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Nata

LumCAT: 3-1699-N	
Luminaire: 92.70.065.00+92.70.089.00	
Report No: NATA0100	Voltage(V): 34.0000
Test No: GC20180712007	Current(A): 0.3000
LampCAT: BRIDGELUX V9 HD	Power (W): 10.2000
Lamp flux(lm): 1191.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm):79	Width(mm): 79
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 935.60
Efficiency(%): 78.56%
Lumens(lm)/Power(W): 92.20
Central intensity(cd): 5186.451
Maximum intensity(cd): 5186.451
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=19.7
 [C90/270]Total=19.7
Field angle(10%Imax): [C0/180]Total=37.6
 [C90/270]Total=37.6
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.33 C90_270=0.33
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.96%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.512%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5186.451	4.963	4.963	.417%	.530%
2.0	5063.055	38.752	43.715	3.254%	4.672%
4.0	4689.291	71.739	115.455	6.023%	12.340%
6.0	4096.609	93.913	209.367	7.885%	22.378%
8.0	3368.626	102.819	312.186	8.633%	33.367%
10.0	2525.575	96.182	408.369	8.076%	43.648%
12.0	1805.850	82.343	490.712	6.914%	52.449%
14.0	1178.269	62.515	553.227	5.249%	59.131%
16.0	807.264	48.800	602.027	4.097%	64.346%
18.0	569.703	38.610	640.636	3.242%	68.473%
20.0	438.806	32.915	673.551	2.764%	71.991%
22.0	357.522	29.373	702.924	2.466%	75.131%
24.0	298.647	26.640	729.564	2.237%	77.978%
26.0	255.028	24.519	754.082	2.059%	80.599%
28.0	216.131	22.253	776.336	1.868%	82.977%
30.0	183.902	20.166	796.502	1.693%	85.133%
32.0	153.890	17.885	814.386	1.502%	87.044%
34.0	129.981	15.941	830.327	1.338%	88.748%
36.0	109.487	14.114	844.441	1.185%	90.256%
38.0	92.564	12.498	856.939	1.049%	91.592%
40.0	77.733	10.958	867.897	.920%	92.764%
42.0	64.258	9.430	877.327	.792%	93.771%
44.0	53.253	8.113	885.44	.681%	94.639%
46.0	43.804	6.911	892.351	.580%	95.377%
48.0	35.725	5.822	898.173	.489%	96.000%
50.0	28.691	4.820	902.993	.405%	96.515%
52.0	23.310	4.028	907.022	.338%	96.945%
54.0	18.643	3.308	910.33	.278%	97.299%
56.0	14.776	2.687	913.016	.226%	97.586%
58.0	11.720	2.180	915.196	.183%	97.819%
60.0	9.635	1.830	917.026	.154%	98.015%
62.0	8.609	1.667	918.693	.140%	98.193%
64.0	8.052	1.587	920.28	.133%	98.362%
66.0	7.639	1.531	921.811	.129%	98.526%
68.0	7.295	1.483	923.294	.125%	98.685%
70.0	6.985	1.440	924.734	.121%	98.838%
72.0	6.676	1.392	926.126	.117%	98.987%
74.0	6.393	1.348	927.474	.113%	99.131%

