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Nata

LumCAT: 3-1640-A	
Luminaire: 92.76.227.00	
Report No: NT2015071601	Voltage(V): 38.9000
Test No: GC2015071601	Current(A): 2.1000
LampCAT: BRIDGELUX VERO 29	Power (W): 81.6900
Lamp flux(lm): 8650.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 88	Width(mm): 88
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 7871.38
Efficiency(%): 91.00%
Lumens(lm)/Power(W): 96.36
Central intensity(cd): 18106.950
Maximum intensity(cd): 18106.950
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=28.8
 [C90/270]Total=28.8
Field angle(10%Imax): [C0/180]Total=74.7
 [C90/270]Total=74.7
Maximum s/h(1/2): C0_180=0.48 C90_270=0.48
Maximum s/h(1/4): C0_180=0.50 C90_270=0.50
Up flux rate of lamp(%): 2.60%
Down flux rate of lamp(%): 89.57%
Up flux rate of LUM(%): 3.98%
Down flux rate of LUM(%): 97.18%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.116%

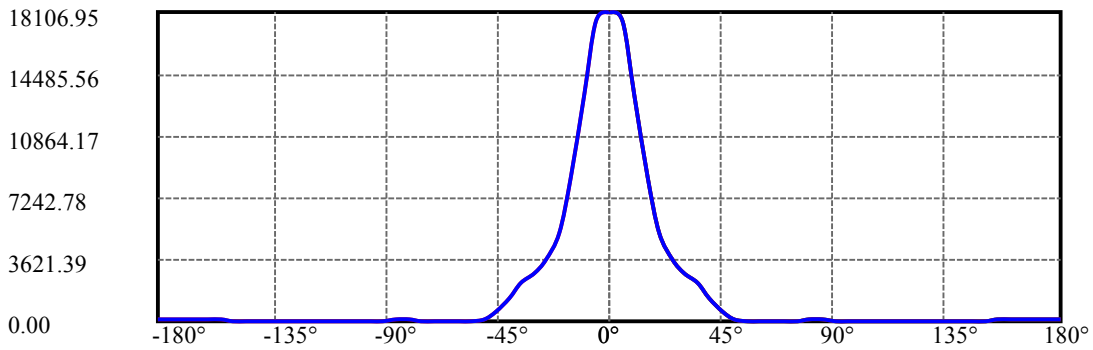
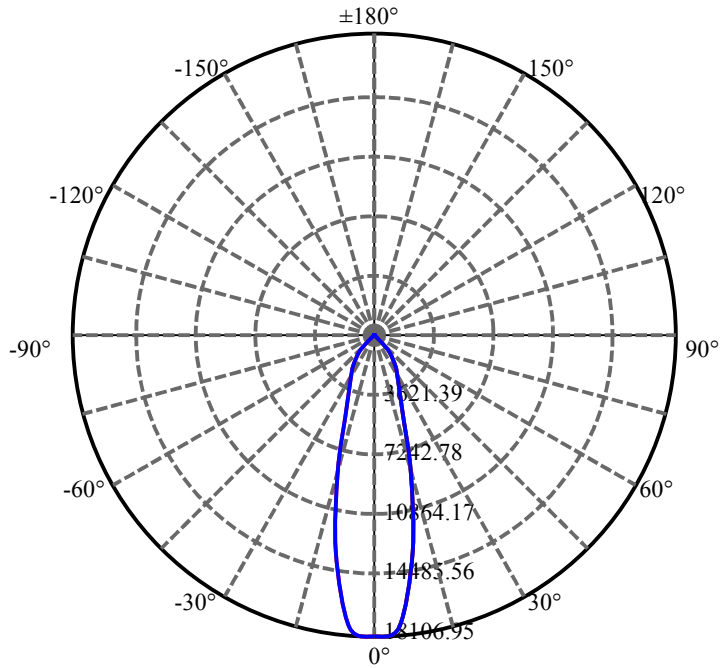
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	18106.947	108.283	108.283	1.252%	1.376%
5.0	17572.621	839.503	947.786	9.705%	12.041%
10.0	13289.059	1264.893	2212.679	14.623%	28.110%
15.0	8463.058	1200.640	3413.319	13.880%	43.364%
20.0	5120.161	959.897	4373.217	11.097%	55.558%
25.0	3563.215	825.429	5198.646	9.543%	66.045%
30.0	2858.940	783.546	5982.191	9.058%	75.999%
35.0	2224.728	699.451	6681.643	8.086%	84.885%
40.0	1349.272	475.397	7157.04	5.496%	90.925%
45.0	616.783	239.060	7396.1	2.764%	93.962%
50.0	163.711	68.742	7464.842	.795%	94.835%
55.0	45.502	20.431	7485.272	.236%	95.095%
60.0	38.340	18.200	7503.472	.210%	95.326%
65.0	38.536	19.144	7522.616	.221%	95.569%
70.0	43.334	22.320	7544.937	.258%	95.853%
75.0	55.013	29.127	7574.064	.337%	96.223%
80.0	60.748	32.792	7606.856	.379%	96.639%
85.0	56.776	31.002	7637.859	.358%	97.033%
90.0	32.060	17.573	7655.432	.203%	97.257%
95.0	30.255	16.521	7671.953	.191%	97.466%
100.0	32.997	17.812	7689.765	.206%	97.693%
105.0	29.850	15.804	7705.569	.183%	97.894%
110.0	29.822	15.361	7720.929	.178%	98.089%
115.0	29.682	14.745	7735.675	.170%	98.276%
120.0	29.682	14.090	7749.765	.163%	98.455%
125.0	29.822	13.390	7763.155	.155%	98.625%
130.0	30.143	12.657	7775.812	.146%	98.786%
135.0	31.094	12.052	7787.864	.139%	98.939%
140.0	34.270	12.074	7799.938	.140%	99.092%
145.0	40.368	12.692	7812.63	.147%	99.254%
150.0	48.789	13.371	7826.001	.155%	99.424%
155.0	57.237	13.259	7839.26	.153%	99.592%
160.0	63.811	11.963	7851.223	.138%	99.744%
165.0	67.854	9.626	7860.85	.111%	99.866%
170.0	70.274	6.689	7867.539	.077%	99.951%
175.0	71.421	3.412	7870.951	.039%	99.995%
180.0	71.603	0.428	7871.379	.005%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	5982.19	69.16%	76.00%
0-40	7157.04	82.74%	90.92%
0-60	7503.47	86.75%	95.33%
0-90	7655.43	88.50%	97.26%
0-120	7749.76	89.59%	98.45%
0-180	7871.38	91.00%	100.00%
60-90	170.16	1.97%	2.16%
90-120	111.91	1.29%	1.42%
90-130	137.95	1.59%	1.75%
90-150	188.14	2.18%	2.39%
90-180	233.09	2.69%	2.96%
0-32.25	6297.10	72.80%	80.00%

