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## Nata

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LumCAT: 3-1594-E	
Luminaire: 92.76.263.00	
Report No: NATA0100	Voltage(V): 30.0000
Test No: 2017011906	Current(A): 0.9500
LampCAT: brideglux VERO 18	Power (W): 28.5000
Lamp flux(lm): 3743.0	PF: 0.0000
Number of Lamps: 1	Ballast type:
Length(mm): 88	Width(mm): 88
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 3459.72  
Efficiency(%): 92.43%  
Lumens(lm)/Power(W): 125.03  
Central intensity(cd): 17880.940  
Maximum intensity(cd): 17880.940  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=17.4  
                                  [C90/270]Total=17.4  
Field angle(10%Imax): [C0/180]Total=38.0  
                                  [C90/270]Total=38.0  
Maximum s/h(1/2): C0\_180=0.30 C90\_270=0.30  
Maximum s/h(1/4): C0\_180=0.32 C90\_270=0.32  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 95.20%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 95.796%

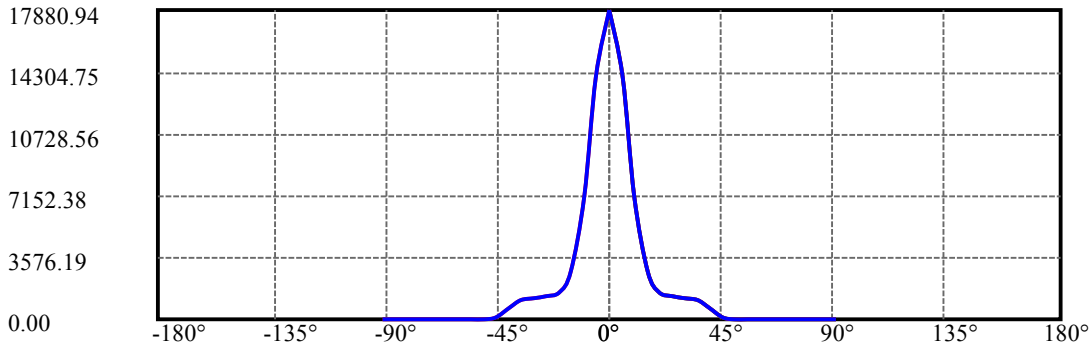
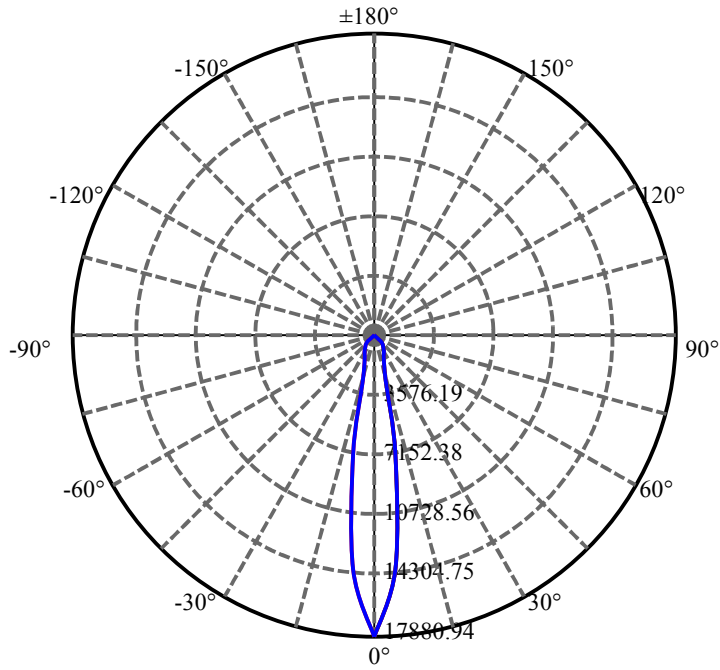
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	17880.941	106.932	106.932	2.857%	3.091%
5.0	14003.251	668.982	775.913	17.873%	22.427%
10.0	7131.662	678.813	1454.727	18.136%	42.048%
15.0	2817.993	399.784	1854.511	10.681%	53.603%
20.0	1533.390	287.471	2141.982	7.680%	61.912%
25.0	1295.339	300.069	2442.051	8.017%	70.585%
30.0	1208.075	331.096	2773.146	8.846%	80.155%
35.0	1080.269	339.635	3112.781	9.074%	89.972%
40.0	633.644	223.256	3336.037	5.965%	96.425%
45.0	144.668	56.072	3392.109	1.498%	98.046%
50.0	17.508	7.352	3399.46	.196%	98.258%
55.0	15.533	6.974	3406.435	.186%	98.460%
60.0	14.996	7.119	3413.553	.190%	98.666%
65.0	14.755	7.330	3420.883	.196%	98.878%
70.0	14.748	7.597	3428.48	.203%	99.097%
75.0	16.820	8.905	3437.385	.238%	99.354%
80.0	17.797	9.607	3446.992	.257%	99.632%
85.0	16.193	8.842	3455.835	.236%	99.888%
90.0	14.170	3.884	3459.718	.104%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2773.15	74.09%	80.16%
0-40	3336.04	89.13%	96.43%
0-60	3413.55	91.20%	98.67%
0-90	3455.83	92.33%	99.89%
0-120	3455.83	92.33%	99.89%
0-180	3459.72	92.43%	100.00%
60-90	49.40	1.32%	1.43%
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%
0-29.92	2767.78	73.95%	80.00%

