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NATA

LumCAT: 3-1938-M	
Luminaire: BJB 47.319.2030	
Report No: NATA0100	Voltage(V): 48.9300
Test No: GC2018111417	Current(A): 0.4550
LampCAT: BRIDGELUX V22B	Power (W): 22.2600
Lamp flux(lm): 3359.2	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 78	Width(mm): 78
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2842.65
Efficiency(%): 84.62%
Lumens(lm)/Power(W): 127.70
Central intensity(cd): 7746.328
Maximum intensity(cd): 7746.328
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.4
 [C90/270]Total=26.4
Field angle(10%Imax): [C0/180]Total=66.8
 [C90/270]Total=66.8
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
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(%): 85.92%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.096%

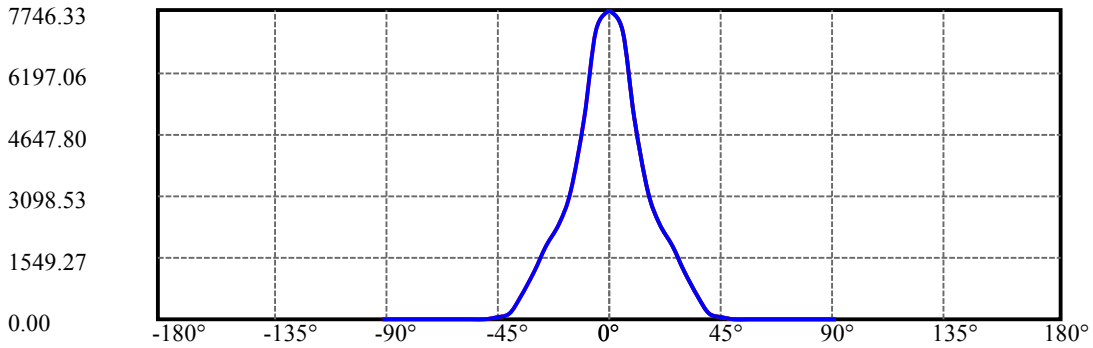
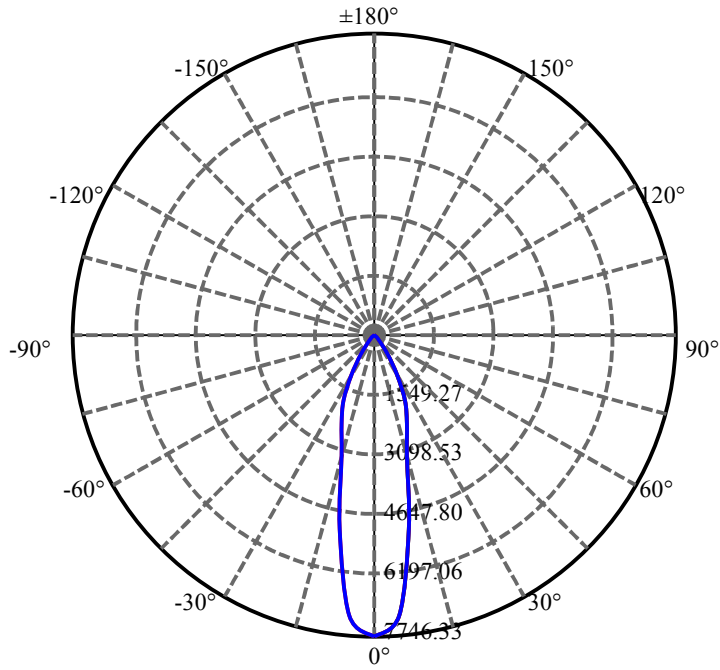
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7746.328	46.325	46.325	1.379%	1.630%
5.0	7235.086	345.644	391.969	10.290%	13.789%
10.0	5049.914	480.666	872.635	14.309%	30.698%
15.0	3209.344	455.304	1327.939	13.554%	46.715%
20.0	2418.188	453.347	1781.287	13.496%	62.663%
25.0	1826.578	423.132	2204.419	12.596%	77.548%
30.0	1194.694	327.428	2531.847	9.747%	89.066%
35.0	578.742	181.956	2713.803	5.417%	95.467%
40.0	148.458	52.307	2766.11	1.557%	97.307%
45.0	33.947	13.158	2779.267	.392%	97.770%
50.0	20.566	8.636	2787.903	.257%	98.074%
55.0	16.763	7.526	2795.43	.224%	98.339%
60.0	14.794	7.023	2802.452	.209%	98.586%
65.0	13.795	6.853	2809.305	.204%	98.827%
70.0	13.437	6.921	2816.226	.206%	99.070%
75.0	14.597	7.728	2823.955	.230%	99.342%
80.0	15.237	8.225	2832.18	.245%	99.632%
85.0	13.205	7.210	2839.39	.215%	99.885%
90.0	11.911	3.264	2842.655	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2531.85	75.37%	89.07%
0-40	2766.11	82.34%	97.31%
0-60	2802.45	83.43%	98.59%
0-90	2839.39	84.53%	99.89%
0-120	2839.39	84.53%	99.89%
0-180	2842.65	84.62%	100.00%
60-90	43.96	1.31%	1.55%
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%
0-26.06	2274.12	67.70%	80.00%