ZONAL LUMEN SUMMARY

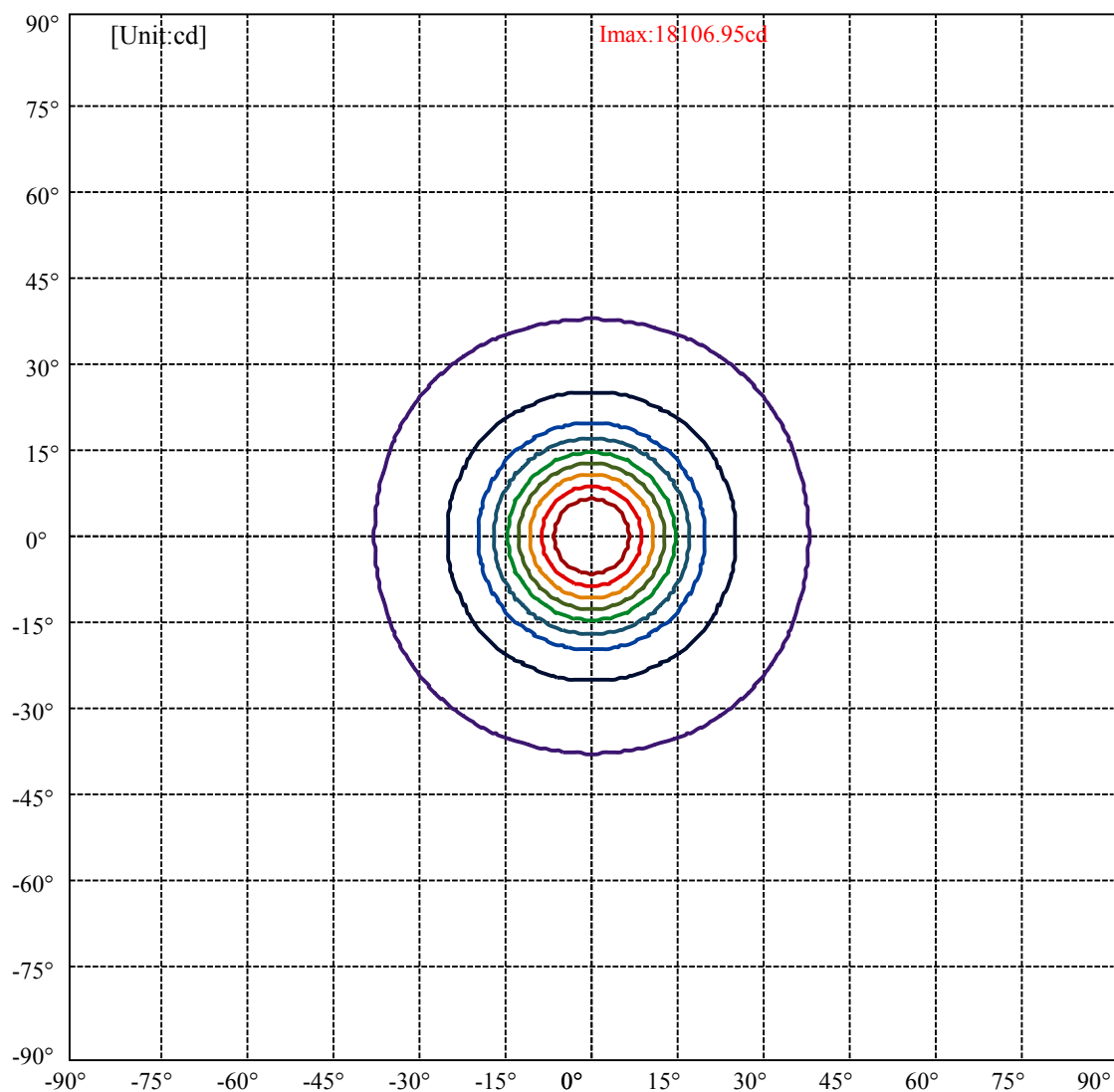
0-10	2212.68
10-20	2160.54
20-30	1608.97
30-40	1174.85
40-50	307.80
50-60	38.63
60-70	41.46
70-80	61.92
80-90	48.58
90-100	34.33
100-110	31.16
110-120	28.84
120-130	26.05
130-140	24.13
140-150	26.06
150-160	25.22
160-170	16.32
170-180	3.41