ZONAL LUMEN SUMMARY

0-10	1454.73
10-20	687.25
20-30	631.16
30-40	562.89
40-50	63.42
50-60	14.09
60-70	14.93
70-80	18.51
80-90	8.84
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

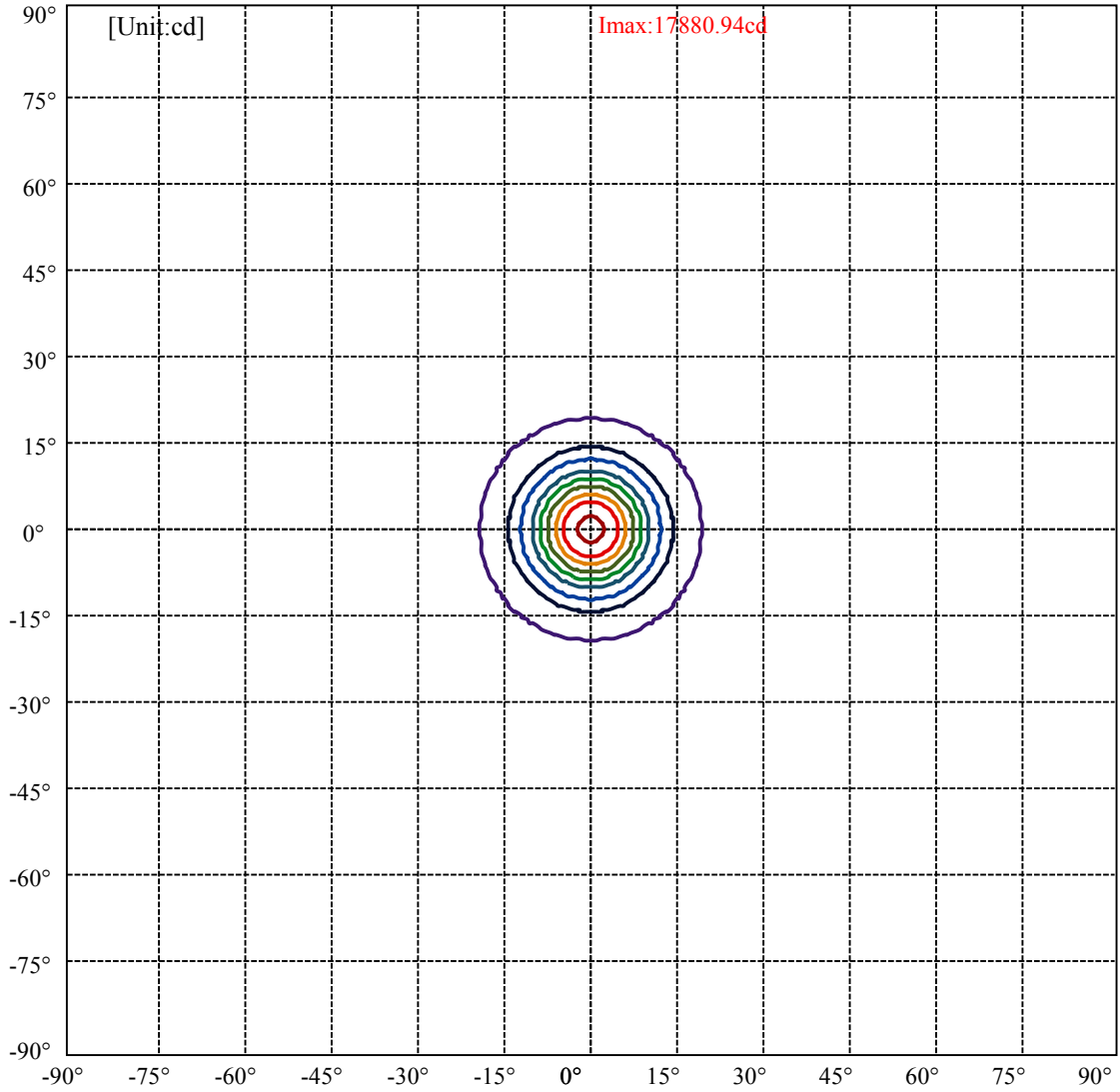


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

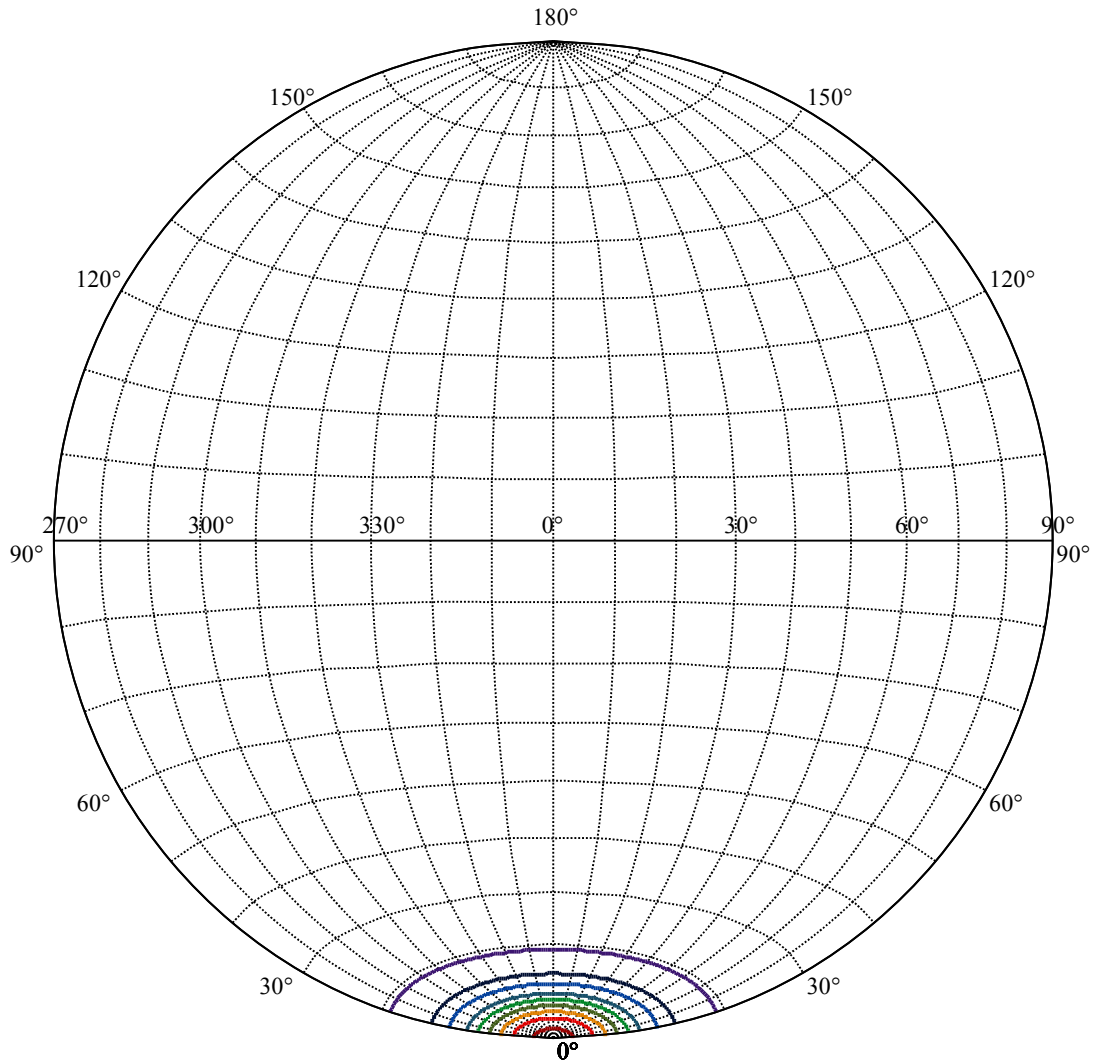
Field angle(10%Imax):C0/180Left:19.0 Right:19.0  
:C90/270Left:19.0 Right:19.0

