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## NATA

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LumCAT: 3-1945-M  
Luminaire: BJB 47.319.2011  
Report No: NATA0100  
Test No: GC2018102613  
LampCAT: LUMILEDS LUXEON 1205  
Lamp flux(lm): 3003.0  
Number of Lamps: 1  
Length(mm): 86  
Phm Type: C

Voltage(V): 35.8000  
Current(A): 0.6000  
Power (W): 21.4800  
PF: 0.0000  
Ballast type: DC  
Width(mm): 86  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 2676.26  
Efficiency(%): 89.12%  
Lumens(lm)/Power(W): 125.38  
Central intensity(cd): 3268.266  
Maximum intensity(cd): 3298.148  
Angle of maximum intensity: C=0.0  $\gamma$ =5.0  
Beam Angle(50%Imax): [C0/180]Total=57.5  
                                  [C90/270]Total=57.5  
Field angle(10%Imax): [C0/180]Total=75.7  
                                  [C90/270]Total=75.7  
Maximum s/h(1/2): C0\_180=0.95 C90\_270=0.95  
Maximum s/h(1/4): C0\_180=0.85 C90\_270=0.85  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 89.69%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.029%

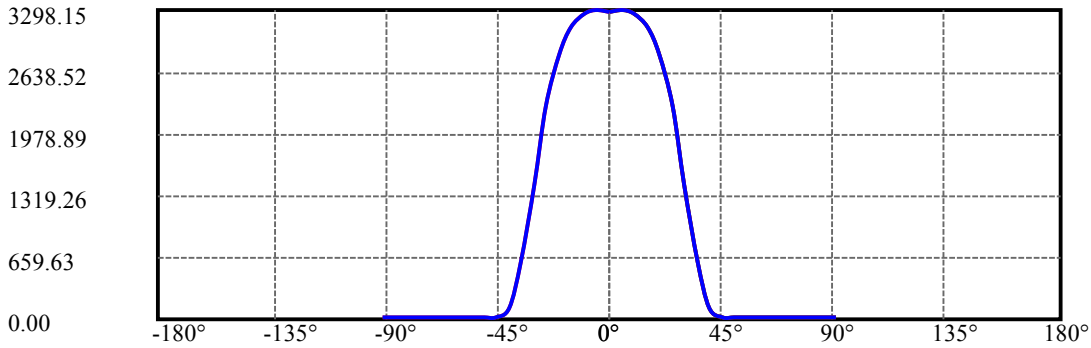
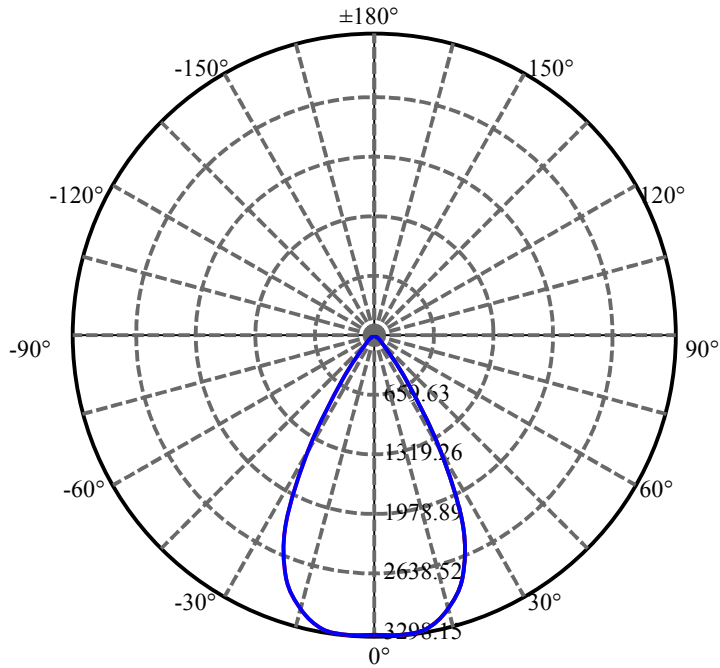
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3268.266	19.545	19.545	.651%	.730%
5.0	3298.148	157.564	177.108	5.247%	6.618%
10.0	3254.414	309.765	486.873	10.315%	18.192%
15.0	3113.367	441.688	928.562	14.708%	34.696%
20.0	2820.305	528.734	1457.296	17.607%	54.453%
25.0	2273.555	526.675	1983.971	17.538%	74.132%
30.0	1440.063	394.676	2378.647	13.143%	88.880%
35.0	612.773	192.655	2571.303	6.415%	96.078%
40.0	118.181	41.639	2612.942	1.387%	97.634%
45.0	21.698	8.410	2621.352	.280%	97.948%
50.0	15.420	6.475	2627.827	.216%	98.190%
55.0	13.795	6.194	2634.021	.206%	98.422%
60.0	12.980	6.161	2640.183	.205%	98.652%
65.0	12.382	6.151	2646.334	.205%	98.882%
70.0	12.178	6.273	2652.606	.209%	99.116%
75.0	14.541	7.699	2660.305	.256%	99.404%
80.0	11.820	6.380	2666.685	.212%	99.642%
85.0	11.749	6.416	2673.101	.214%	99.882%
90.0	11.510	3.155	2676.256	.105%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2378.65	79.21%	88.88%
0-40	2612.94	87.01%	97.63%
0-60	2640.18	87.92%	98.65%
0-90	2673.10	89.01%	99.88%
0-120	2673.10	89.01%	99.88%
0-180	2676.26	89.12%	100.00%
60-90	39.08	1.30%	1.46%
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%
0-26.99	2141.01	71.30%	80.00%