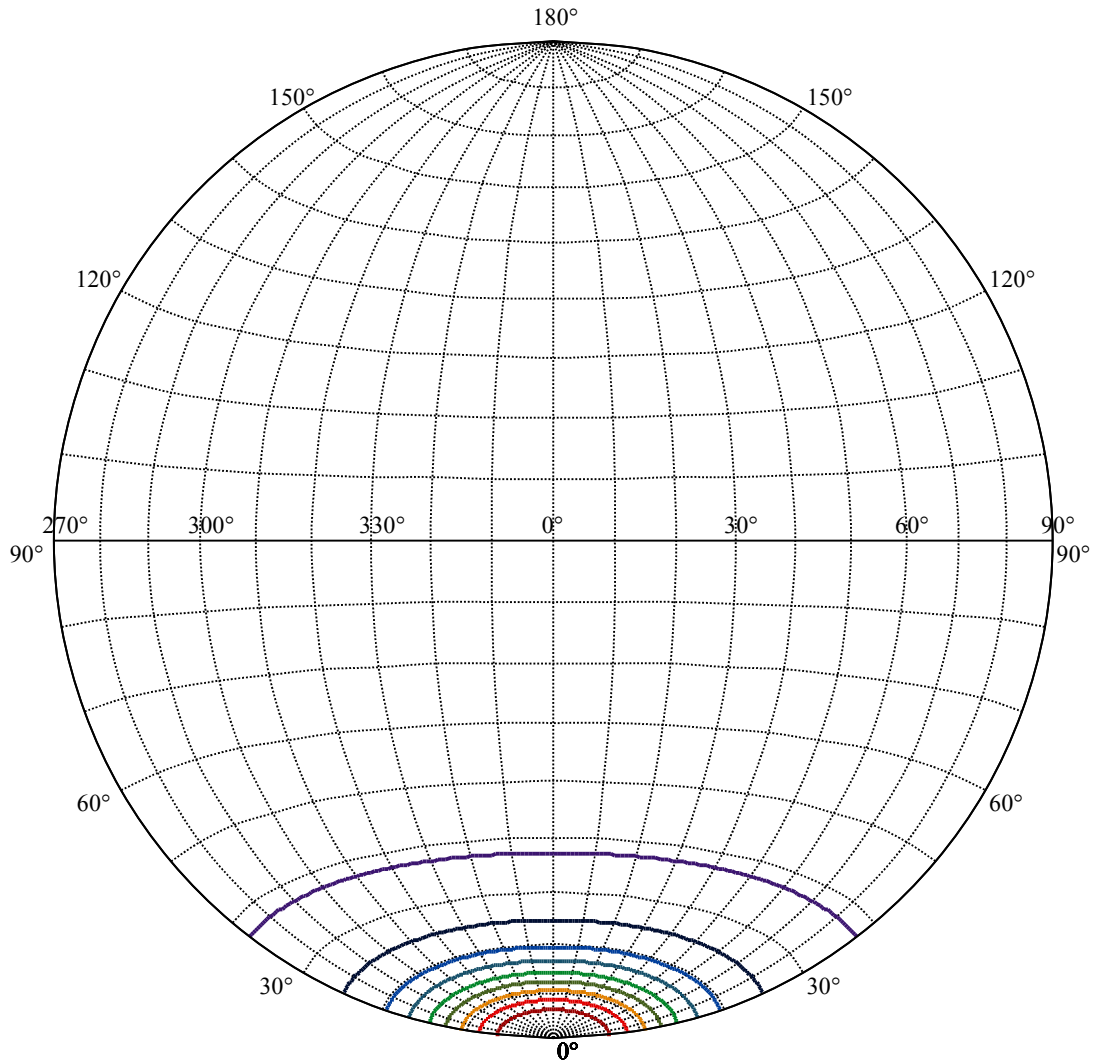
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.4 Right:37.4
:C90/270Left:37.4 Right:37.4