ZONAL LUMEN SUMMARY

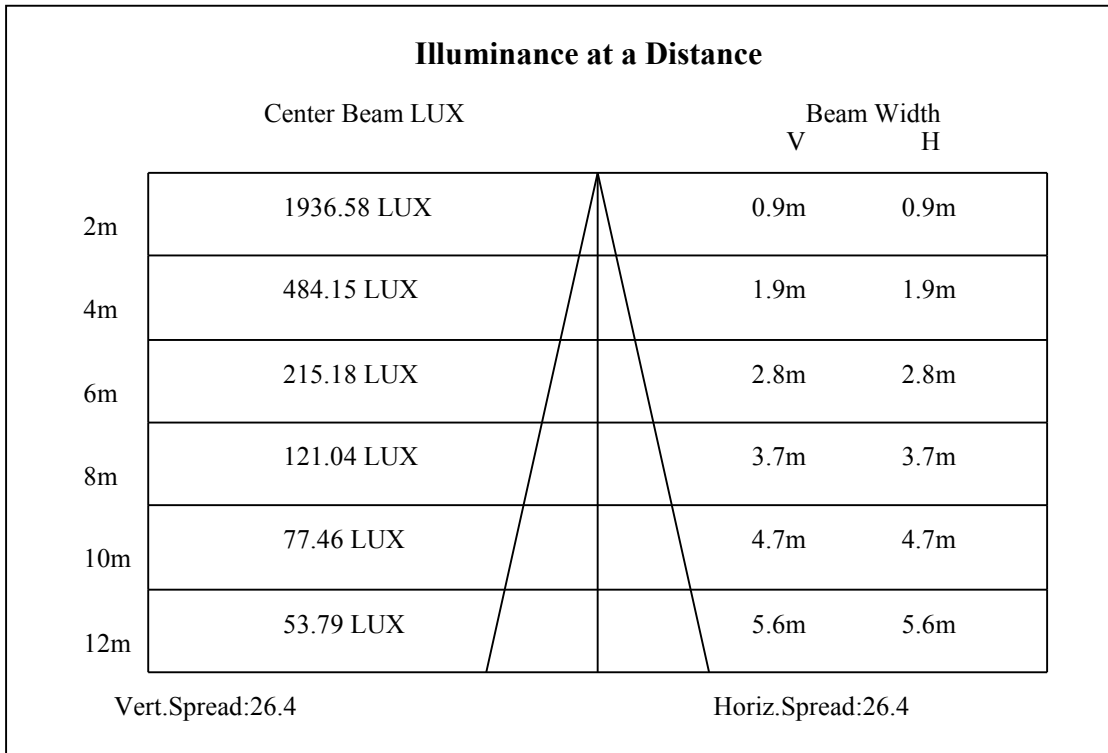
0-10	872.63
10-20	908.65
20-30	750.56
30-40	234.26
40-50	21.79
50-60	14.55
60-70	13.77
70-80	15.95
80-90	7.21
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