Beam Angle(50%Imax):C0/180Left:8.7 Right:8.7  
:C90/270Left:8.7 Right:8.7





(10%I <sub>max</sub> ) 1788.09	—
(20%I <sub>max</sub> ) 3576.19	—
(30%I <sub>max</sub> ) 5364.28	—
(40%I <sub>max</sub> ) 7152.38	—
(50%I <sub>max</sub> ) 8940.47	—
(60%I <sub>max</sub> ) 10728.6	—
(70%I <sub>max</sub> ) 12516.7	—
(80%I <sub>max</sub> ) 14304.8	—
(90%I <sub>max</sub> ) 16092.8	—



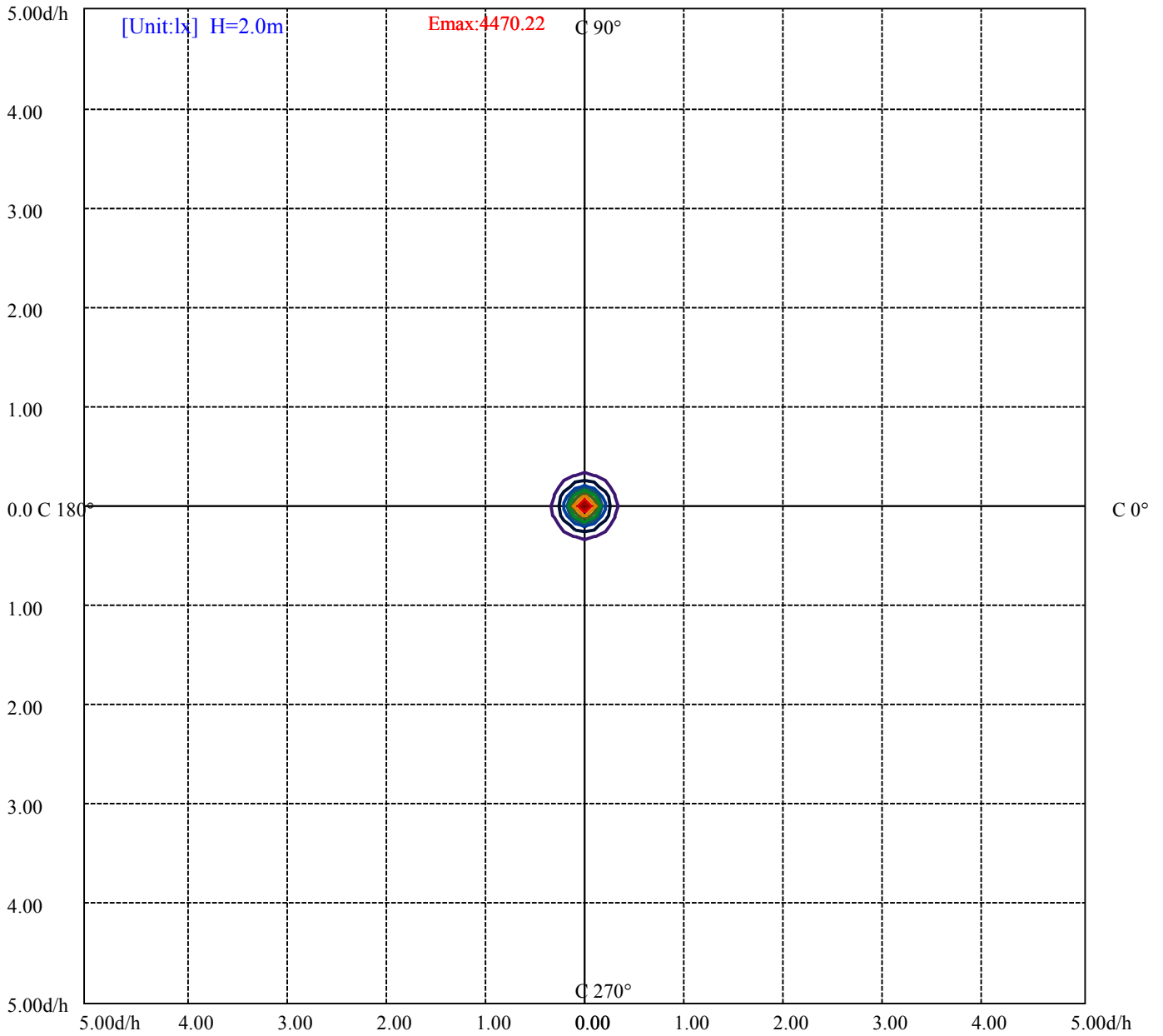
House

[Unit:cd]

