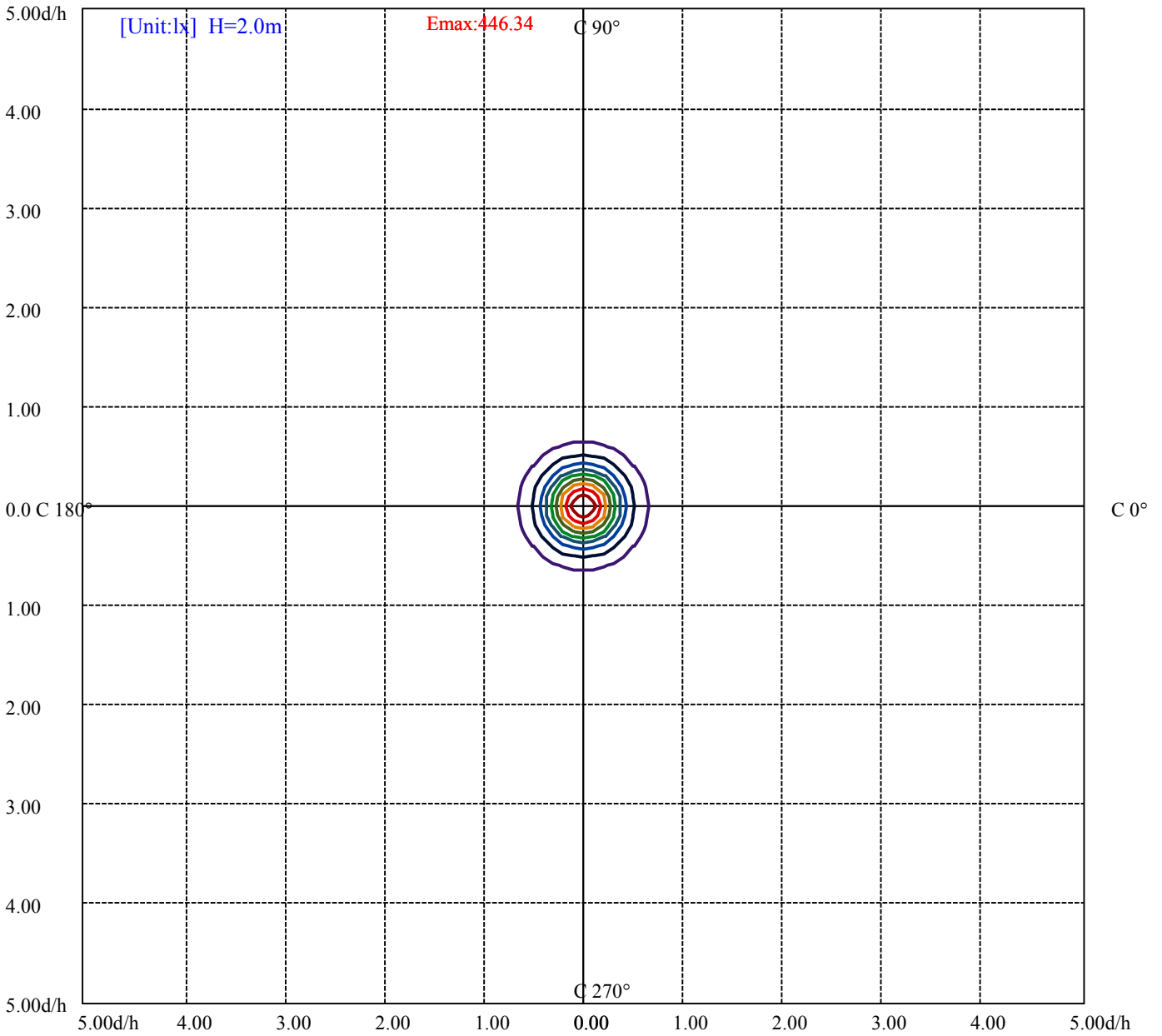
House

[Unit:cd]