Beam Angle(50%Imax):C0/180Left:14.4 Right:14.4
:C90/270Left:14.4 Right:14.4



(10%Imax) 1810.69	—
(20%Imax) 3621.39	—
(30%Imax) 5432.08	—
(40%Imax) 7242.78	—
(50%Imax) 9053.47	—
(60%Imax) 10864.2	—
(70%Imax) 12674.9	—
(80%Imax) 14485.6	—
(90%Imax) 16296.3	—



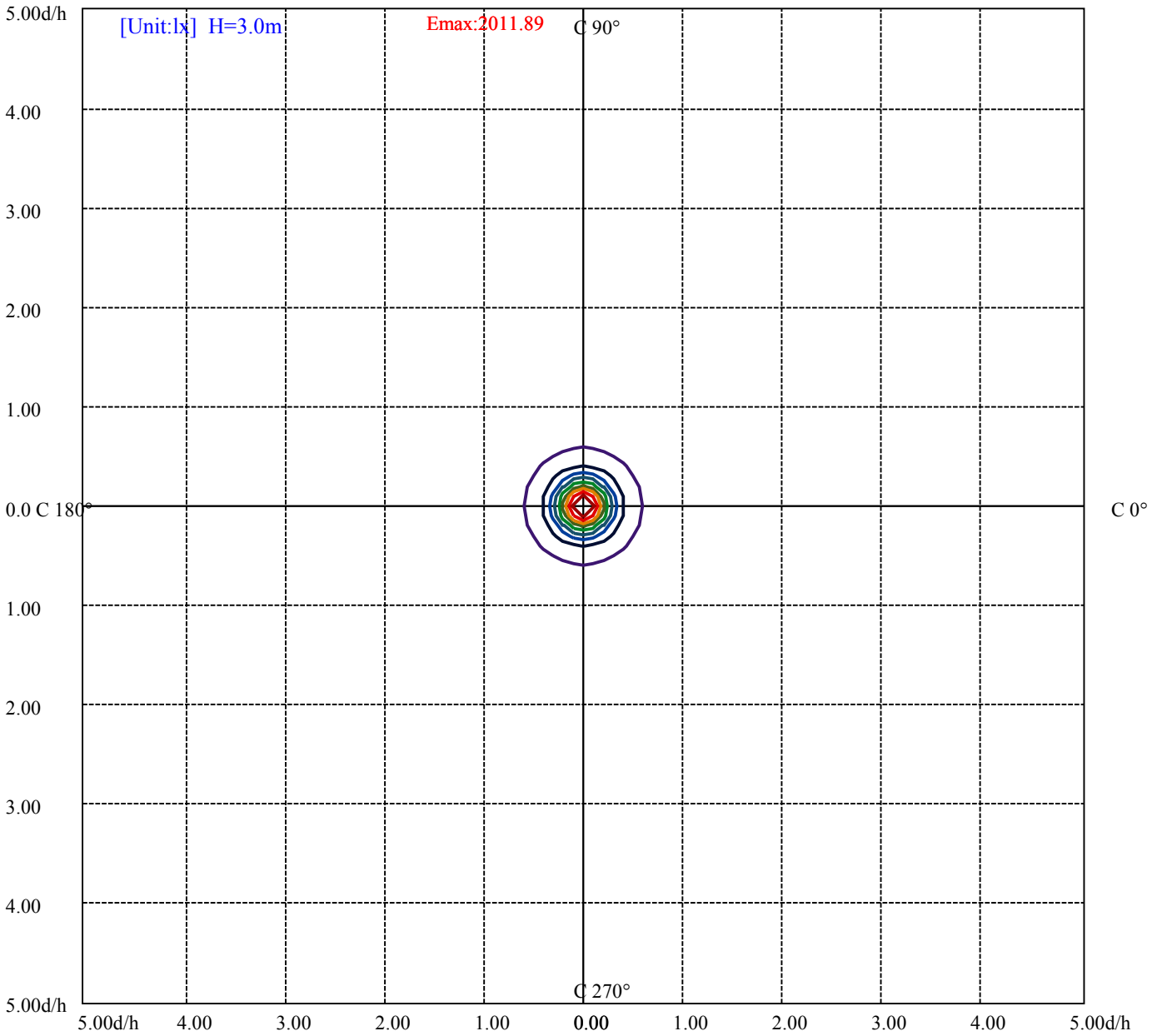
House

[Unit:cd]