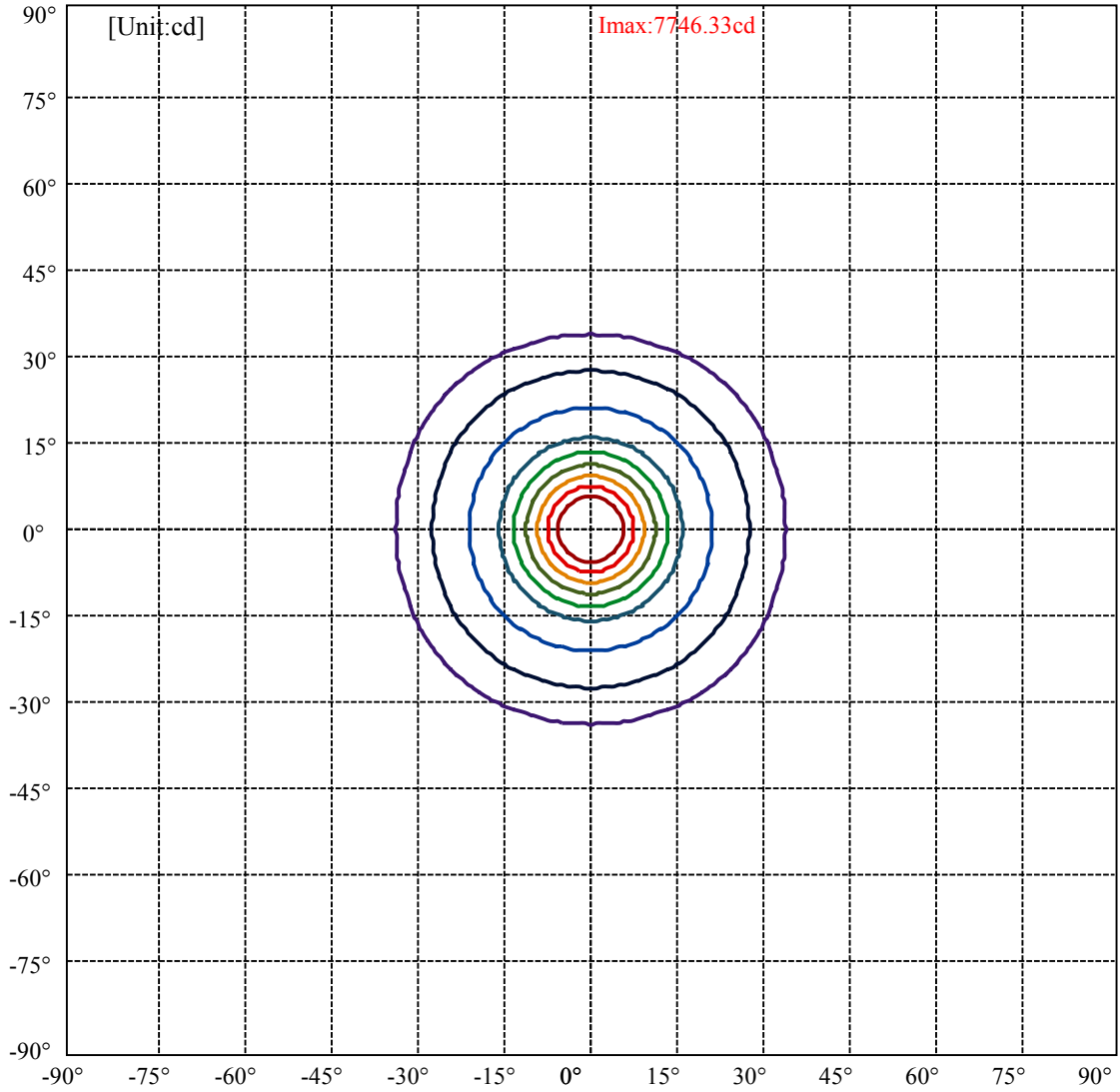


C0(Max): ———
C0/C180: ———
C90/C270: ———

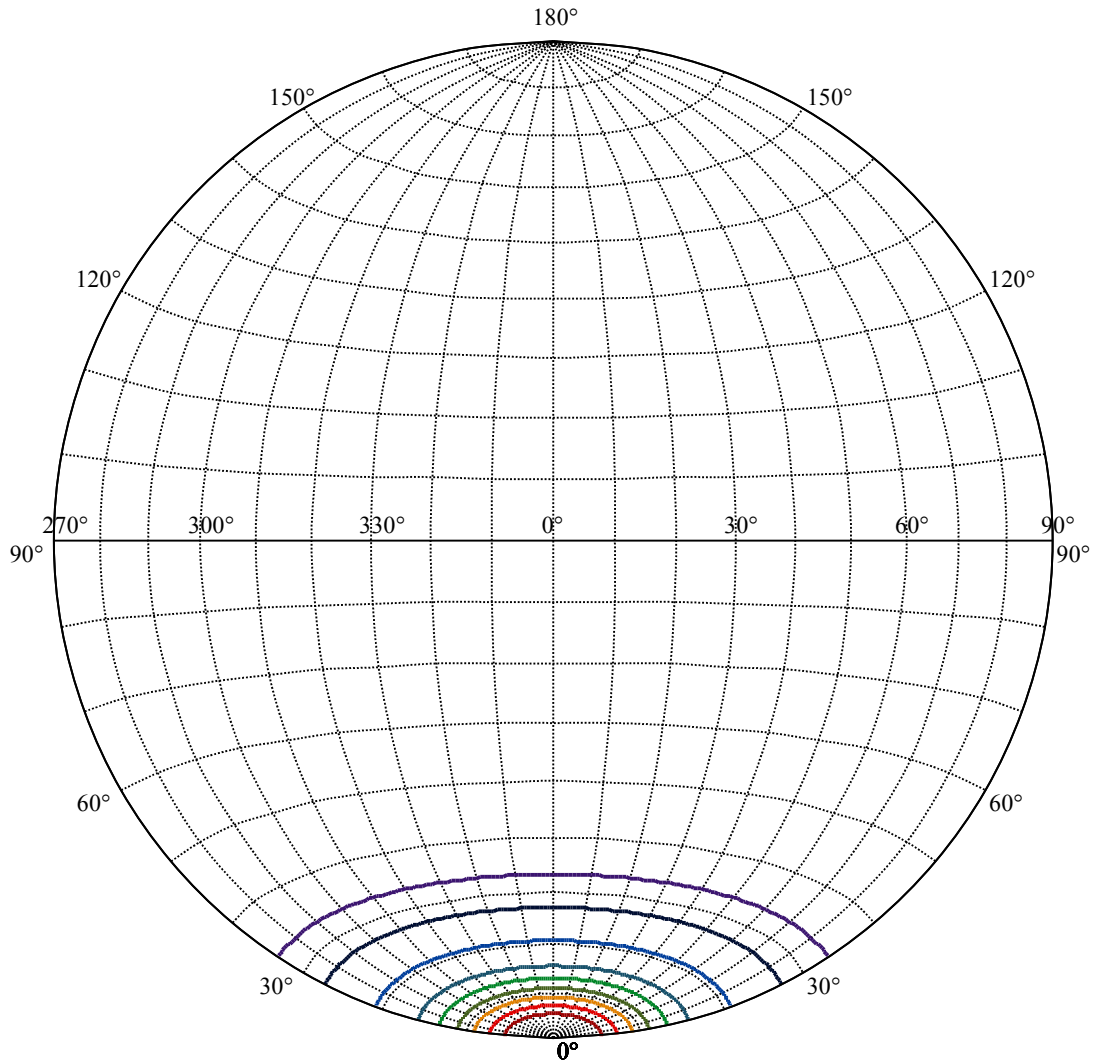
Field angle(10%Imax):C0/180Left:33.4 Right:33.4
:C90/270Left:33.4 Right:33.4

Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2
:C90/270Left:13.2 Right:13.2





(10%Imax) 774.633	—
(20%Imax) 1549.27	—
(30%Imax) 2323.9	—
(40%Imax) 3098.53	—
(50%Imax) 3873.16	—
(60%Imax) 4647.8	—
(70%Imax) 5422.43	—
(80%Imax) 6197.06	—
(90%Imax) 6971.69	—



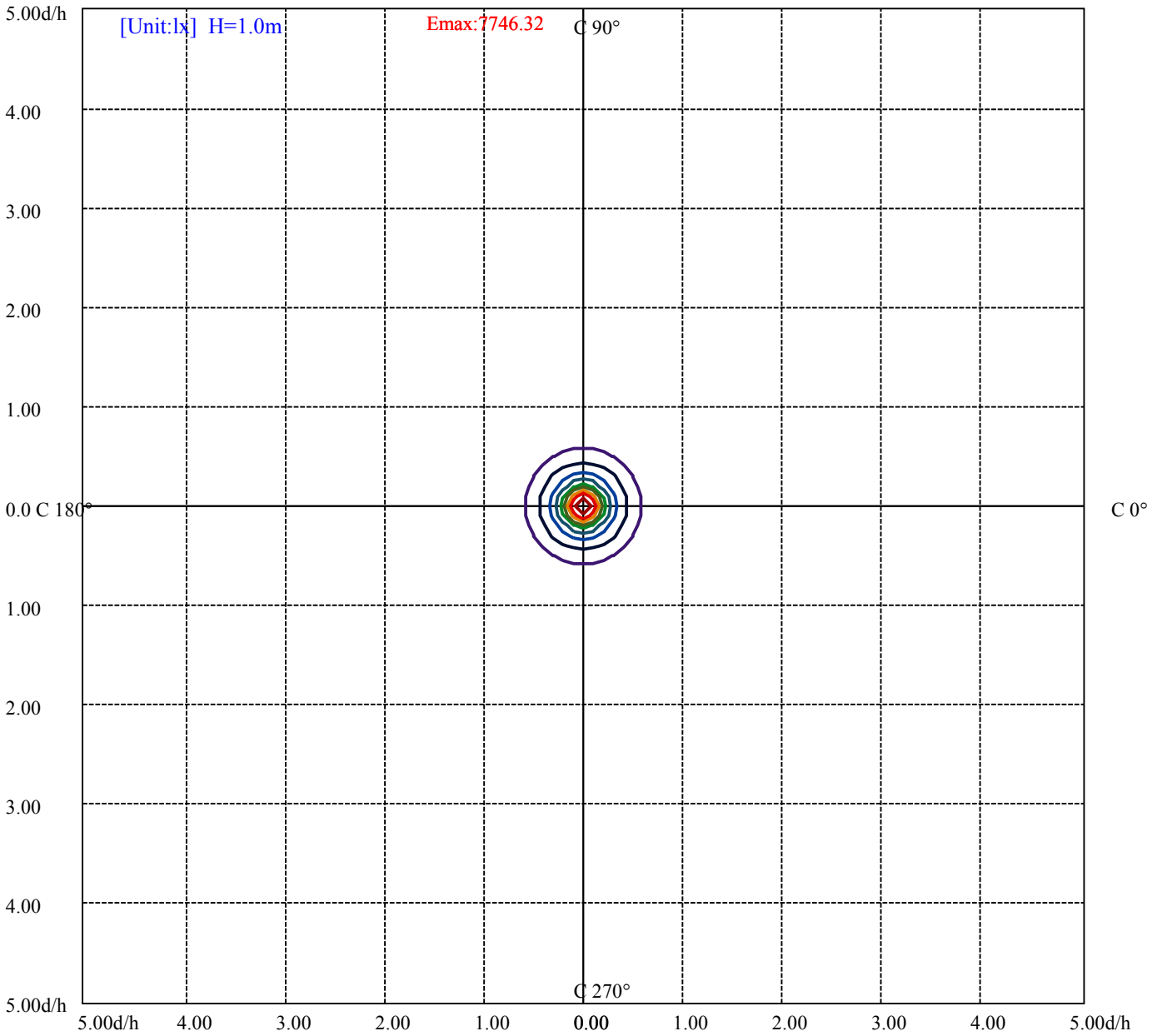
House

[Unit:cd]

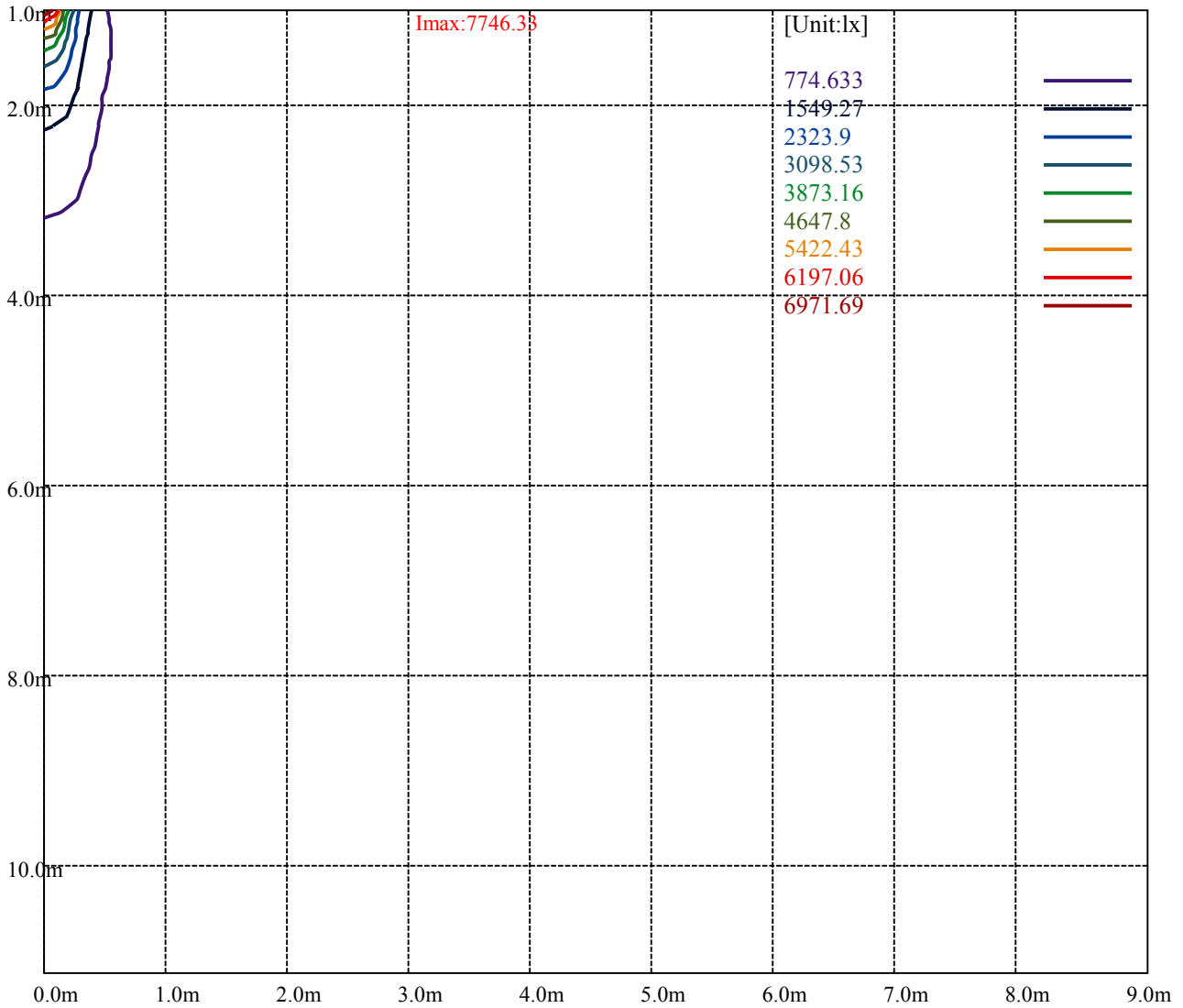
Road

Imax:7746.33

(10%Imax) 774.633	—
(20%Imax) 1549.27	—
(30%Imax) 2323.9	—
(40%Imax) 3098.53	—
(50%Imax) 3873.16	—
(60%Imax) 4647.8	—
(70%Imax) 5422.43	—
(80%Imax) 6197.06	—
(90%Imax) 6971.69	—