Road

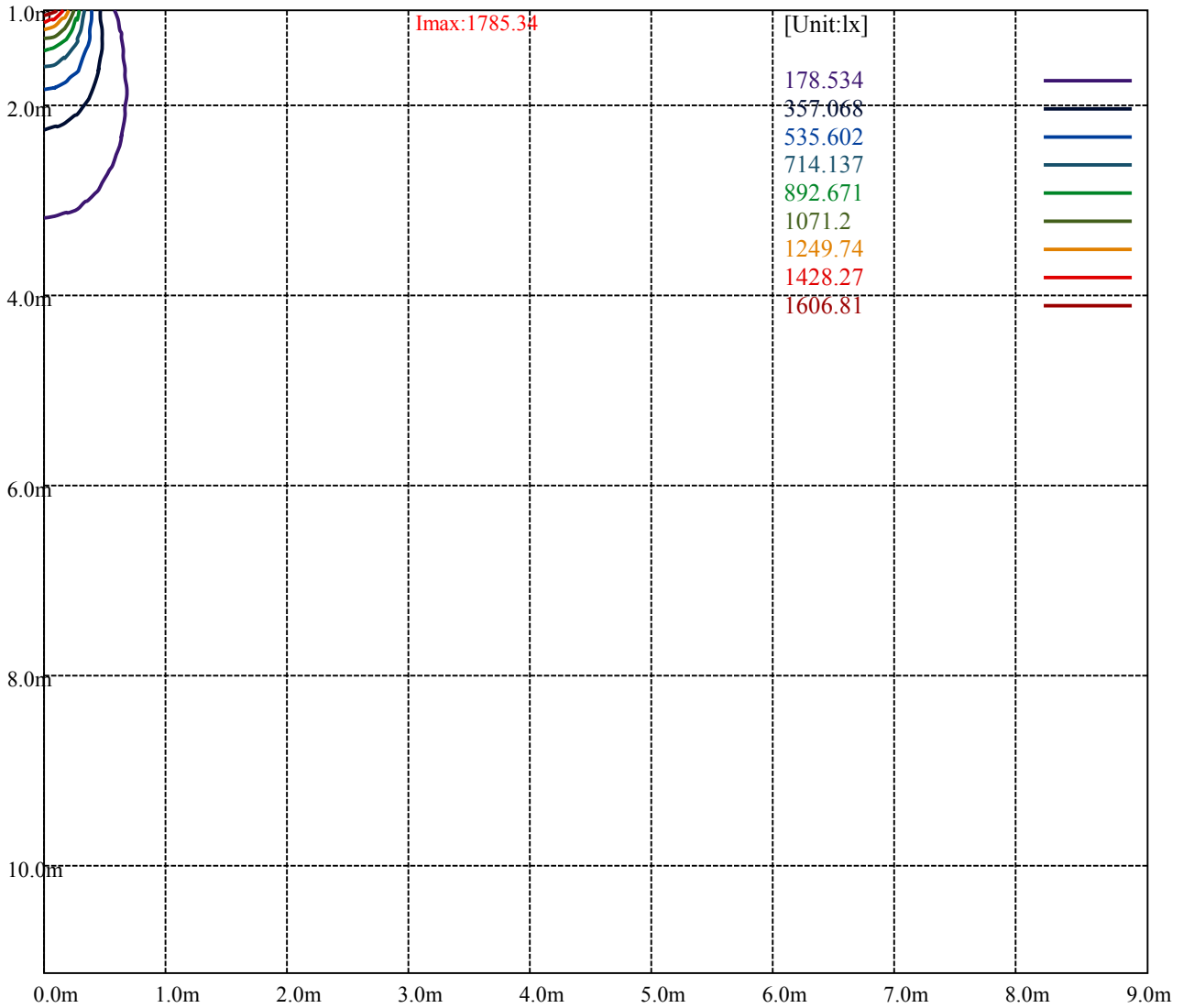
Imax:1785.34

(10%Imax)	178.534	—
(20%Imax)	357.068	—
(30%Imax)	535.602	—
(40%Imax)	714.137	—
(50%Imax)	892.671	—
(60%Imax)	1071.2	—
(70%Imax)	1249.74	—
(80%Imax)	1428.27	—
(90%Imax)	1606.81	—