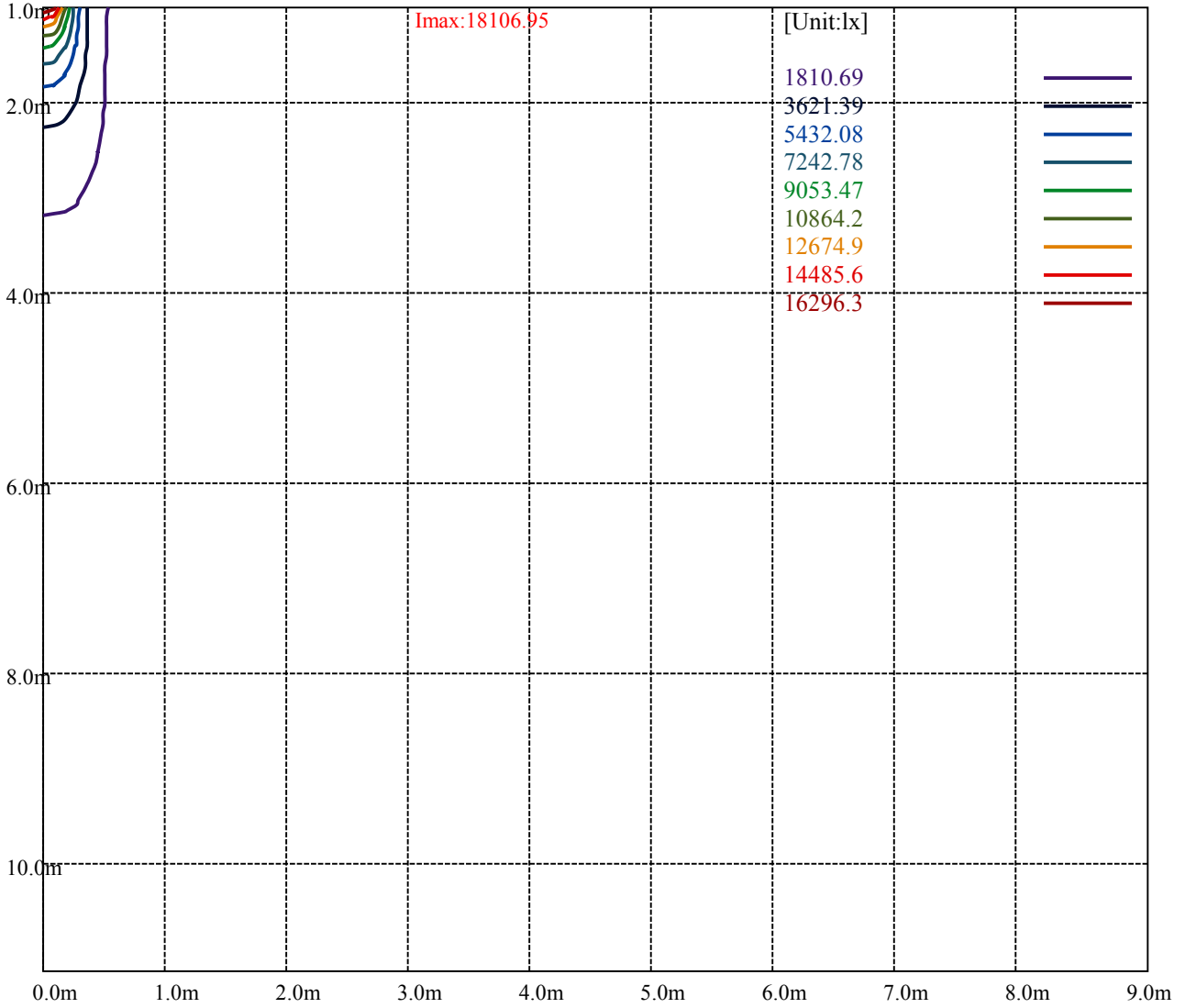
Road

I_{max}:18106.95

(10%I _{max}) 1810.69	—
(20%I _{max}) 3621.39	—
(30%I _{max}) 5432.08	—
(40%I _{max}) 7242.78	—
(50%I _{max}) 9053.47	—
(60%I _{max}) 10864.2	—
(70%I _{max}) 12674.9	—
(80%I _{max}) 14485.6	—
(90%I _{max}) 16296.3	—



- (10%Emax) 201.1878
- (20%Emax) 402.3766
- (30%Emax) 603.5645
- (40%Emax) 804.7522
- (50%Emax) 1005.941
- (60%Emax) 1207.133
- (70%Emax) 1408.322
- (80%Emax) 1609.5
- (90%Emax) 1810.689



