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## NATA

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LumCAT: 2-1568-M	
Luminaire:BJB47.319.2011	
Report No: 2017060608-1	Voltage(V): 219.4000
Test No: 2017060608	Current(A): 0.1350
LampCAT: luxeon 1208	Power (W): 28.0000
Lamp flux(lm): 3235.0	PF: 0.9430
Number of Lamps: 1	Ballast type:
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 2958.29  
Efficiency(%): 91.45%  
Lumens(lm)/Power(W): 105.65  
Central intensity(cd): 5943.339  
Maximum intensity(cd): 5943.339  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=38.7  
                                  [C90/270]Total=38.7  
Field angle(10%Imax): [C0/180]Total=73.1  
                                  [C90/270]Total=73.1  
Maximum s/h(1/2): C0\_180=0.63 C90\_270=0.63  
Maximum s/h(1/4): C0\_180=0.62 C90\_270=0.62  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 92.46%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.756%

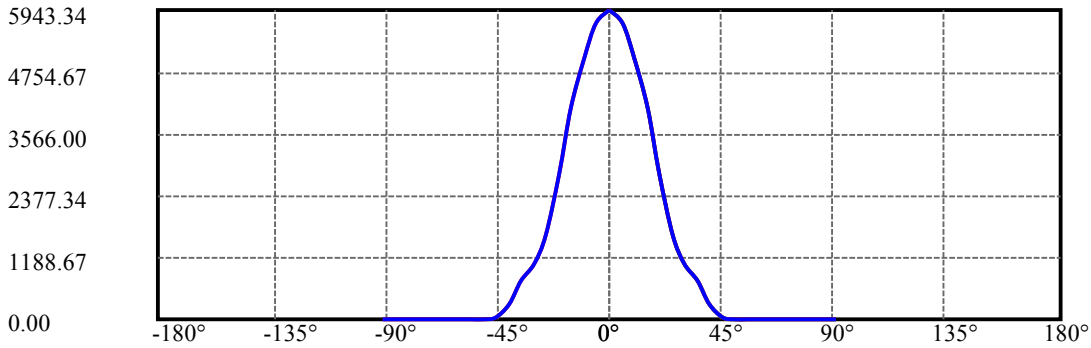
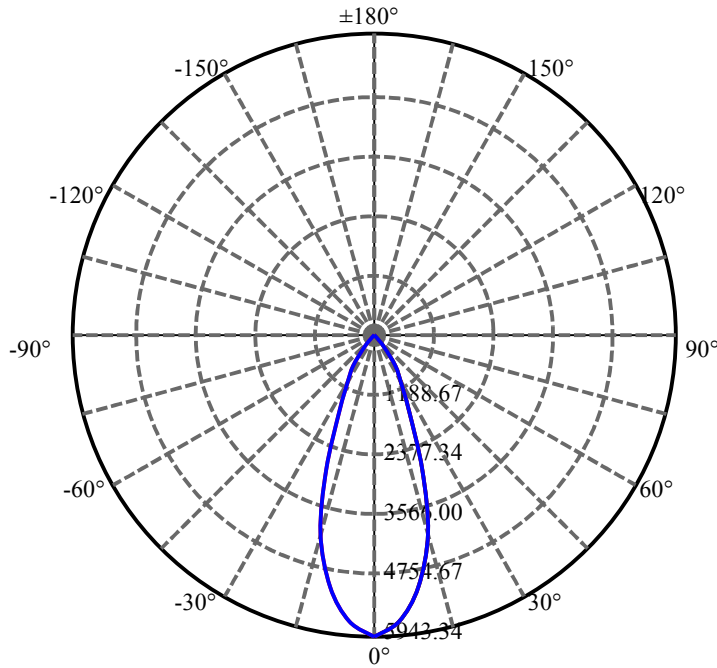
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5943.338	35.542	35.542	1.099%	1.201%
5.0	5679.274	271.318	306.86	8.387%	10.373%
10.0	5038.486	479.579	786.439	14.825%	26.584%
15.0	4047.402	574.198	1360.637	17.750%	45.994%
20.0	2810.216	526.843	1887.48	16.286%	63.803%
25.0	1618.335	374.892	2262.372	11.589%	76.476%
30.0	1088.733	298.388	2560.759	9.224%	86.562%
35.0	726.841	228.518	2789.277	7.064%	94.287%
40.0	293.168	103.294	2892.571	3.193%	97.778%
45.0	32.779	12.705	2905.276	.393%	98.208%
50.0	15.829	6.646	2911.922	.205%	98.433%
55.0	13.255	5.952	2917.874	.184%	98.634%
60.0	12.663	6.011	2923.885	.186%	98.837%
65.0	12.284	6.103	2929.988	.189%	99.043%
70.0	12.009	6.186	2936.173	.191%	99.252%
75.0	11.816	6.256	2942.43	.193%	99.464%
80.0	11.720	6.327	2948.756	.196%	99.678%
85.0	11.631	6.351	2955.107	.196%	99.892%
90.0	11.617	3.184	2958.291	.098%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2560.76	79.16%	86.56%
0-40	2892.57	89.41%	97.78%
0-60	2923.88	90.38%	98.84%
0-90	2955.11	91.35%	99.89%
0-120	2955.11	91.35%	99.89%
0-180	2958.29	91.45%	100.00%
60-90	37.23	1.15%	1.26%
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%
0-26.75	2366.63	73.16%	80.00%