- (10%E<sub>max</sub>) 44.6335
- (20%E<sub>max</sub>) 89.267
- (30%E<sub>max</sub>) 133.9005
- (40%E<sub>max</sub>) 178.534
- (50%E<sub>max</sub>) 223.1675
- (60%E<sub>max</sub>) 267.8
- (70%E<sub>max</sub>) 312.435
- (80%E<sub>max</sub>) 357.0675
- (90%E<sub>max</sub>) 401.7025





Luminance Table

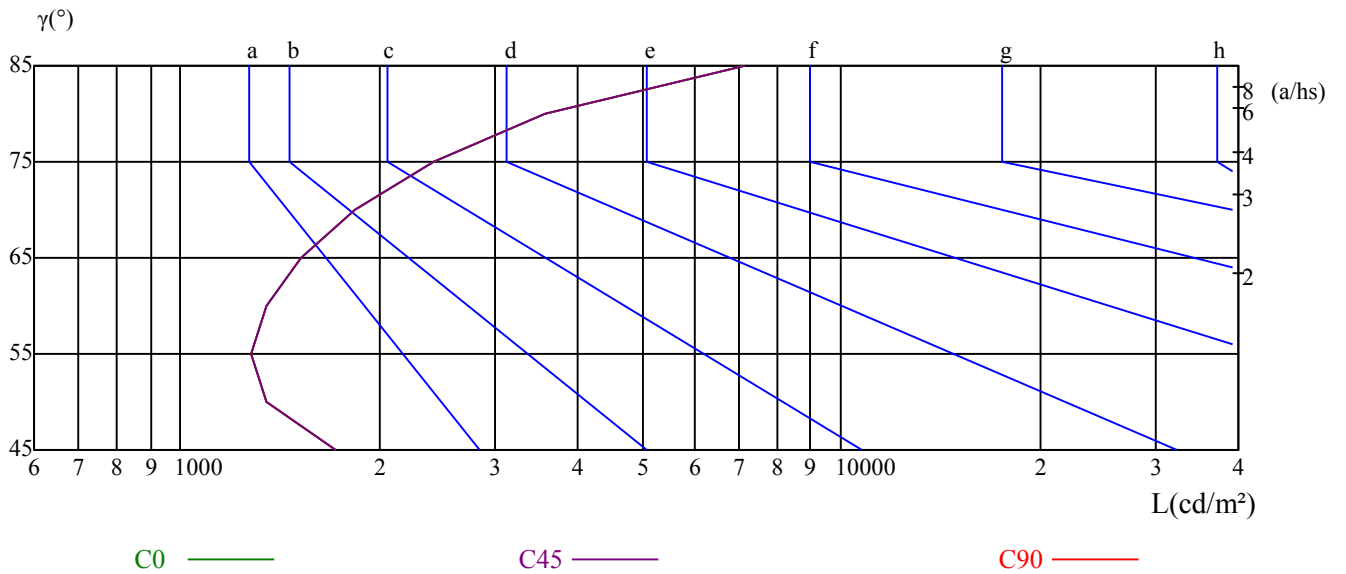
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1719	1345	1282	1348	1524	1841	2416	3575	7174
C45	1719	1345	1282	1348	1524	1841	2416	3575	7174
C90	1719	1345	1282	1348	1524	1841	2416	3575	7174