Luminance Table

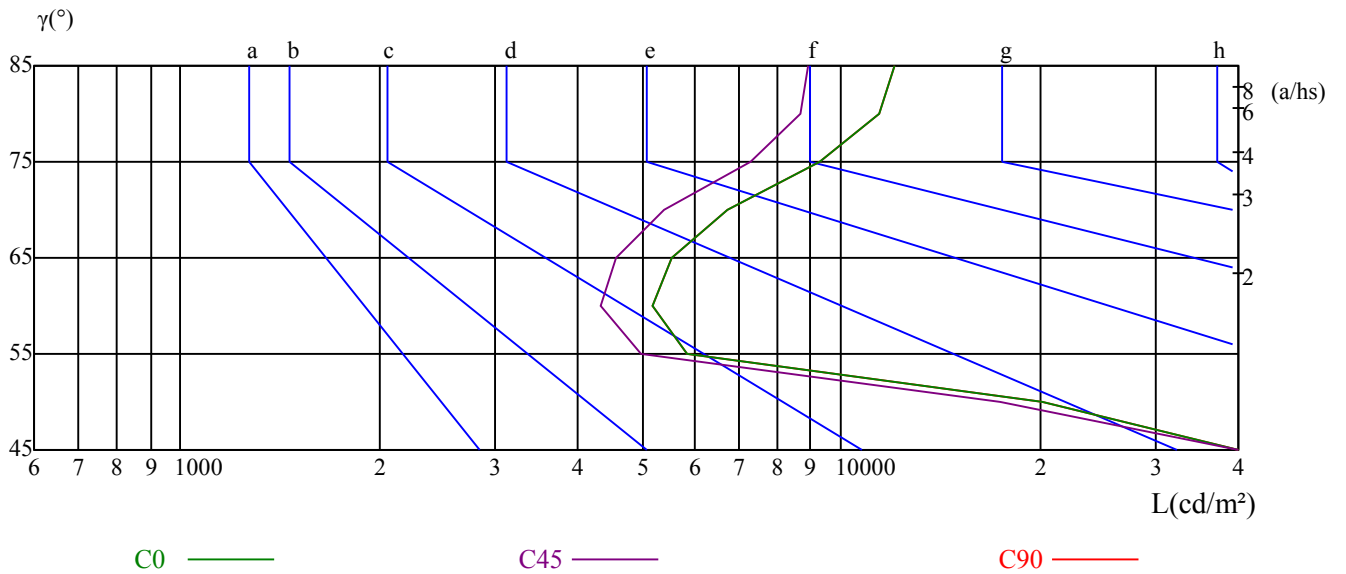
γ	45	50	55	60	65	70	75	80	85
C0	73971	20265	5865	5197	5552	6716	9302	11395	12061
C45	64762	17485	4983	4342	4554	5398	7302	8700	8902
C90	73971	20265	5865	5197	5552	6716	9302	11395	12061

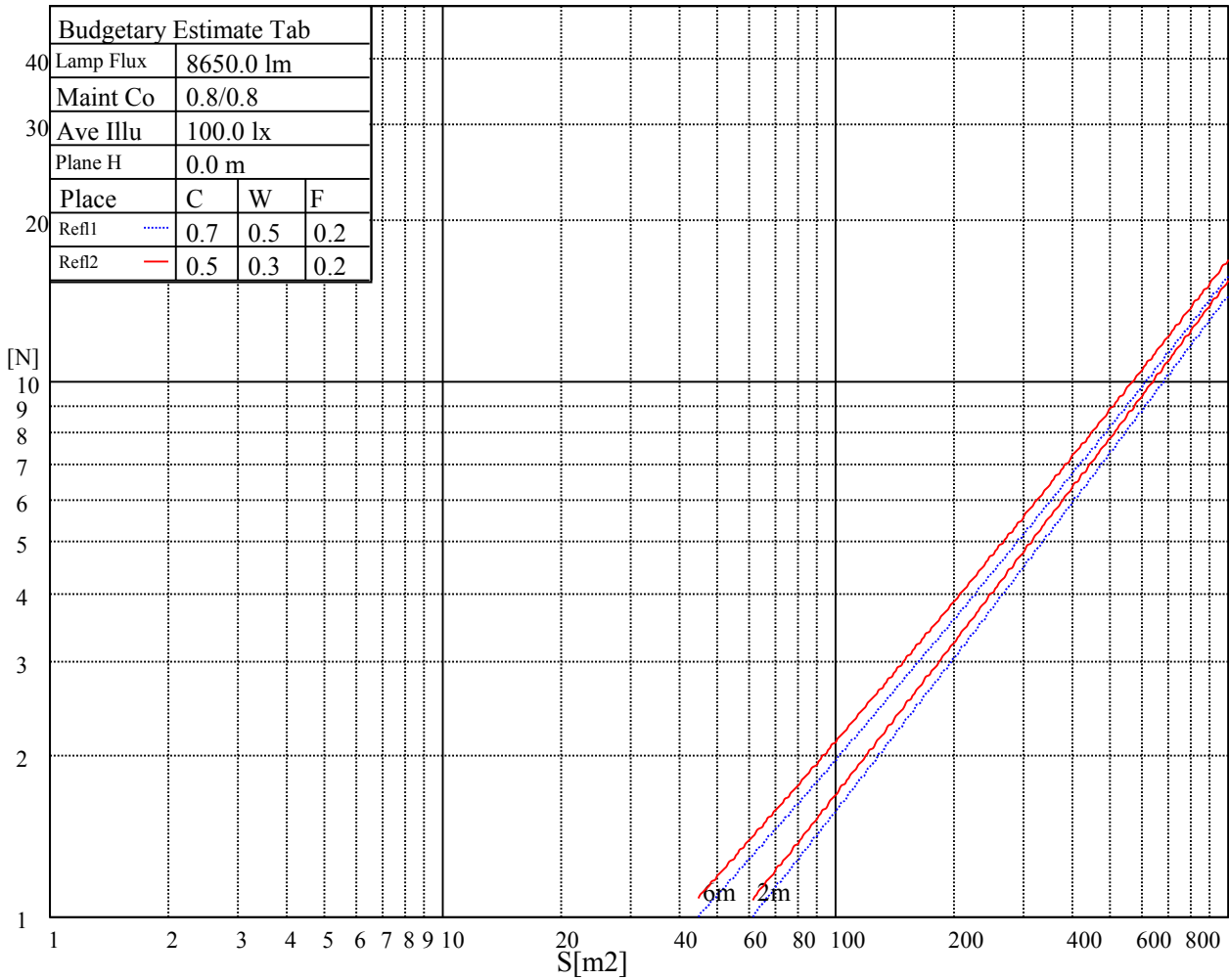
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
11775	11775	11775	27448	27448	27448	84120	84120	84120