ZONAL LUMEN SUMMARY

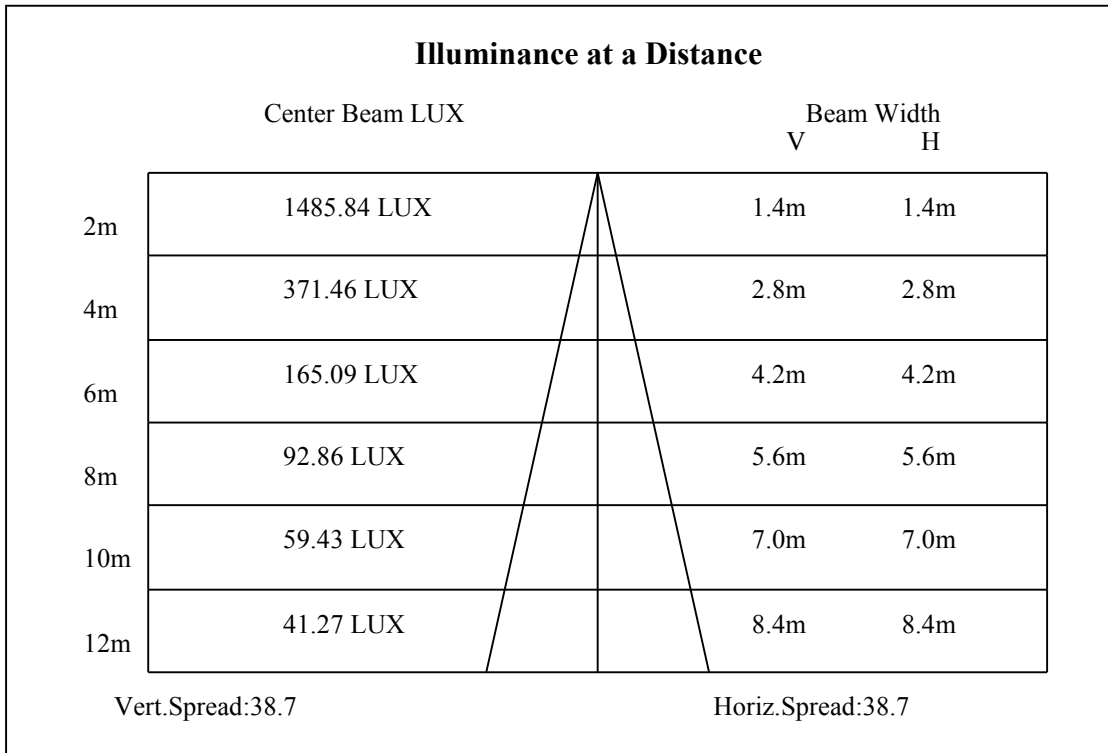
0-10	786.44
10-20	1101.04
20-30	673.28
30-40	331.81
40-50	19.35
50-60	11.96
60-70	12.29
70-80	12.58
80-90	6.35
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