(10%Emax) 774.631	—
(20%Emax) 1549.26	—
(30%Emax) 2323.89	—
(40%Emax) 3098.52	—
(50%Emax) 3873.16	—
(60%Emax) 4647.79	—
(70%Emax) 5422.42	—
(80%Emax) 6197.05	—
(90%Emax) 6971.68	—



Luminance Table

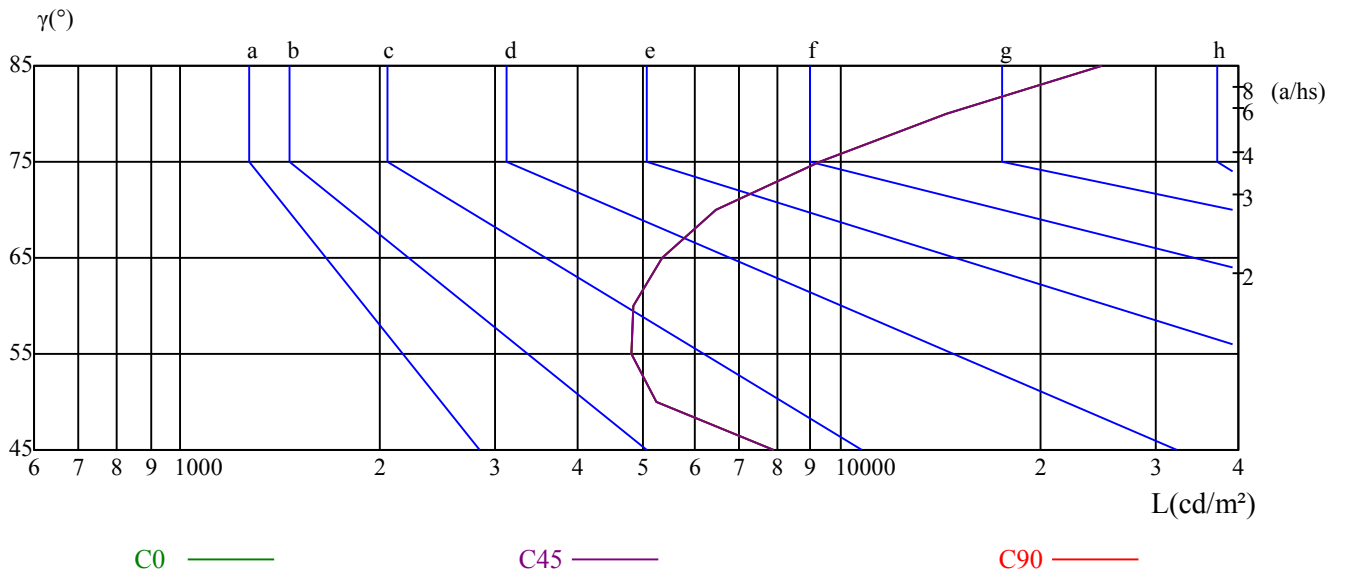
γ	45	50	55	60	65	70	75	80	85
C0	7891	5259	4804	4863	5365	6457	9270	14422	24902
C45	7891	5259	4804	4863	5365	6457	9270	14422	24902
C90	7891	5259	4804	4863	5365	6457	9270	14422	24902