ZONAL LUMEN SUMMARY

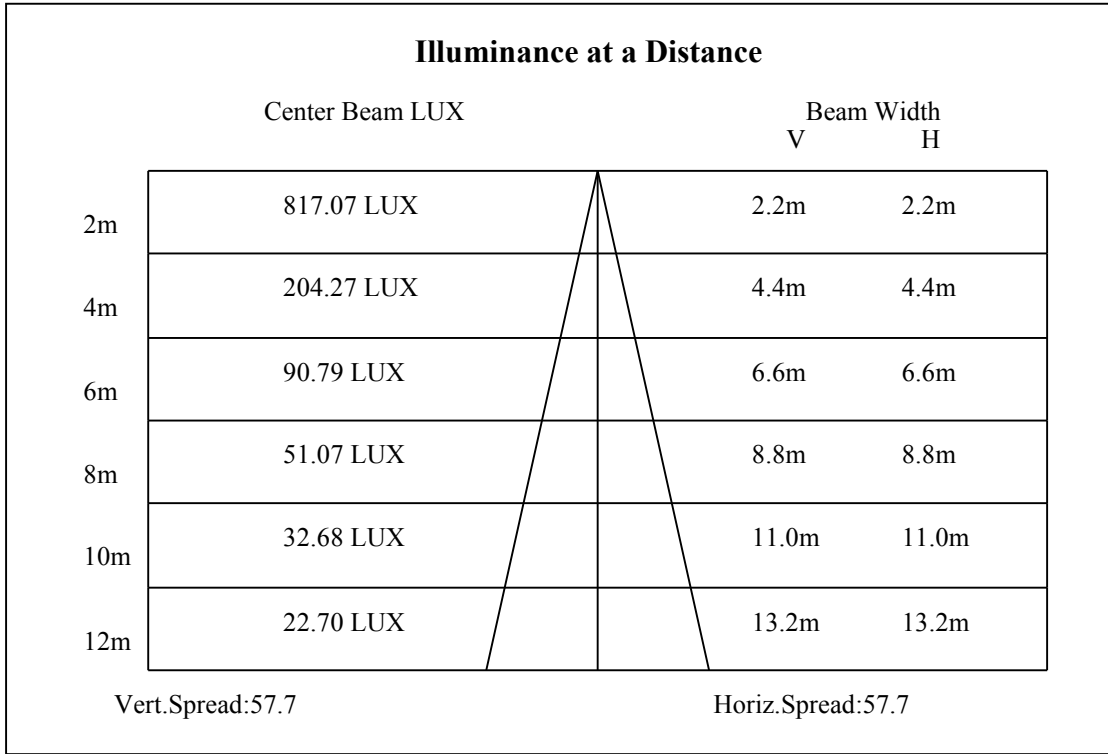
0-10	486.87
10-20	970.42
20-30	921.35
30-40	234.29
40-50	14.88
50-60	12.36
60-70	12.42
70-80	14.08
80-90	6.42
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