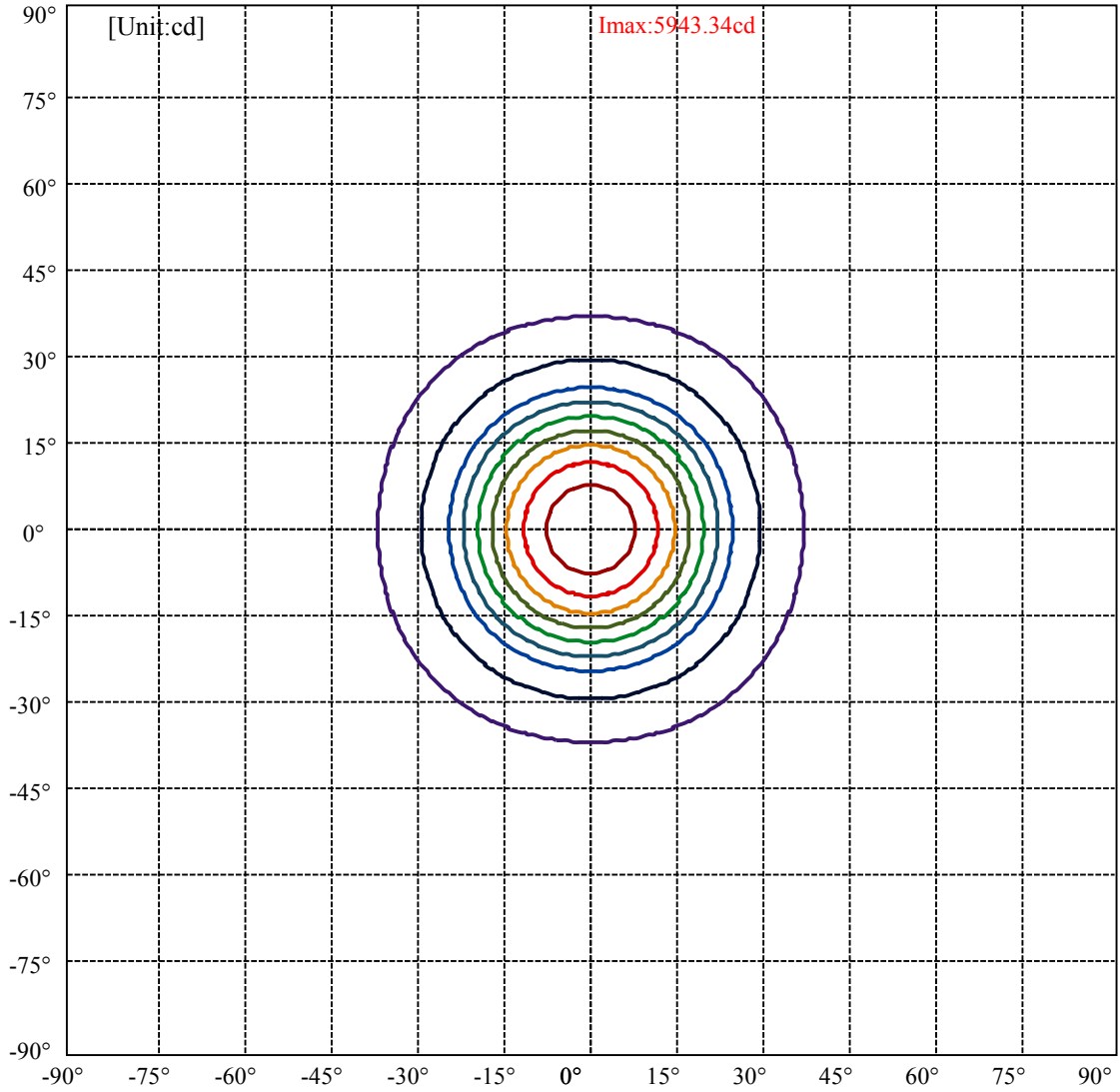


C0(Max): —————  
 C0/C180: —————  
 C90/C270: —————