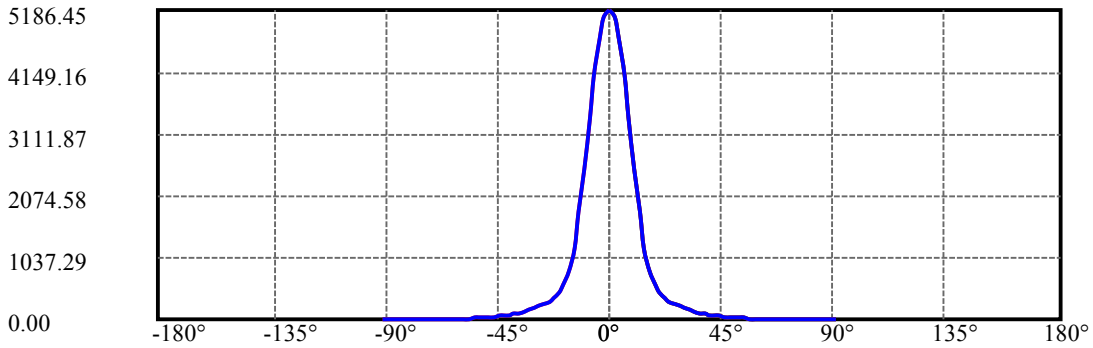
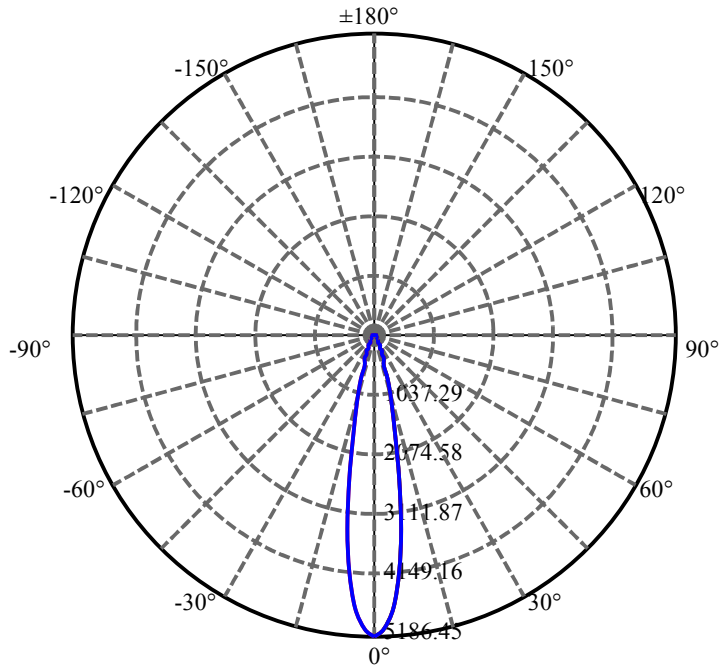
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.056	1.289	928.763	.108%	99.269%
78.0	5.740	1.231	929.994	.103%	99.401%
80.0	5.402	1.167	931.161	.098%	99.525%
82.0	5.072	1.102	932.262	.092%	99.643%
84.0	4.755	1.037	933.3	.087%	99.754%
86.0	4.425	0.968	934.268	.081%	99.857%
88.0	4.102	0.899	935.167	.075%	99.954%
90.0	3.964	0.435	935.601	.036%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	796.50	66.88%	85.13%
0-40	867.90	72.87%	92.76%
0-60	917.03	77.00%	98.01%
0-90	935.17	78.52%	99.95%
0-120	935.17	78.52%	99.95%
0-180	935.60	78.56%	100.00%
60-90	19.97	1.68%	2.13%
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%
0-25.54	748.48	62.84%	80.00%

ZONAL LUMEN SUMMARY

0-10	408.37
10-20	265.18
20-30	122.95
30-40	71.40
40-50	35.10
50-60	14.03
60-70	7.71
70-80	6.43
80-90	4.01
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: —————