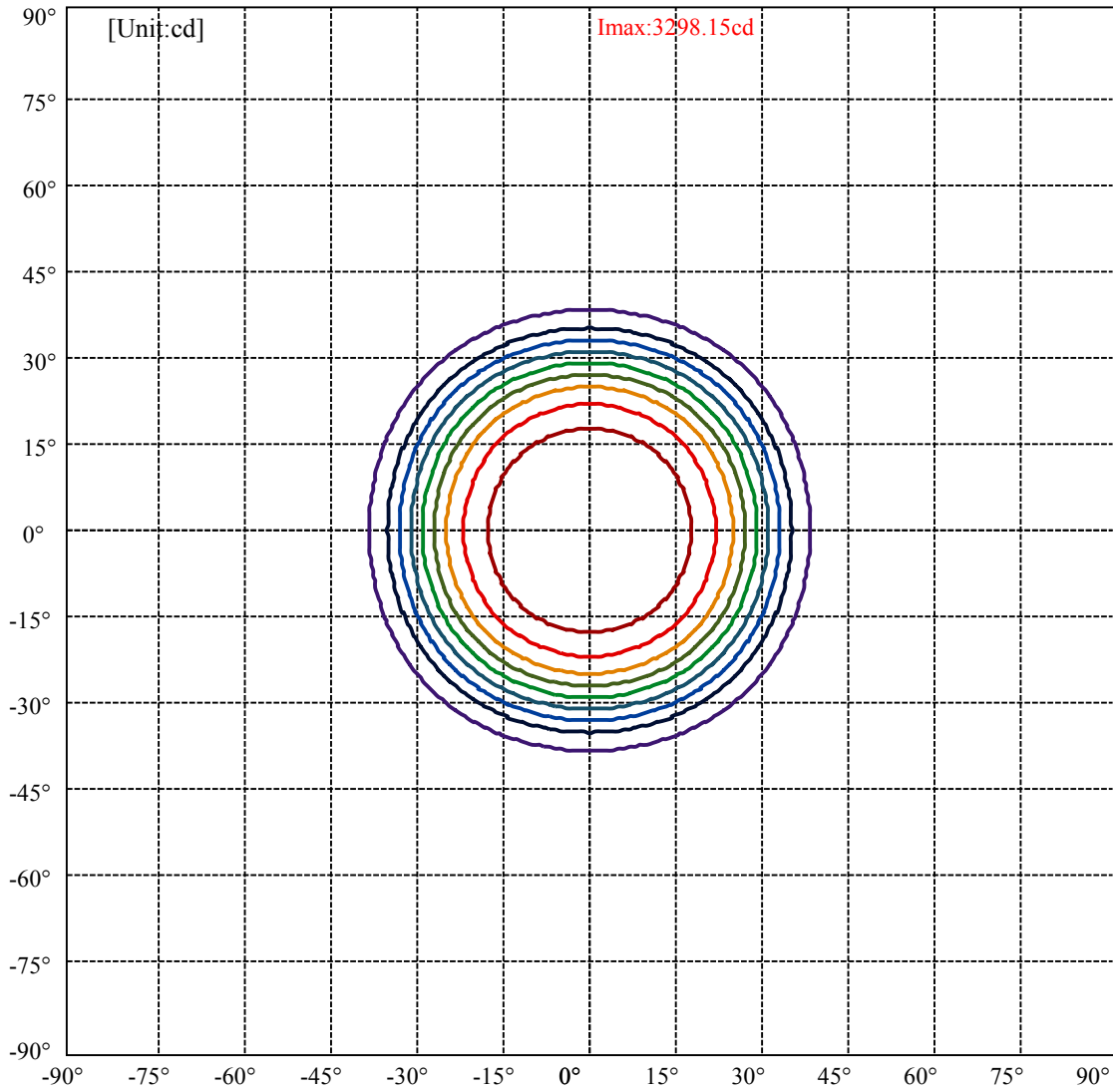


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