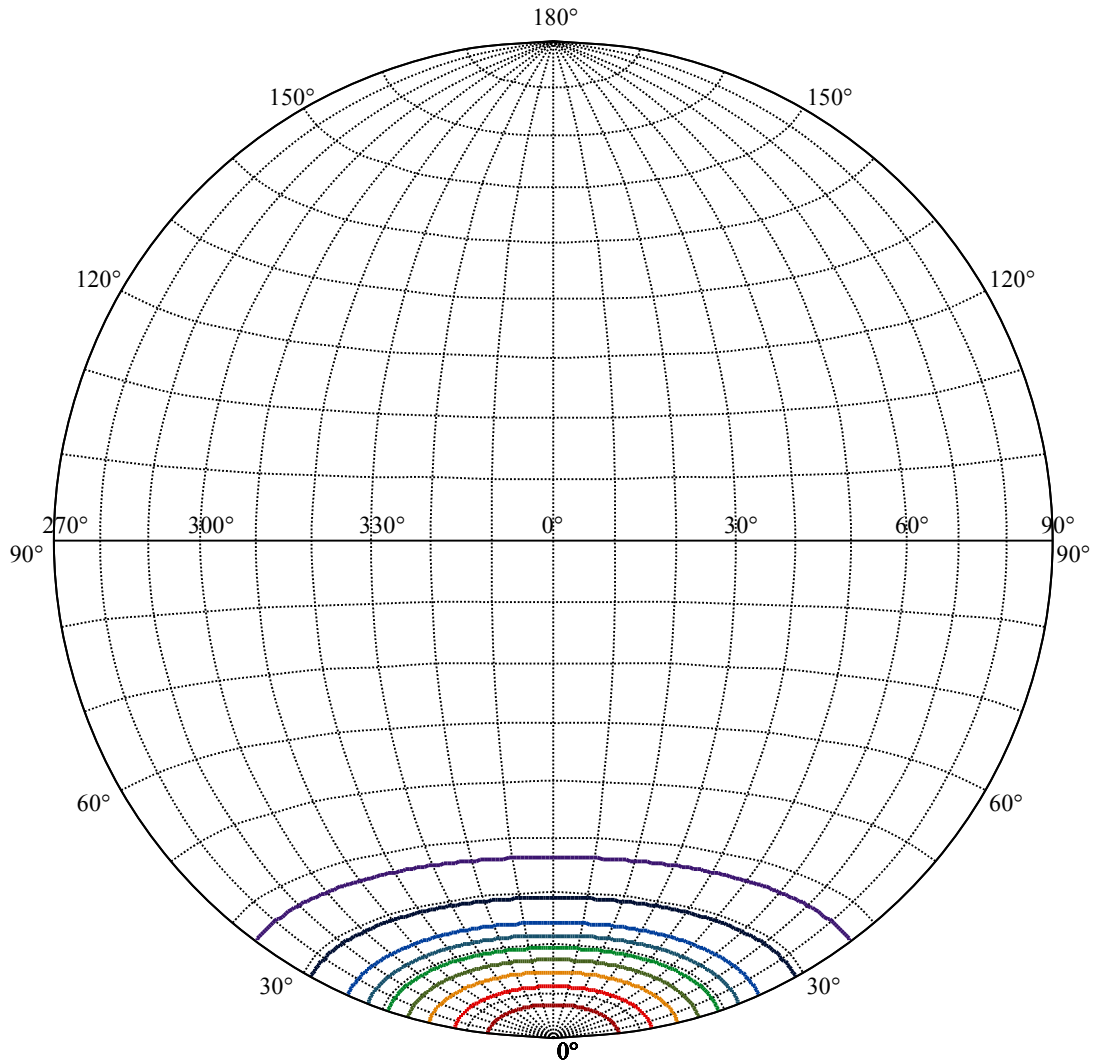
Field angle(10%Imax):C0/180Left:36.5 Right:36.5  
 :C90/270Left:36.5 Right:36.5