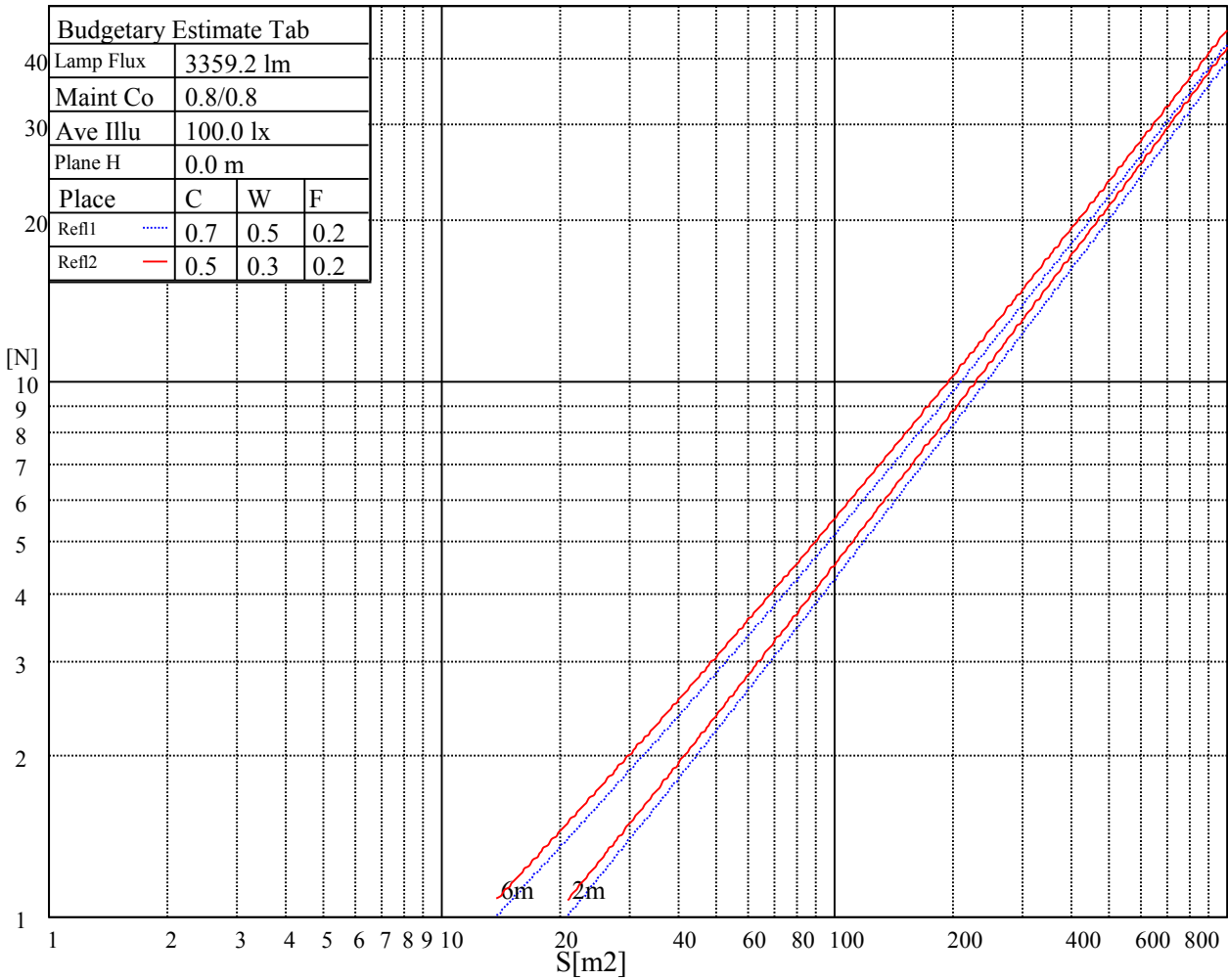
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5365	5365	5365	9270	9270	9270	24902	24902	24902