Road

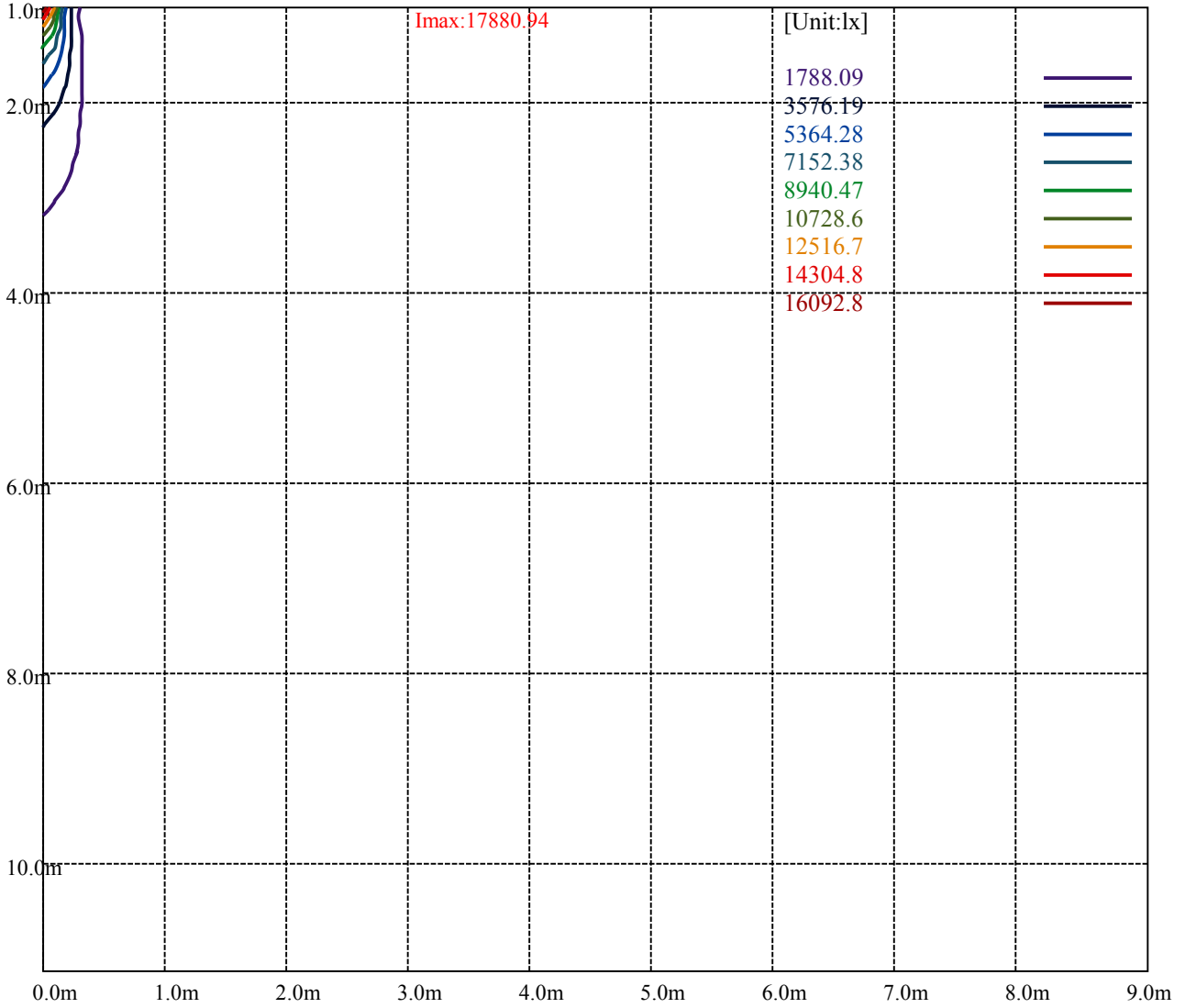
Imax:17880.94

(10%Imax)	1788.09	—
(20%Imax)	3576.19	—
(30%Imax)	5364.28	—
(40%Imax)	7152.38	—
(50%Imax)	8940.47	—
(60%Imax)	10728.6	—
(70%Imax)	12516.7	—
(80%Imax)	14304.8	—
(90%Imax)	16092.8	—



- (10%Emax) 447.02
- (20%Emax) 894.04
- (30%Emax) 1341.063
- (40%Emax) 1788.083
- (50%Emax) 2235.103
- (60%Emax) 2682.125
- (70%Emax) 3129.15
- (80%Emax) 3576.175
- (90%Emax) 4023.175