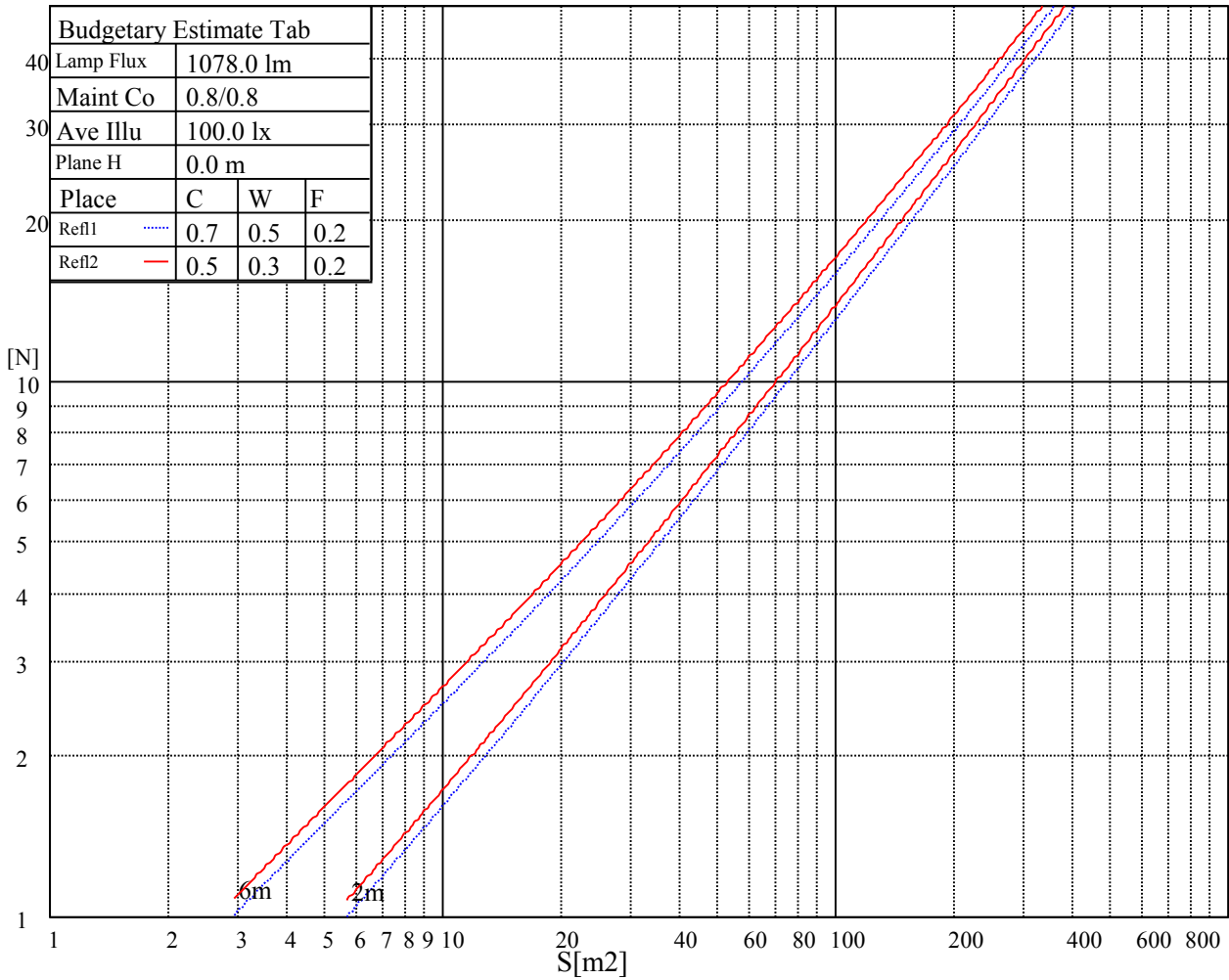
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1524	1524	1524	2416	2416	2416	7174	7174	7174