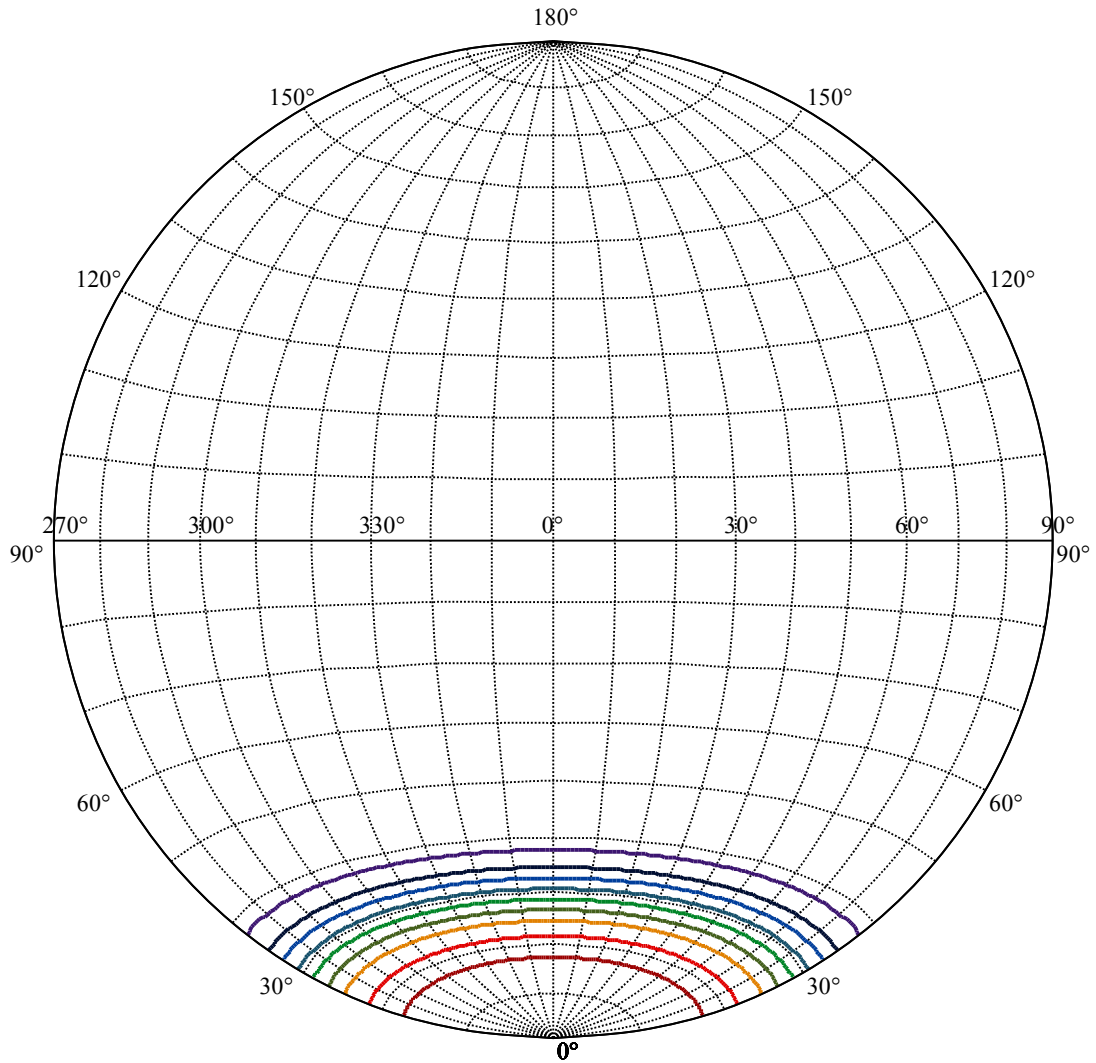
Field angle(10%Imax):C0/180Left:42.9 Right:32.9  
:C90/270Left:42.9 Right:32.9