Luminance Table

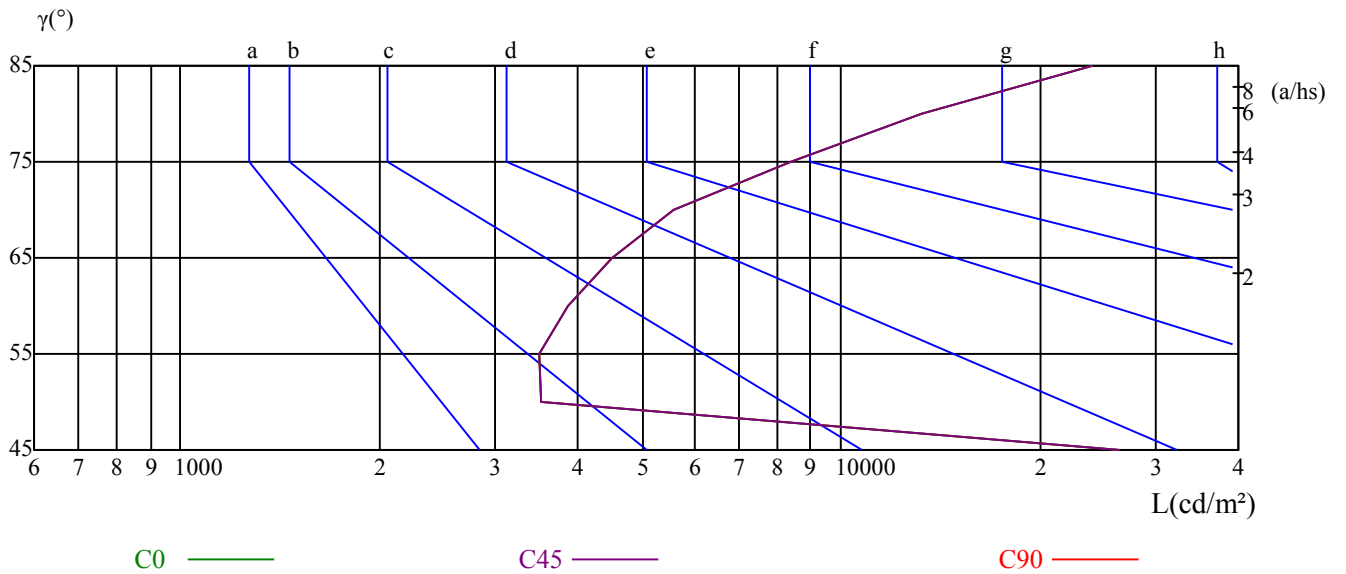
$\gamma$	45	50	55	60	65	70	75	80	85
C0	26419	3517	3497	3873	4508	5568	8392	13235	23993
C45	26419	3517	3497	3873	4508	5568	8392	13235	23993
C90	26419	3517	3497	3873	4508	5568	8392	13235	23993