Glare Table

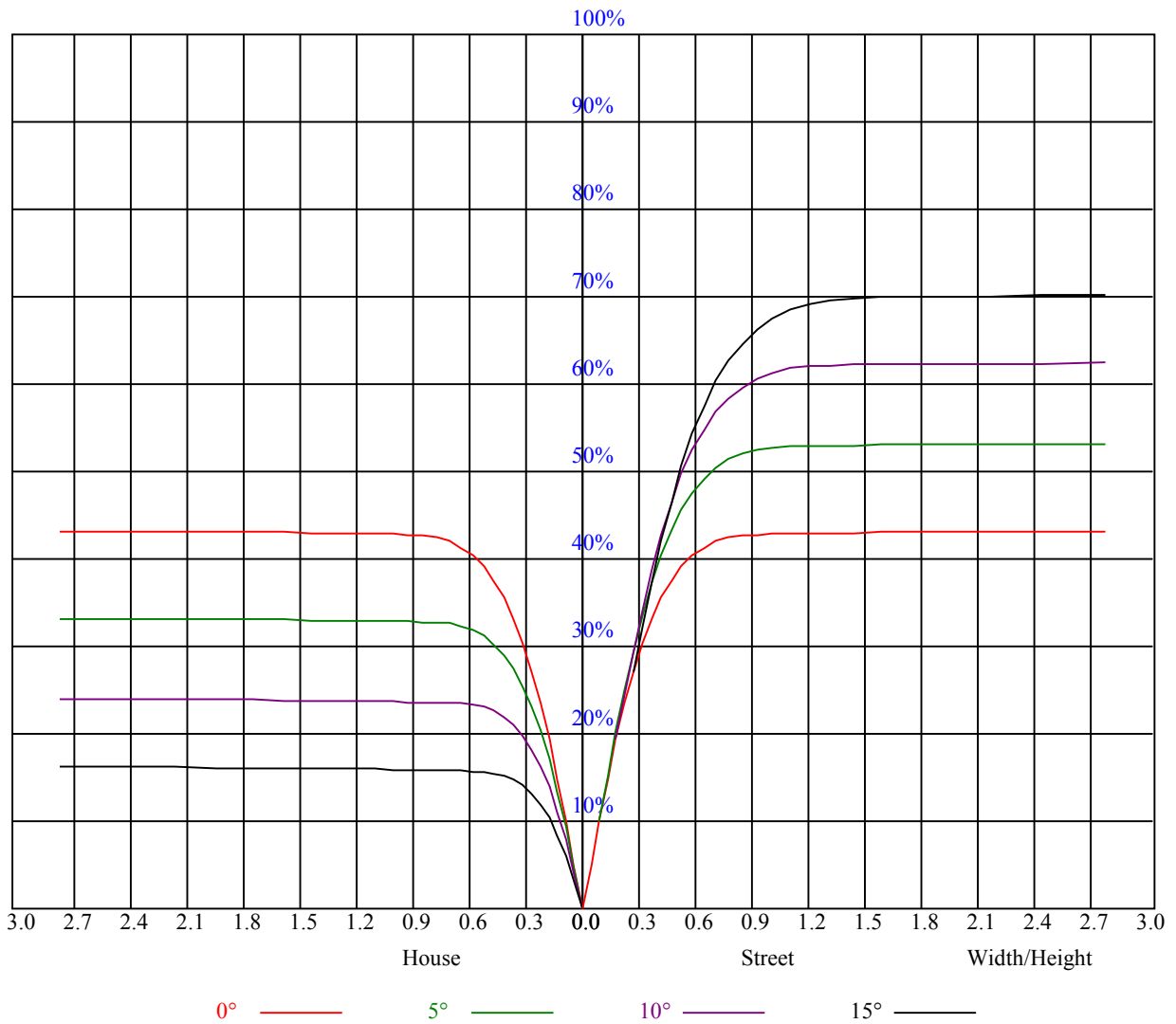
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.81
2	0.91	0.88	0.85	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.81	0.82	0.80	0.79	0.77
3	0.86	0.82	0.79	0.85	0.82	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.72	0.70
5	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.73	0.71	0.69	0.67
6	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
9	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.55