Beam Angle(50%Imax):C0/180Left:19.3 Right:19.3  
 :C90/270Left:19.3 Right:19.3





(10%Imax) 594.334	—
(20%Imax) 1188.67	—
(30%Imax) 1783	—
(40%Imax) 2377.34	—
(50%Imax) 2971.67	—
(60%Imax) 3566	—
(70%Imax) 4160.34	—
(80%Imax) 4754.67	—
(90%Imax) 5349	—



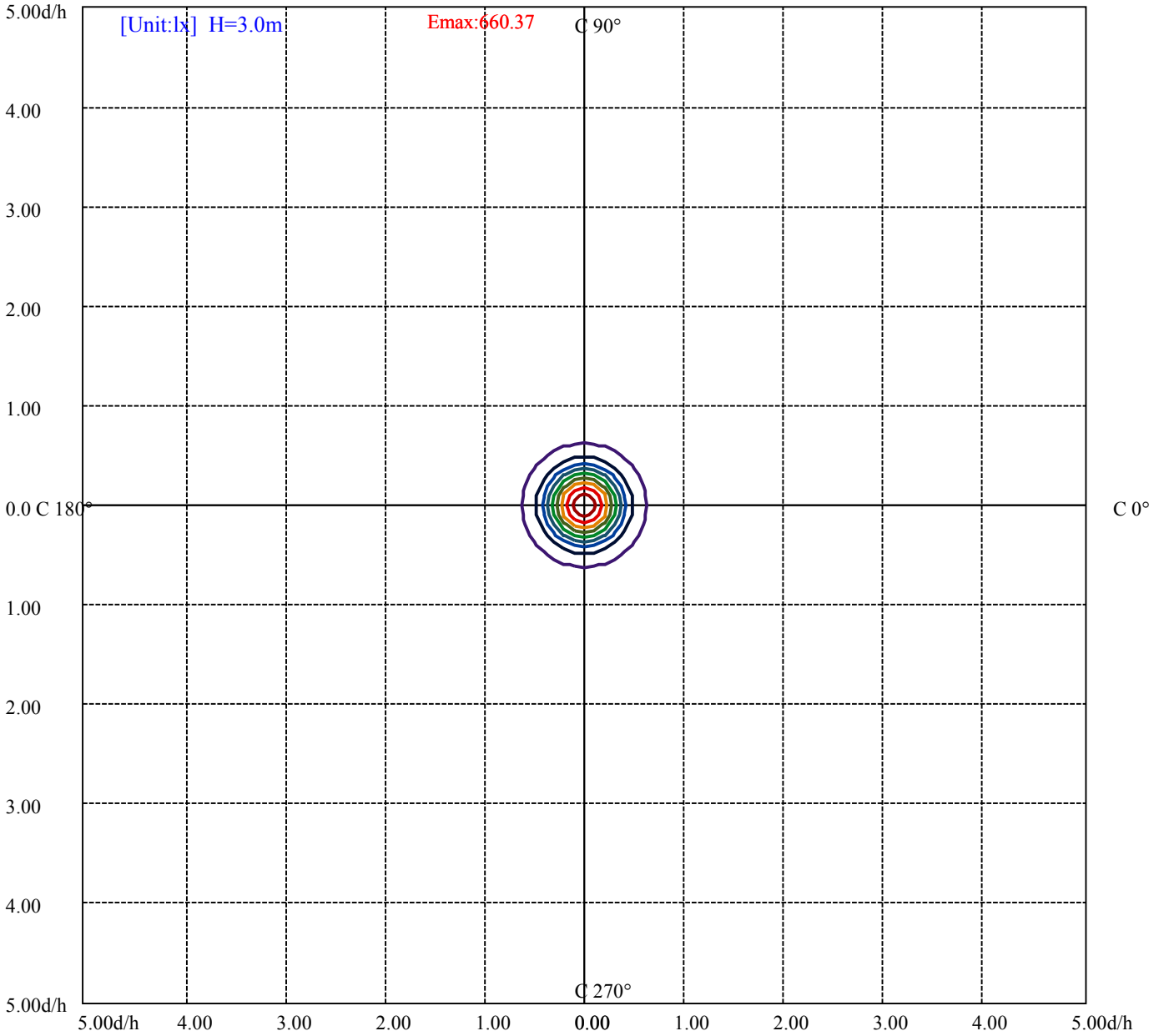
House

[Unit:cd]