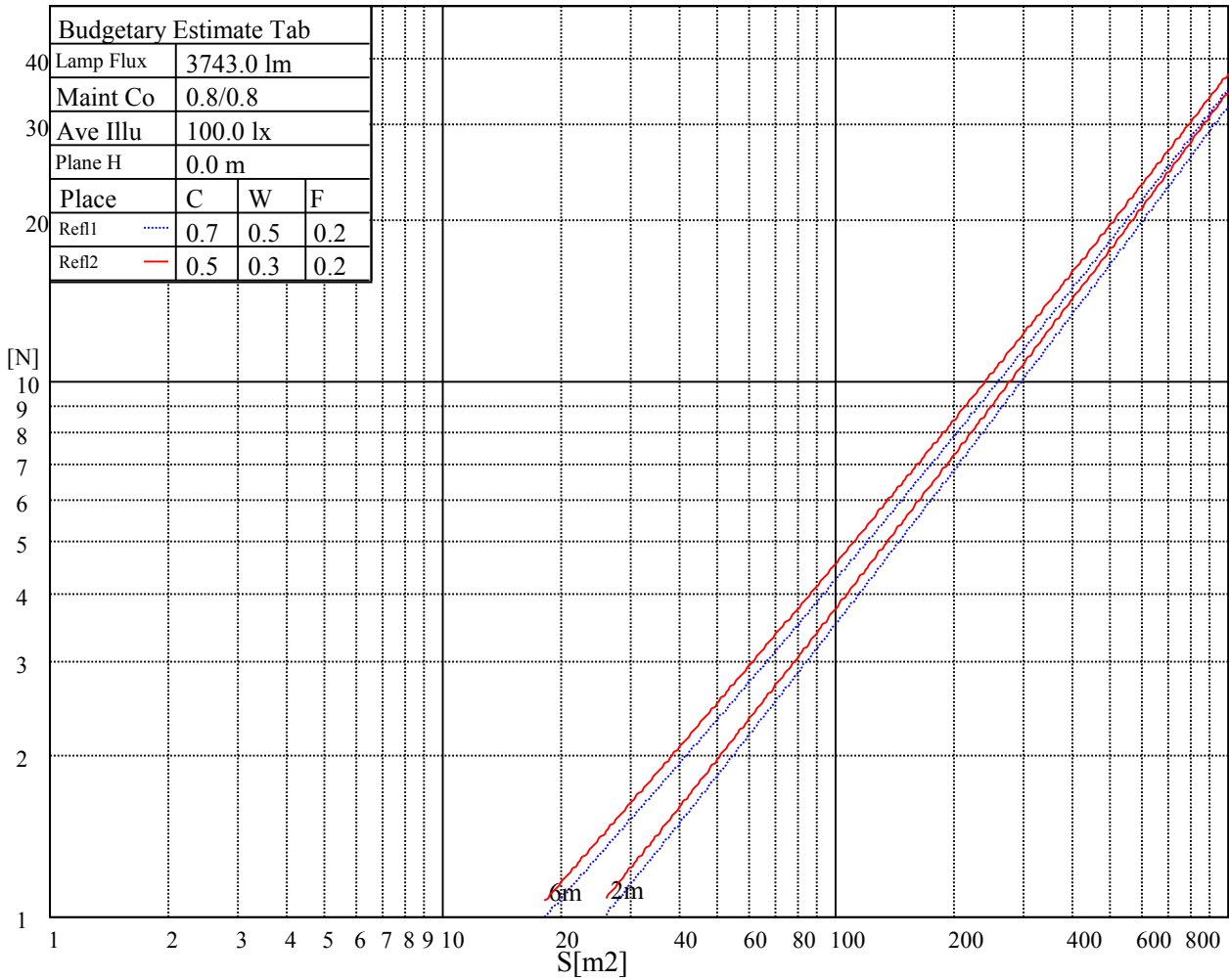
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4508	4508	4508	8392	8392	8392	23993	23993	23993