Glare Table

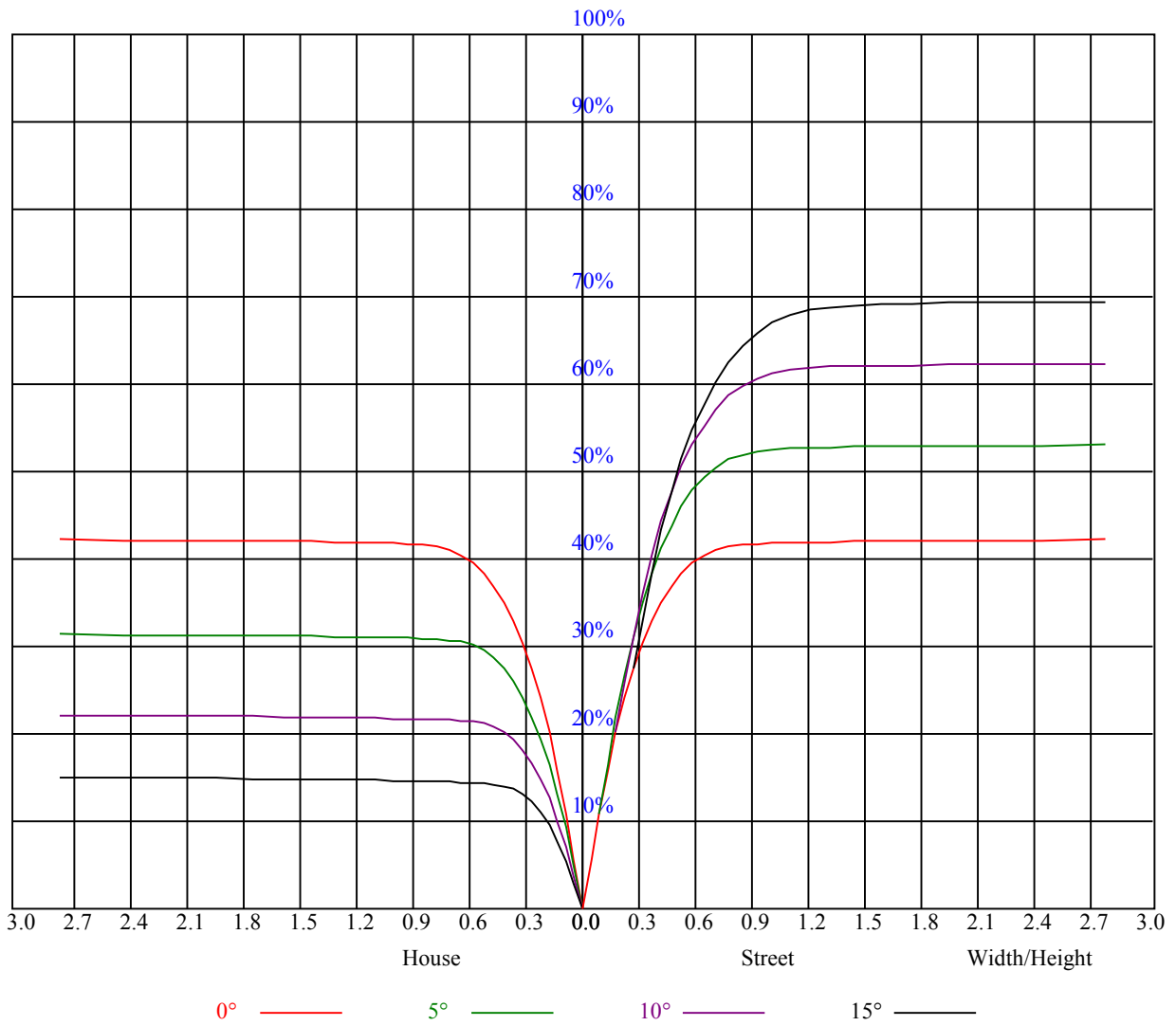
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.02	1.02	1.02	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.88	0.88	0.88	0.86
1	0.94	0.92	0.90	0.93	0.90	0.88	0.89	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.79
2	0.89	0.86	0.83	0.88	0.85	0.82	0.85	0.82	0.80	0.82	0.80	0.79	0.80	0.78	0.77	0.76
3	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.72
4	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.69
5	0.77	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.72	0.69	0.67	0.66
6	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
8	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
9	0.66	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55



NATA 3-1938-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	7730.44	7462.69	5693.63	3430.13	2543.06	1964.25	1405.13	729.00	286.31
45.0	7764.75	7131.38	4696.88	3036.38	2309.63	1747.13	1146.94	471.94	78.64
90.0	7736.63	6887.25	4266.00	2915.44	2243.25	1668.94	1004.46	396.23	56.08
135.0	7753.50	7225.31	4833.00	3138.19	2373.19	1774.13	1209.38	525.94	95.46
180.0	7730.44	6861.38	4456.13	2937.94	2234.81	1658.81	1098.28	431.78	59.06
225.0	7764.75	7457.63	5372.44	3353.63	2521.13	1905.19	1118.14	668.93	156.71
270.0	7736.63	7537.50	5848.88	3582.56	2696.06	2029.50	1467.00	795.94	308.81
315.0	7753.50	7317.56	5232.38	3280.50	2424.38	1864.69	1108.24	610.20	146.59
360.0	7730.44	7462.69	5693.63	3430.13	2543.06	1964.25	1405.13	729.00	286.31

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	39.32	21.66	16.93	14.85	13.56	13.05	12.77	12.71	12.83
45.0	30.38	19.97	16.71	14.85	13.89	13.44	16.48	19.18	12.83
90.0	27.68	19.24	15.98	14.34	13.50	13.22	13.73	12.83	13.05
135.0	31.11	20.08	16.59	14.57	13.61	13.22	13.05	13.28	13.56
180.0	29.98	19.80	16.54	14.79	13.89	13.61	13.73	13.33	13.16
225.0	38.53	21.43	17.49	15.41	14.63	14.40	20.19	23.01	13.73
270.0	40.28	22.28	17.33	15.19	14.01	13.67	14.01	14.46	13.16
315.0	34.31	20.08	16.54	14.34	13.28	12.88	12.83	13.11	13.33
360.0	39.32	21.66	16.93	14.85	13.56	13.05	12.77	12.71	12.83

C/γ(°)	90.0
0.0	11.93
45.0	11.93
90.0	11.93
135.0	11.87
180.0	11.87
225.0	11.93
270.0	11.93
315.0	11.93
360.0	11.93