NATA 3-1903-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	1781.07	1719.96	1536.90	1239.87	894.78	605.90	399.21	223.25	79.01	
22.5	1781.07	1724.09	1536.07	1232.05	887.18	580.29	399.60	219.12	63.65	
45.0	1788.78	1722.99	1527.98	1228.09	887.78	584.48	400.76	219.84	59.35	
67.5	1783.83	1721.34	1523.58	1191.70	878.04	575.50	401.64	231.07	54.40	
90.0	1784.93	1718.59	1516.25	1167.75	875.89	575.50	401.25	240.87	52.96	
112.5	1788.78	1721.34	1523.58	1191.70	878.04	575.50	401.64	231.07	54.40	
135.0	1782.18	1722.99	1527.98	1228.09	887.78	584.48	400.76	219.84	59.35	
157.5	1792.09	1724.09	1536.07	1232.05	887.18	580.29	399.60	219.12	63.65	
180.0	1781.07	1719.96	1536.90	1239.87	894.78	605.90	399.21	223.25	79.01	
202.5	1781.07	1724.09	1536.07	1232.05	887.18	580.29	399.60	219.12	63.65	
225.0	1788.78	1722.99	1527.98	1228.09	887.78	584.48	400.76	219.84	59.35	
247.5	1783.83	1721.34	1523.58	1191.70	878.04	575.50	401.64	231.07	54.40	
270.0	1784.93	1718.59	1516.25	1167.75	875.89	575.50	401.25	240.87	52.96	
292.5	1788.78	1721.34	1523.58	1191.70	878.04	575.50	401.64	231.07	54.40	
315.0	1782.18	1722.99	1527.98	1228.09	887.78	584.48	400.76	219.84	59.35	
337.5	1792.09	1724.09	1536.07	1232.05	887.18	580.29	399.60	219.12	63.65	
360.0	1781.07	1719.96	1536.90	1239.87	894.78	605.90	399.21	223.25	79.01	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	8.53	5.34	4.57	4.24	4.02	3.96	3.96	3.91	3.91	
22.5	7.60	5.29	4.57	4.18	4.02	3.96	3.91	3.91	3.91	
45.0	7.54	5.45	4.57	4.24	4.02	3.91	3.91	3.85	3.91	
67.5	7.27	5.45	4.62	4.18	4.02	3.91	3.85	3.85	3.91	
90.0	7.32	5.45	4.62	4.18	4.02	3.91	3.91	3.85	3.85	
112.5	7.27	5.45	4.62	4.18	4.02	3.91	3.85	3.85	3.91	
135.0	7.54	5.45	4.57	4.24	4.02	3.91	3.91	3.85	3.91	
157.5	7.60	5.29	4.57	4.18	4.02	3.96	3.91	3.91	3.91	
180.0	8.53	5.34	4.57	4.24	4.02	3.96	3.96	3.91	3.91	
202.5	7.60	5.29	4.57	4.18	4.02	3.96	3.91	3.91	3.91	
225.0	7.54	5.45	4.57	4.24	4.02	3.91	3.91	3.85	3.91	
247.5	7.27	5.45	4.62	4.18	4.02	3.91	3.85	3.85	3.91	
270.0	7.32	5.45	4.62	4.18	4.02	3.91	3.91	3.85	3.85	
292.5	7.27	5.45	4.62	4.18	4.02	3.91	3.85	3.85	3.91	
315.0	7.54	5.45	4.57	4.24	4.02	3.91	3.91	3.85	3.91	
337.5	7.60	5.29	4.57	4.18	4.02	3.96	3.91	3.91	3.91	
360.0	8.53	5.34	4.57	4.24	4.02	3.96	3.96	3.91	3.91	
C/γ(°)	90.0									
0.0	3.91									
22.5	3.85									
45.0	3.85									
67.5	3.85									
90.0	3.80									
112.5	3.85									
135.0	3.85									
157.5	3.85									
180.0	3.91									
202.5	3.85									
225.0	3.85									
247.5	3.85									
270.0	3.80									
292.5	3.85									
315.0	3.85									
337.5	3.85									
360.0	3.91									