Glare Table

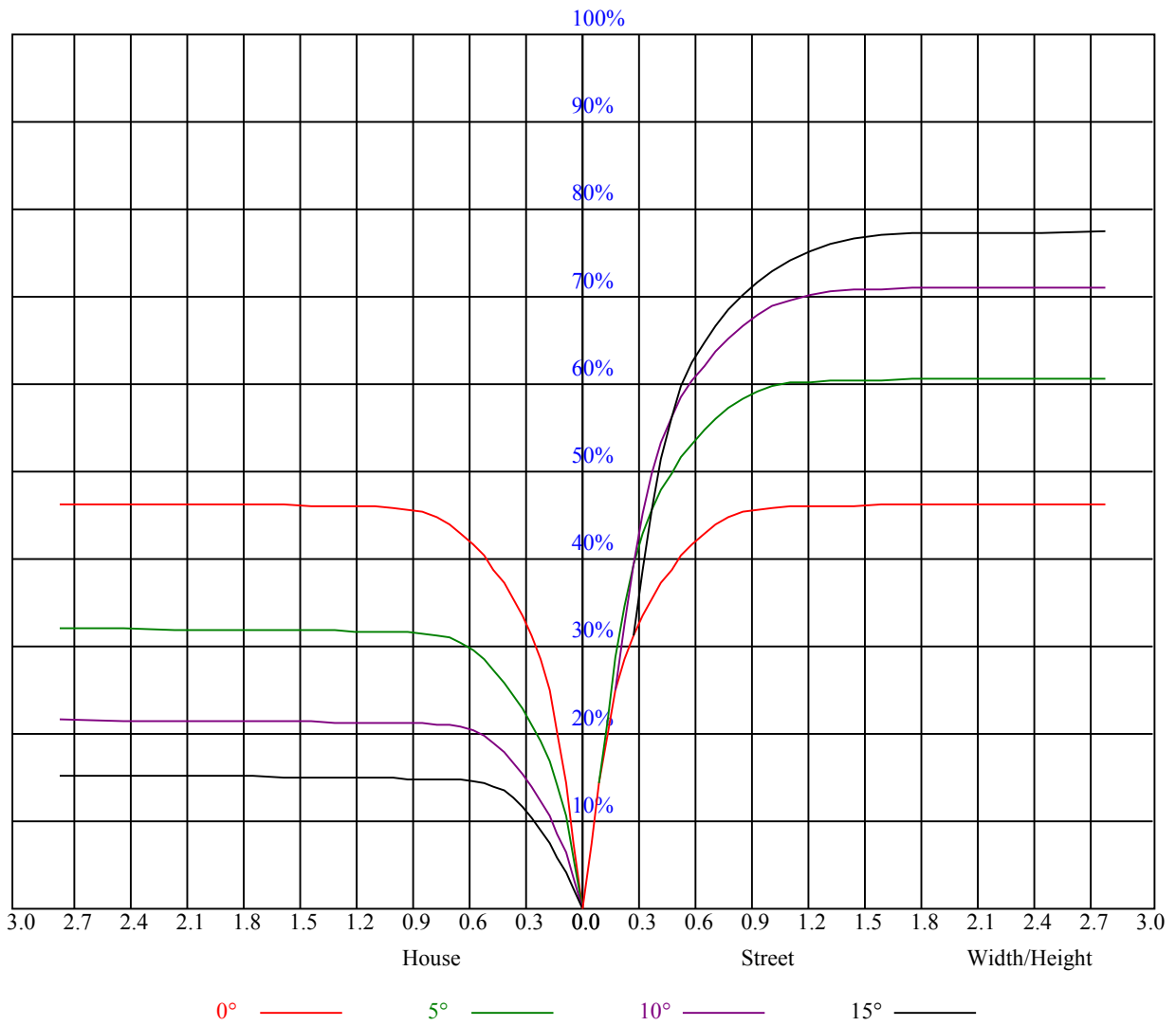
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.13	1.13	1.13	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	1.03	1.00	0.97	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.91	0.90	0.90	0.88	0.87	0.85
2	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.87	0.85	0.83	0.81
3	0.92	0.87	0.84	0.91	0.87	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.78
4	0.88	0.83	0.79	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.75
5	0.84	0.79	0.75	0.83	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.72
6	0.80	0.75	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.69
7	0.77	0.72	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.66
8	0.74	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.64
9	0.72	0.67	0.64	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.62
10	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60



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	17876.81	14991.86	7438.12	2879.45	1549.84	1296.03	1212.34	1124.80	709.68
45.0	18030.97	13681.52	5946.09	2824.39	1496.43	1292.17	1207.39	1059.29	547.26
90.0	17574.00	10839.50	4406.16	1824.02	1383.02	1258.59	1176.56	948.84	373.01
135.0	18041.98	13450.28	6155.31	2873.94	1454.04	1290.52	1209.04	1072.50	569.28
180.0	17876.81	10811.43	6398.65	2189.59	1484.87	1292.17	1200.78	1094.80	592.79
225.0	18030.97	15702.09	7989.78	2881.65	1560.85	1296.03	1207.39	1094.85	705.60
270.0	17574.00	17254.68	10339.59	4140.24	1767.31	1347.23	1239.87	1152.88	884.21
315.0	18041.98	15294.67	8379.58	2930.65	1570.76	1289.97	1211.24	1094.19	687.32
360.0	17876.81	14991.86	7438.12	2879.45	1549.84	1296.03	1212.34	1124.80	709.68

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	303.36	17.12	15.64	15.03	14.81	14.65	16.46	16.63	15.20
45.0	47.84	16.24	15.42	14.98	14.76	14.76	18.44	18.99	17.62
90.0	27.36	16.13	15.42	15.09	14.92	15.64	22.08	22.68	15.31
135.0	56.65	16.30	15.53	15.03	14.87	14.87	16.30	17.07	17.84
180.0	66.84	16.24	15.36	14.98	14.76	14.59	17.56	19.66	16.96
225.0	158.84	16.85	15.36	14.76	14.53	14.37	14.87	16.35	15.58
270.0	315.47	23.51	15.97	15.14	14.76	14.59	14.42	16.19	16.19
315.0	180.97	17.67	15.58	14.98	14.65	14.53	14.42	14.81	14.87
360.0	303.36	17.12	15.64	15.03	14.81	14.65	16.46	16.63	15.20

C/γ(°)	90.0
0.0	14.26
45.0	14.09
90.0	14.15
135.0	14.20
180.0	14.20
225.0	14.04
270.0	14.20
315.0	14.20
360.0	14.26