Glare Table

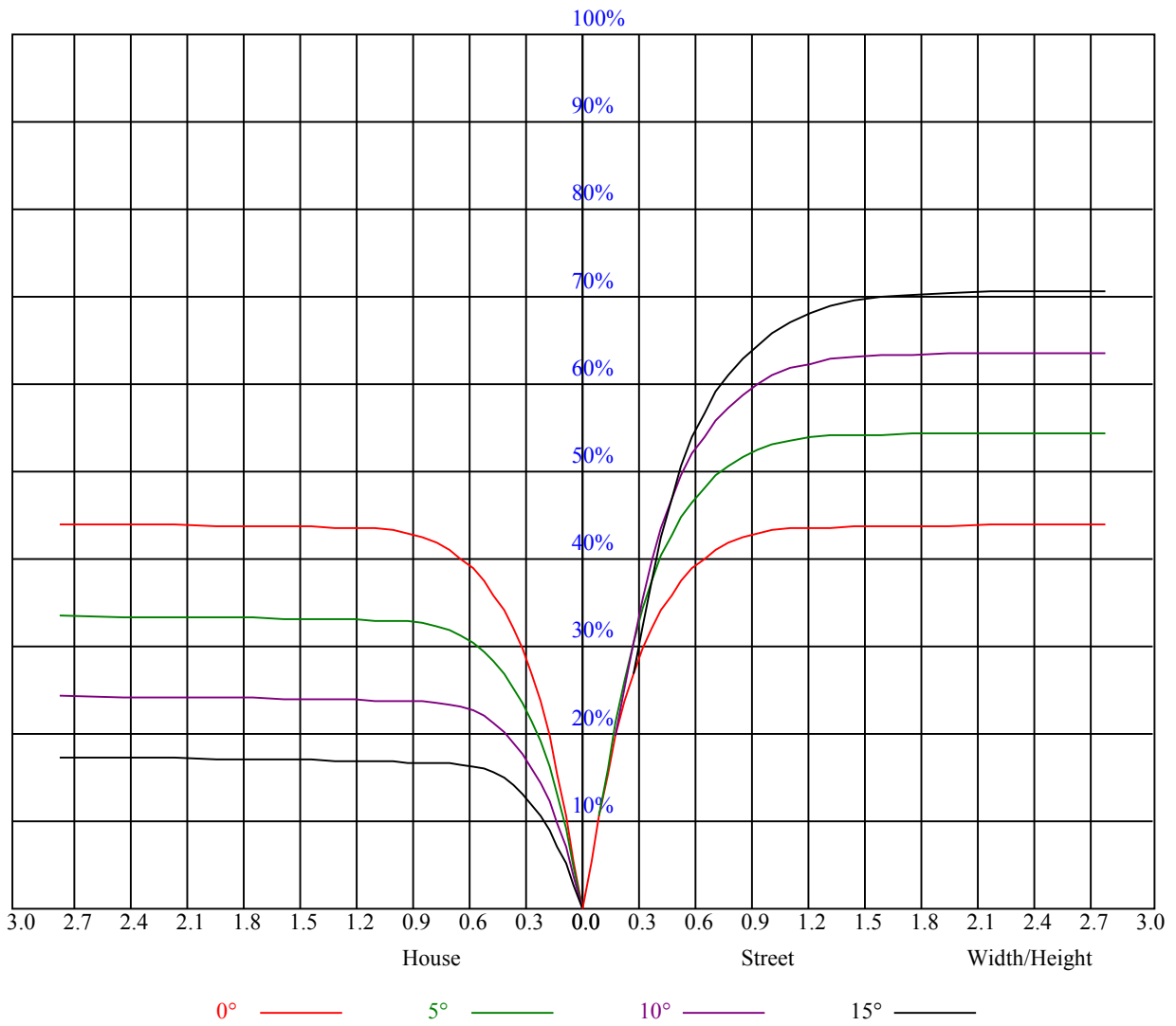
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.09	1.09	1.09	1.06	1.06	1.06	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.98	0.95	0.98	0.96	0.94	0.94	0.92	0.90	0.90	0.88	0.87	0.86	0.85	0.84	0.82
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.86	0.84	0.86	0.83	0.81	0.83	0.81	0.79	0.78
3	0.89	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.78	0.82	0.79	0.77	0.79	0.77	0.75	0.74
4	0.84	0.79	0.75	0.83	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.79	0.75	0.71	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.71	0.69	0.73	0.70	0.68	0.67
6	0.76	0.71	0.67	0.75	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.65	0.70	0.67	0.65	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	0.62	0.68	0.64	0.62	0.61
8	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
9	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.56
10	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.54