Beam Angle(50%Imax):C0/180Left:33.7 Right:23.7  
:C90/270Left:33.7 Right:23.7





(10%Imax) 329.815	—
(20%Imax) 659.63	—
(30%Imax) 989.445	—
(40%Imax) 1319.26	—
(50%Imax) 1649.07	—
(60%Imax) 1978.89	—
(70%Imax) 2308.7	—
(80%Imax) 2638.52	—
(90%Imax) 2968.33	—



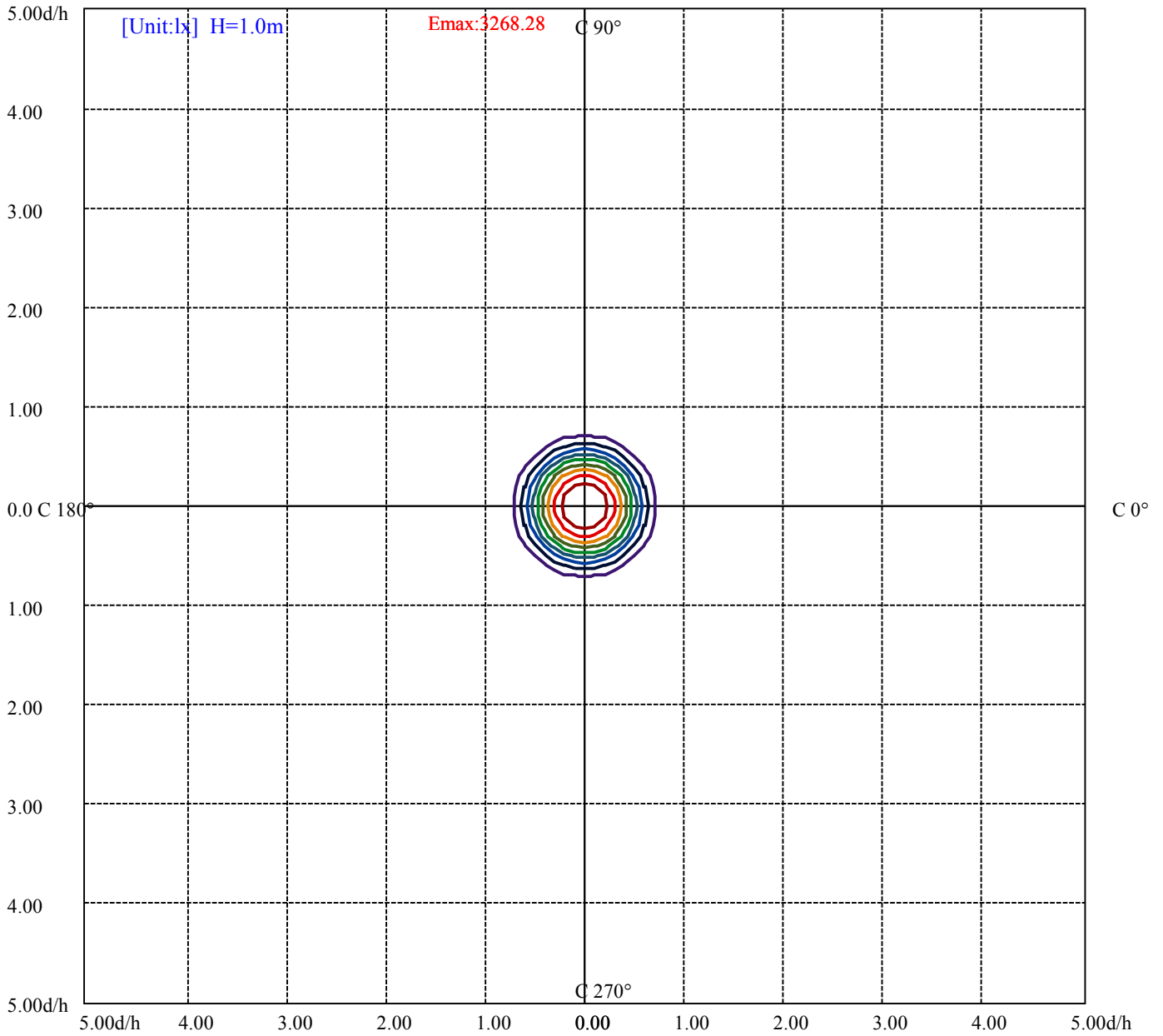
House

[Unit:cd]