Road

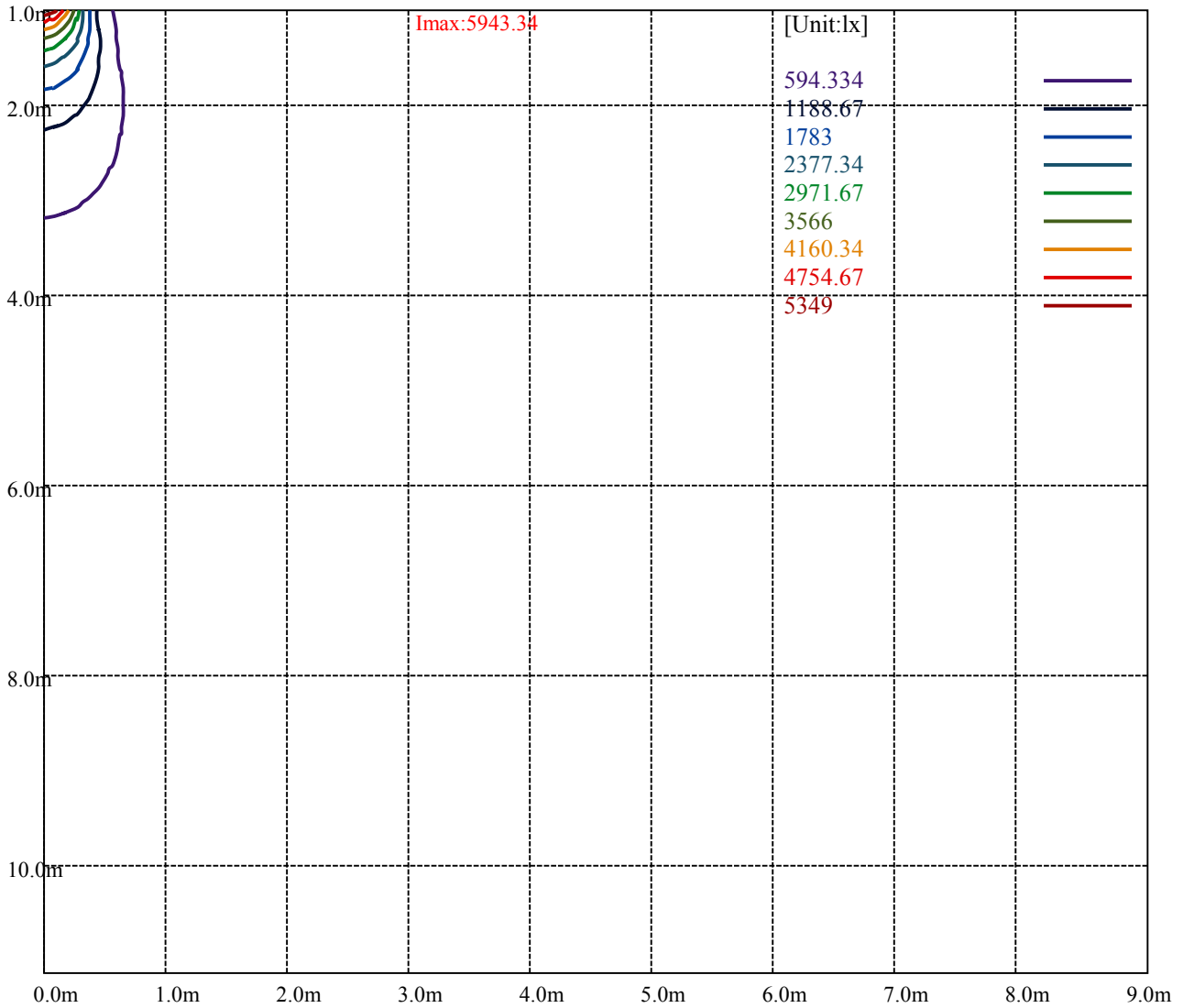
**Imax:5943.34**

(10%Imax) 594.334	—
(20%Imax) 1188.67	—
(30%Imax) 1783	—
(40%Imax) 2377.34	—
(50%Imax) 2971.67	—
(60%Imax) 3566	—
(70%Imax) 4160.34	—
(80%Imax) 4754.67	—
(90%Imax) 5349	—



- (10%Emax) 66.037
- (20%Emax) 132.0744
- (30%Emax) 198.1111
- (40%Emax) 264.1478
- (50%Emax) 330.1855
- (60%Emax) 396.2222
- (70%Emax) 462.2589
- (80%Emax) 528.2966
- (90%Emax) 594.3333





Luminance Table

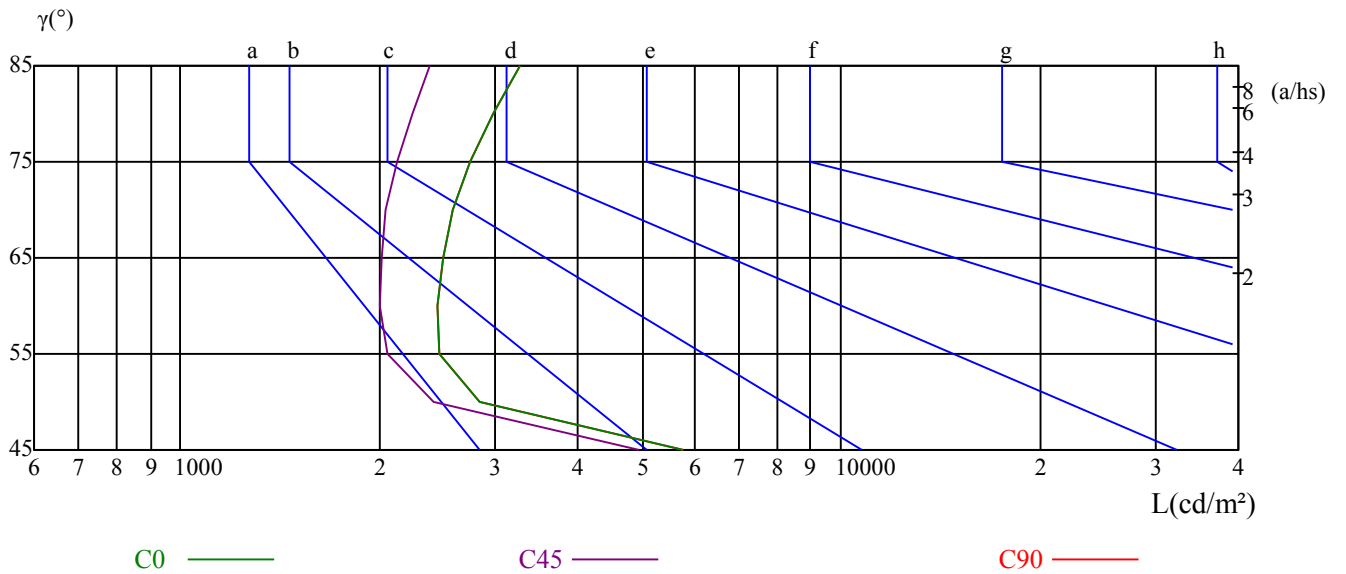
$\gamma$	45	50	55	60	65	70	75	80	85
C0	5759	2846	2459	2446	2494	2590	2741	2965	3262
C45	4955	2412	2052	2007	2011	2049	2121	2238	2391
C90	5759	2846	2459	2446	2494	2590	2741	2965	3262