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	17836.99	17199.15	13367.95	8517.61	5132.61	3558.45	2774.86	2138.42	1324.91
45.0	18407.68	17730.68	13362.07	8438.16	5128.41	3559.73	2885.81	2252.56	1362.84
90.0	18172.69	17629.97	13064.14	8458.30	5091.21	3574.95	2889.28	2255.36	1346.50
135.0	18010.43	17730.68	13362.07	8438.16	5128.41	3559.73	2885.81	2252.56	1362.84
180.0	17836.99	17199.15	13367.95	8517.61	5132.61	3558.45	2774.86	2138.42	1324.91
225.0	18407.68	17730.68	13362.07	8438.16	5128.41	3559.73	2885.81	2252.56	1362.84
270.0	18172.69	17629.97	13064.14	8458.30	5091.21	3574.95	2889.28	2255.36	1346.50
315.0	18010.43	17730.68	13362.07	8438.16	5128.41	3559.73	2885.81	2252.56	1362.84
360.0	17836.99	17199.15	13367.95	8517.61	5132.61	3558.45	2774.86	2138.42	1324.91

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	604.60	197.67	41.68	35.70	36.82	42.47	53.99	55.56	52.20
45.0	623.74	141.05	45.04	38.21	38.72	42.86	56.23	64.57	59.92
90.0	615.06	175.07	50.24	41.24	39.89	45.15	53.60	58.30	55.06
135.0	623.74	141.05	45.04	38.21	38.72	42.86	56.23	64.57	59.92
180.0	604.60	197.67	41.68	35.70	36.82	42.47	53.99	55.56	52.20
225.0	623.74	141.05	45.04	38.21	38.72	42.86	56.23	64.57	59.92
270.0	615.06	175.07	50.24	41.24	39.89	45.15	53.60	58.30	55.06
315.0	623.74	141.05	45.04	38.21	38.72	42.86	56.23	64.57	59.92
360.0	604.60	197.67	41.68	35.70	36.82	42.47	53.99	55.56	52.20

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	32.12	30.05	35.64	29.60	29.71	29.60	29.65	29.82	30.27
45.0	32.68	29.88	29.93	29.93	29.82	29.65	29.60	29.71	30.10
90.0	30.77	31.22	36.48	29.93	29.93	29.82	29.88	30.05	30.10
135.0	32.68	29.88	29.93	29.93	29.82	29.65	29.60	29.71	30.10
180.0	32.12	30.05	35.64	29.60	29.71	29.60	29.65	29.82	30.27
225.0	32.68	29.88	29.93	29.93	29.82	29.65	29.60	29.71	30.10
270.0	30.77	31.22	36.48	29.93	29.93	29.82	29.88	30.05	30.10
315.0	32.68	29.88	29.93	29.93	29.82	29.65	29.60	29.71	30.10
360.0	32.12	30.05	35.64	29.60	29.71	29.60	29.65	29.82	30.27

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	31.11	33.23	38.10	45.54	53.43	59.70	63.67	66.02	67.03
45.0	31.11	34.63	41.07	49.68	58.30	65.01	68.99	71.39	72.57
90.0	31.05	34.58	41.24	50.24	58.92	65.52	69.77	72.29	73.52
135.0	31.11	34.63	41.07	49.68	58.30	65.01	68.99	71.39	72.57
180.0	31.11	33.23	38.10	45.54	53.43	59.70	63.67	66.02	67.03
225.0	31.11	34.63	41.07	49.68	58.30	65.01	68.99	71.39	72.57
270.0	31.05	34.58	41.24	50.24	58.92	65.52	69.77	72.29	73.52
315.0	31.11	34.63	41.07	49.68	58.30	65.01	68.99	71.39	72.57
360.0	31.11	33.23	38.10	45.54	53.43	59.70	63.67	66.02	67.03

C/γ(°)	180.0
0.0	67.25
45.0	72.74
90.0	73.69
135.0	72.74
180.0	67.25
225.0	72.74
270.0	73.69
315.0	72.74
360.0	67.25