Road

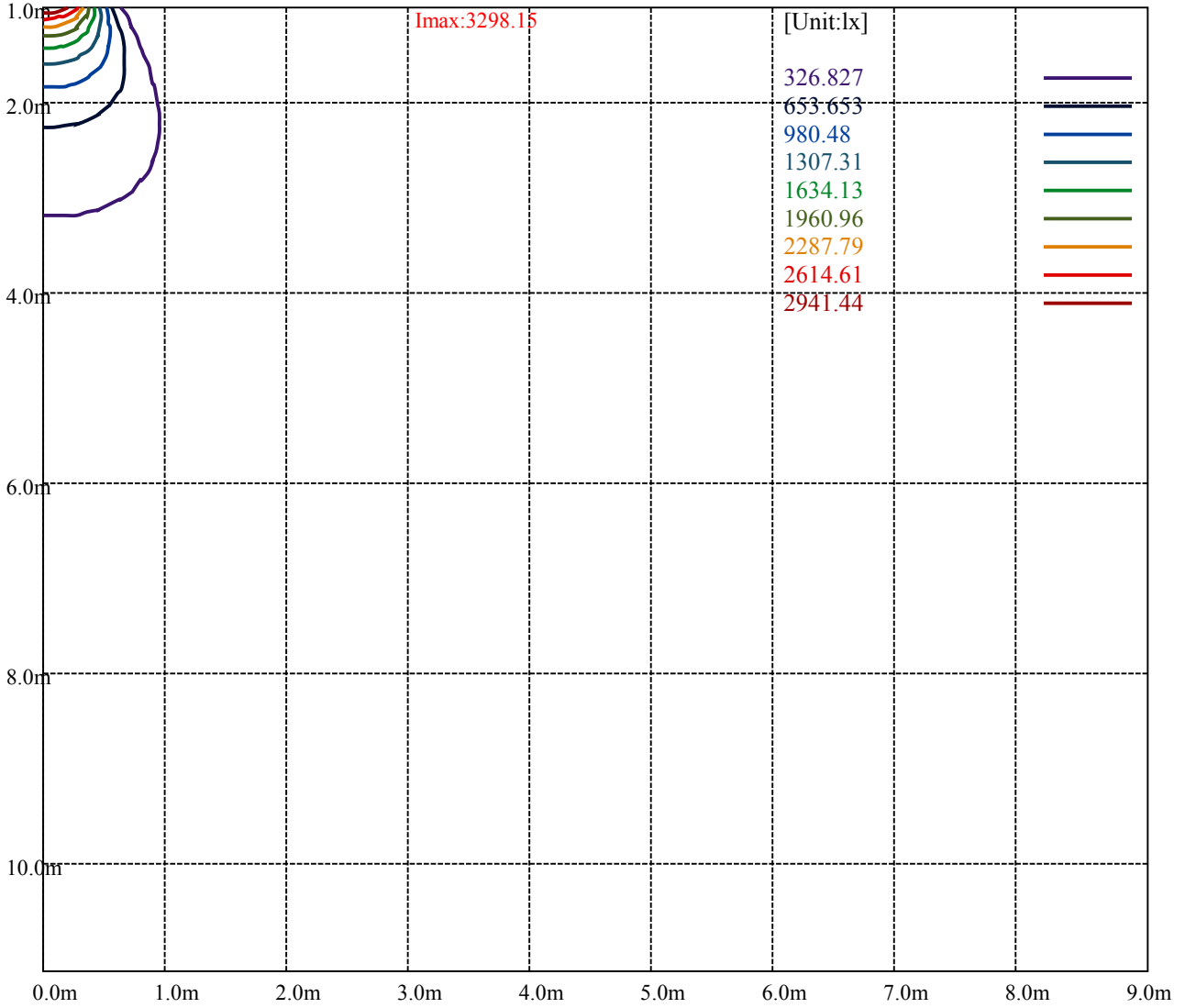
**Imax:3298.15**

(10%Imax) 329.815	—
(20%Imax) 659.63	—
(30%Imax) 989.445	—
(40%Imax) 1319.26	—
(50%Imax) 1649.07	—
(60%Imax) 1978.89	—
(70%Imax) 2308.7	—
(80%Imax) 2638.52	—
(90%Imax) 2968.33	—



- (10%Emax) 326.827
- (20%Emax) 653.653
- (30%Emax) 980.48
- (40%Emax) 1307.31
- (50%Emax) 1634.13
- (60%Emax) 1960.96
- (70%Emax) 2287.79
- (80%Emax) 2614.61
- (90%Emax) 2941.44





Luminance Table

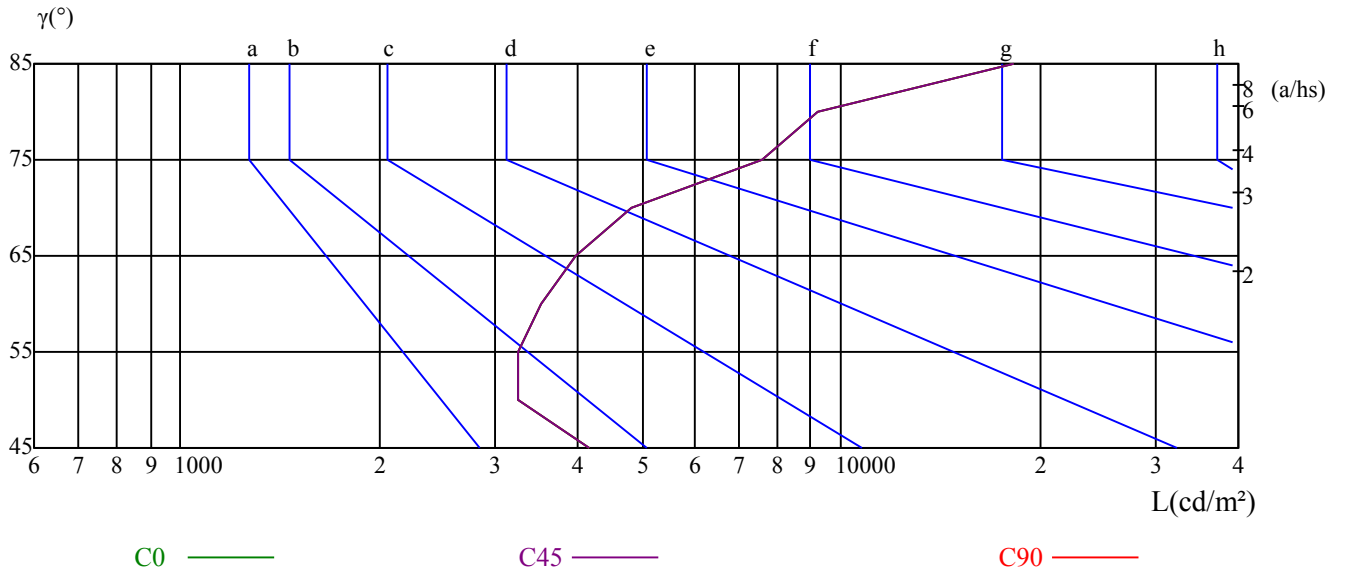
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4149	3243	3252	3510	3961	4814	7596	9203	18227
C45	4149	3243	3252	3510	3961	4814	7596	9203	18227
C90	4149	3243	3252	3510	3961	4814	7596	9203	18227