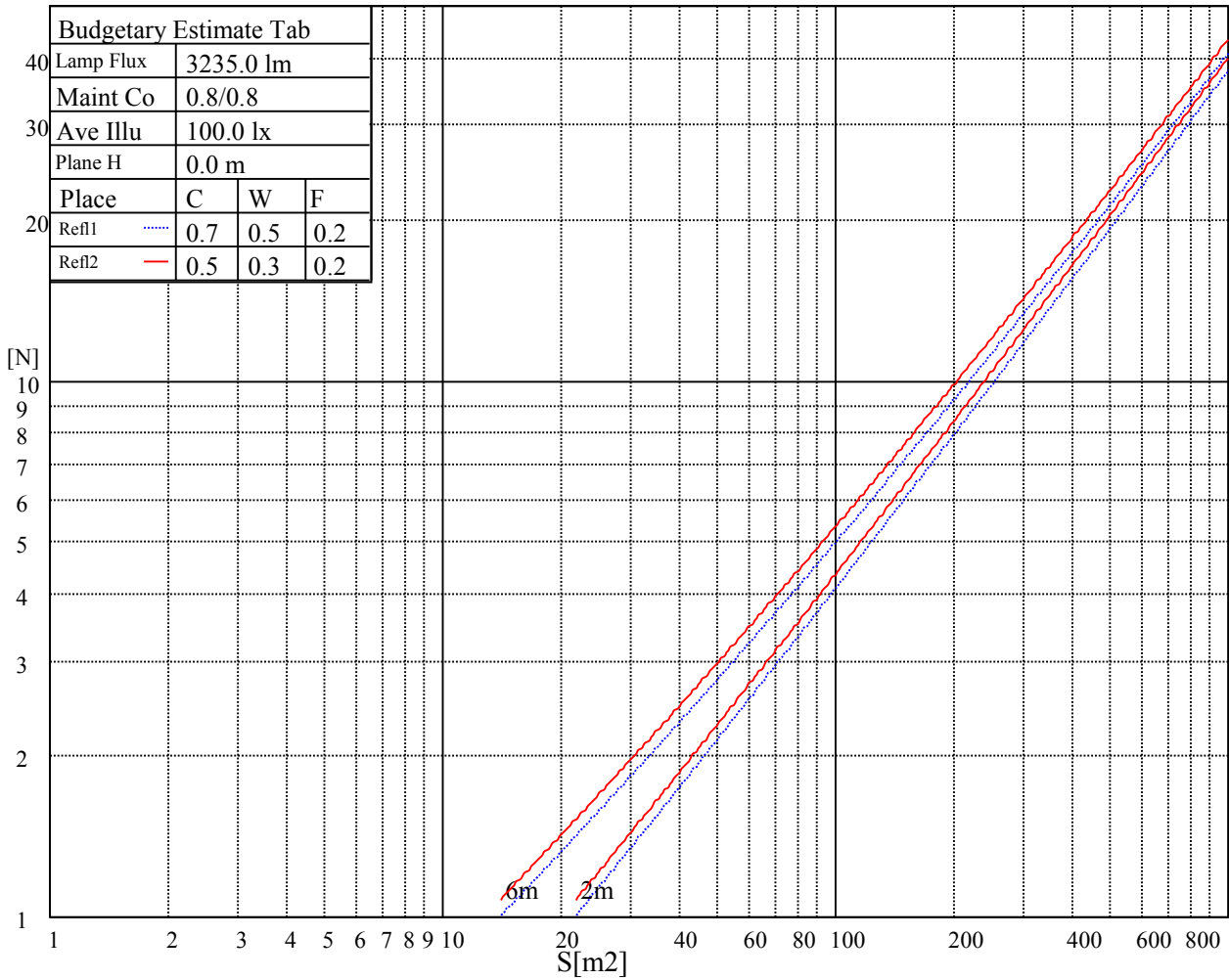
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5932	5932	5932	9317	9317	9317	27234	27234	27234