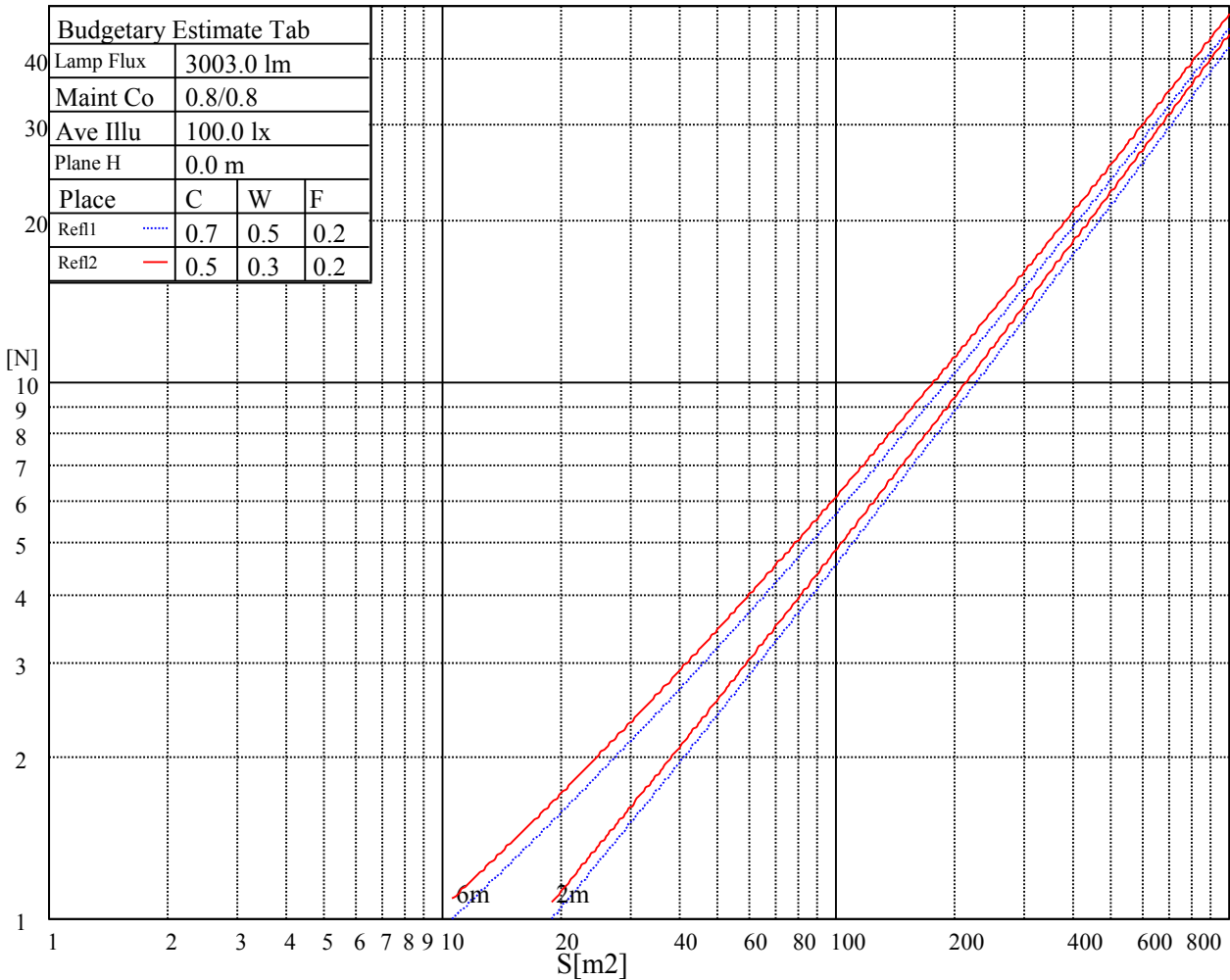
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3961	3961	3961	7596	7596	7596	18227	18227	18227

Glare Table

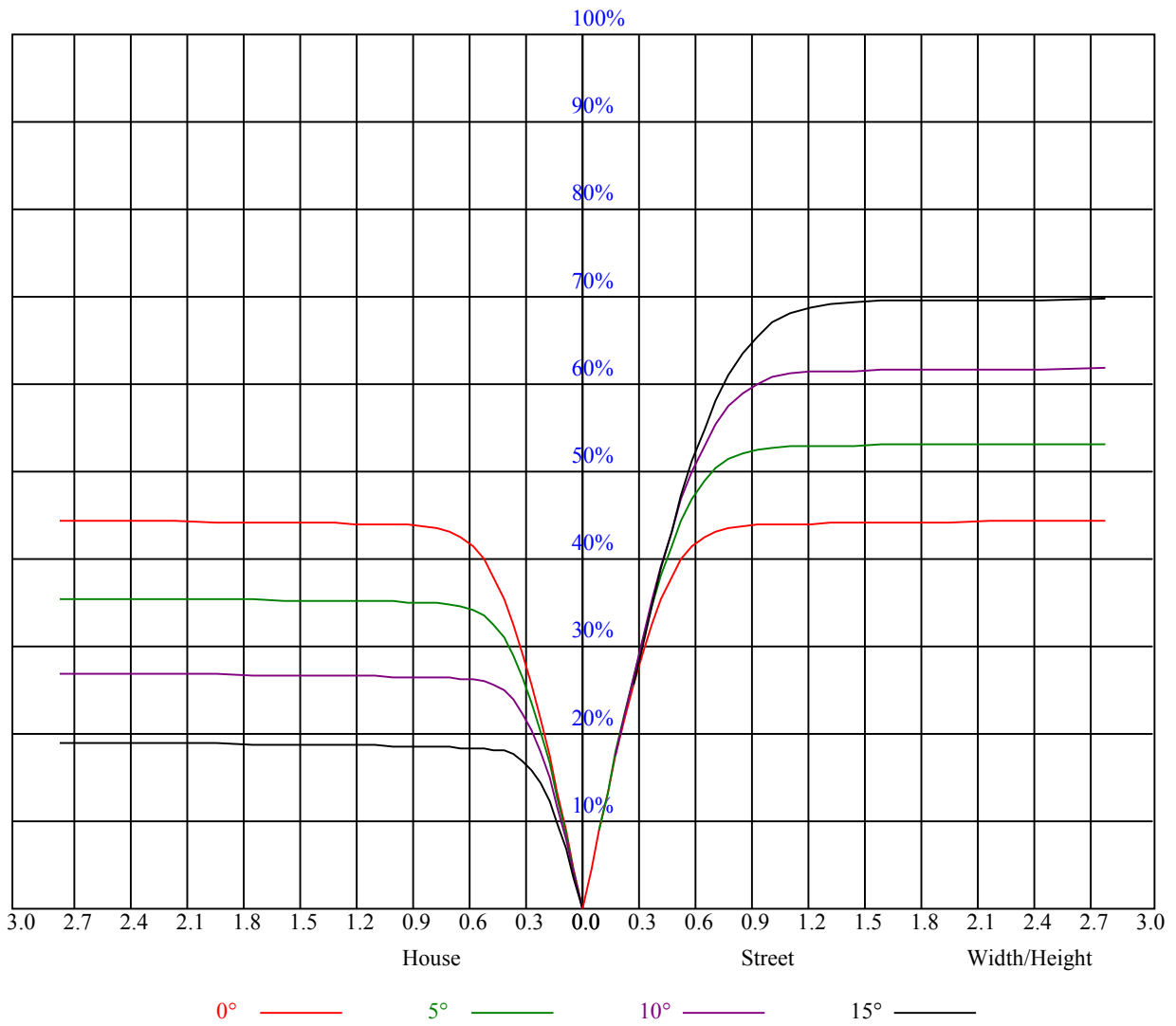
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.95	0.95	0.95	0.92	0.92	0.92	0.90
1	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.77	0.80	0.78	0.76	0.75
4	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.72	0.71
5	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
6	0.75	0.70	0.67	0.75	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.64
7	0.72	0.67	0.64	0.71	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.61
8	0.68	0.64	0.61	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
9	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.56
10	0.63	0.58	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.54



NATA 3-1945-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	3263.63	3325.50	3341.25	3245.63	3021.19	2565.00	1856.25	966.38	291.94
45.0	3260.81	3336.75	3308.06	3188.25	2905.31	2370.94	1594.69	676.13	63.96
90.0	3280.50	3302.44	3222.00	3038.63	2680.88	2075.06	1100.70	333.56	40.84
135.0	3268.13	3285.56	3219.75	3033.56	2727.00	2139.75	1333.69	391.50	44.44
180.0	3263.63	3263.63	3173.63	2961.00	2647.13	1985.63	1031.85	289.63	36.06
225.0	3260.81	3263.06	3191.06	3049.88	2743.31	2223.56	1106.83	533.48	54.96
270.0	3280.50	3291.19	3278.25	3188.81	2927.81	2449.69	1779.75	892.69	317.25
315.0	3268.13	3317.06	3301.31	3201.19	2909.81	2378.81	1716.75	818.83	96.02
360.0	3263.63	3325.50	3341.25	3245.63	3021.19	2565.00	1856.25	966.38	291.94
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	28.46	16.54	14.23	13.16	12.43	11.93	11.64	11.59	11.59
45.0	21.26	15.64	13.89	12.99	12.26	11.81	11.53	11.53	11.53
90.0	17.27	14.51	13.33	12.60	12.04	11.70	11.59	11.59	11.64
135.0	17.55	14.57	13.44	12.83	12.38	12.38	18.00	12.09	12.04
180.0	17.16	14.79	13.73	13.16	12.88	13.95	28.63	12.83	12.26
225.0	19.52	15.13	13.89	13.05	12.43	12.04	11.81	11.87	11.81
270.0	26.94	16.26	14.01	13.11	12.38	11.87	11.59	11.53	11.59
315.0	25.43	15.92	13.84	12.94	12.26	11.76	11.53	11.53	11.53
360.0	28.46	16.54	14.23	13.16	12.43	11.93	11.64	11.59	11.59
C/γ(°)	90.0								
0.0	11.53								
45.0	11.48								
90.0	11.48								
135.0	11.53								
180.0	11.53								
225.0	11.53								
270.0	11.48								
315.0	11.53								
360.0	11.53								