Glare Table

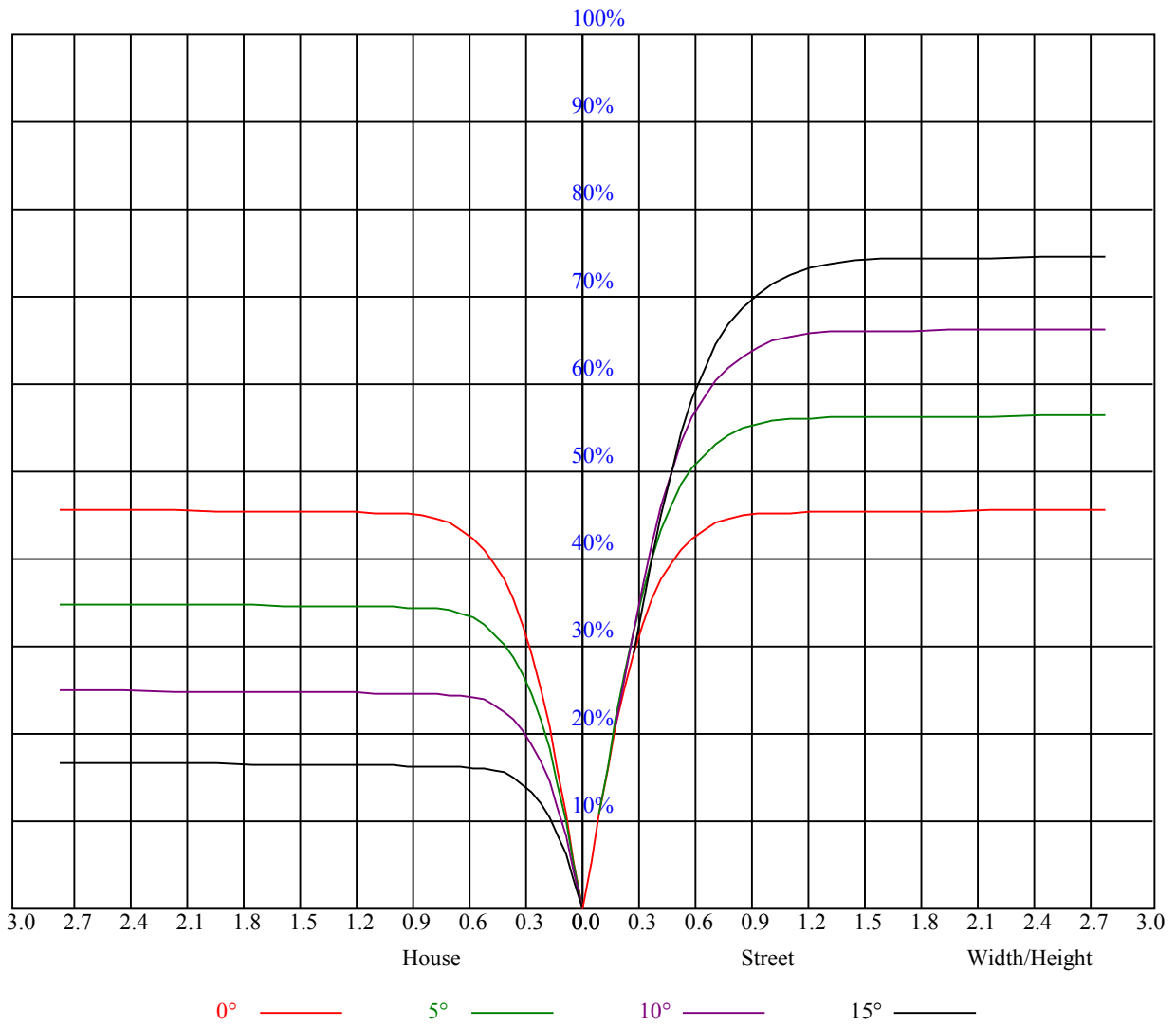
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.08	1.08	1.08	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.97	1.00	0.98	0.96	0.96	0.95	0.93	0.93	0.91	0.90	0.90	0.89	0.88	0.86
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.87	0.82	0.79	0.86	0.82	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
5	0.83	0.78	0.75	0.82	0.78	0.74	0.80	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.71
6	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.68
7	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.66
8	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.63
9	0.70	0.65	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
10	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59



NATA 2-1568-M

Intensity data(cd)

C/\u03b3(\u00b0)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	5911.41	5395.53	4651.72	3543.98	2204.46	1278.96	1018.54	531.29	76.91
45.0	5999.50	5823.87	5273.30	4429.84	3405.79	1920.92	1200.23	862.18	400.81
90.0	5981.88	5801.29	5215.49	4353.86	3198.23	1820.72	1091.99	856.84	378.13
135.0	5880.57	5910.86	5466.55	4689.15	3590.78	2138.94	1294.93	968.99	537.35
180.0	5911.41	5944.44	5425.81	4570.78	3300.08	2009.56	1095.73	913.55	474.97
225.0	5999.50	5629.52	4842.76	3747.69	2357.52	1326.31	1019.81	588.22	120.19
270.0	5981.88	5613.55	4885.15	3742.18	2449.46	1369.25	1033.41	635.90	296.75
315.0	5880.57	5315.14	4547.11	3301.73	1975.42	1082.02	955.23	457.74	60.23
360.0	5911.41	5395.53	4651.72	3543.98	2204.46	1278.96	1018.54	531.29	76.91

C/\u03b3(\u00b0)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	19.43	13.54	12.77	12.28	12.00	11.84	11.67	11.62	11.56
45.0	28.68	17.07	13.60	12.88	12.50	12.17	11.95	11.78	11.67
90.0	27.31	16.63	13.71	13.05	12.55	12.22	11.95	11.78	11.73
135.0	84.35	20.10	13.82	13.10	12.55	12.22	11.95	11.84	11.67
180.0	45.20	17.73	13.54	12.88	12.33	12.06	11.78	11.67	11.56
225.0	18.72	13.76	12.88	12.44	12.11	11.89	11.73	11.73	11.62
270.0	20.65	14.42	13.05	12.44	12.22	11.89	11.78	11.73	11.62
315.0	17.89	13.38	12.66	12.22	12.00	11.78	11.73	11.62	11.62
360.0	19.43	13.54	12.77	12.28	12.00	11.84	11.67	11.62	11.56

C/\u03b3(\u00b0)	90.0
0.0	11.56
45.0	11.67
90.0	11.67
135.0	11.62
180.0	11.56
225.0	11.67
270.0	11.62
315.0	11.56
360.0	11.56