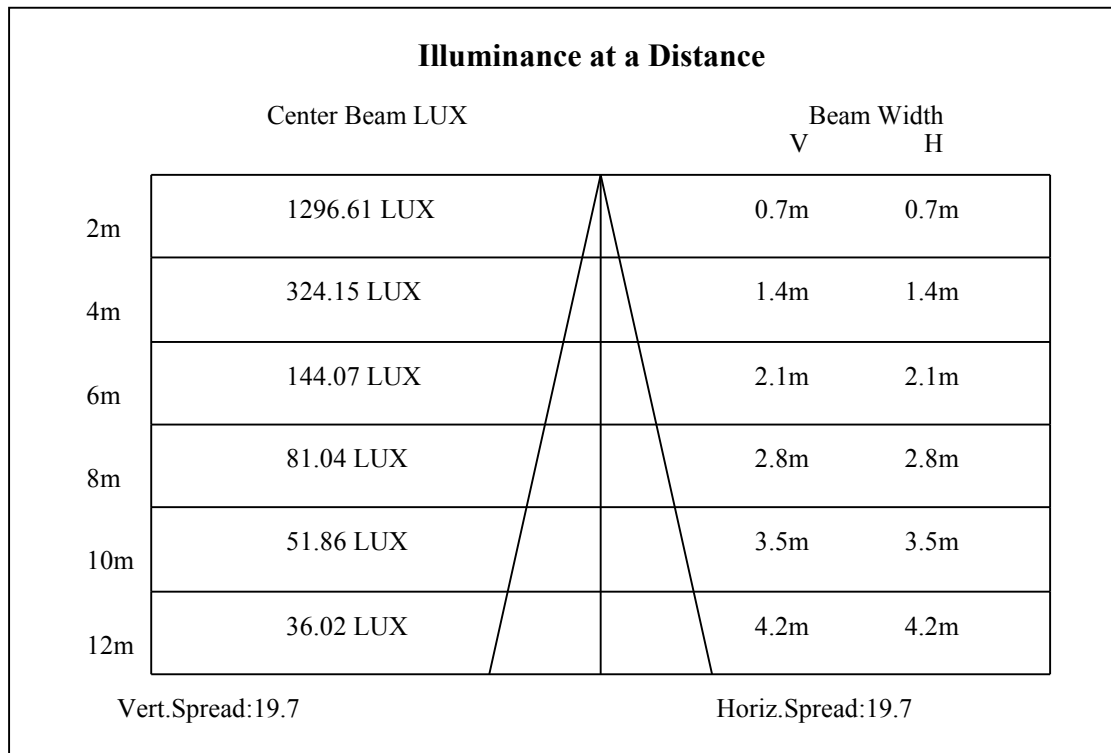
C90/C270: —————

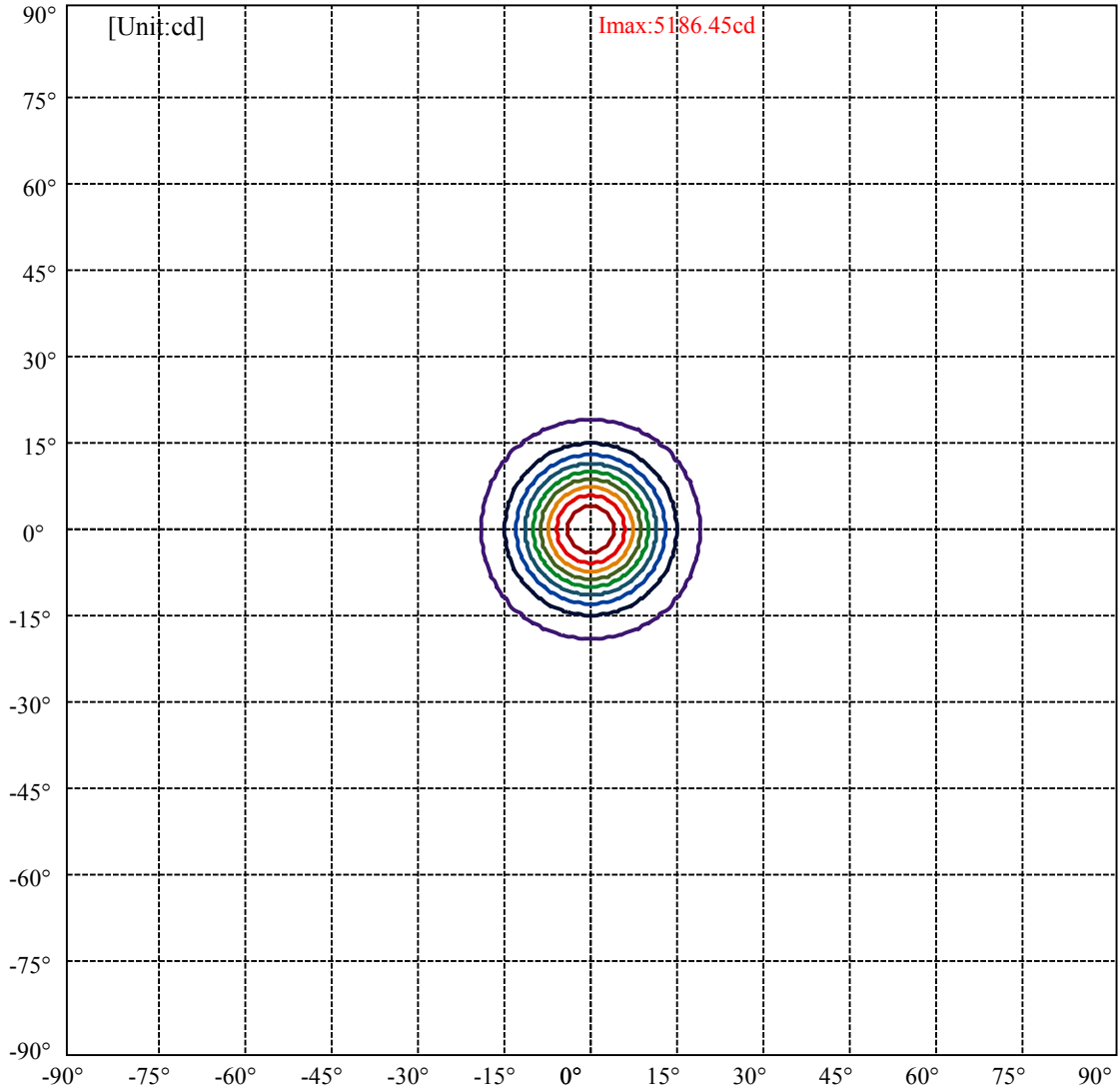
Field angle(10%Imax):C0/180Left:18.8 Right:18.8

:C90/270Left:18.8 Right:18.8

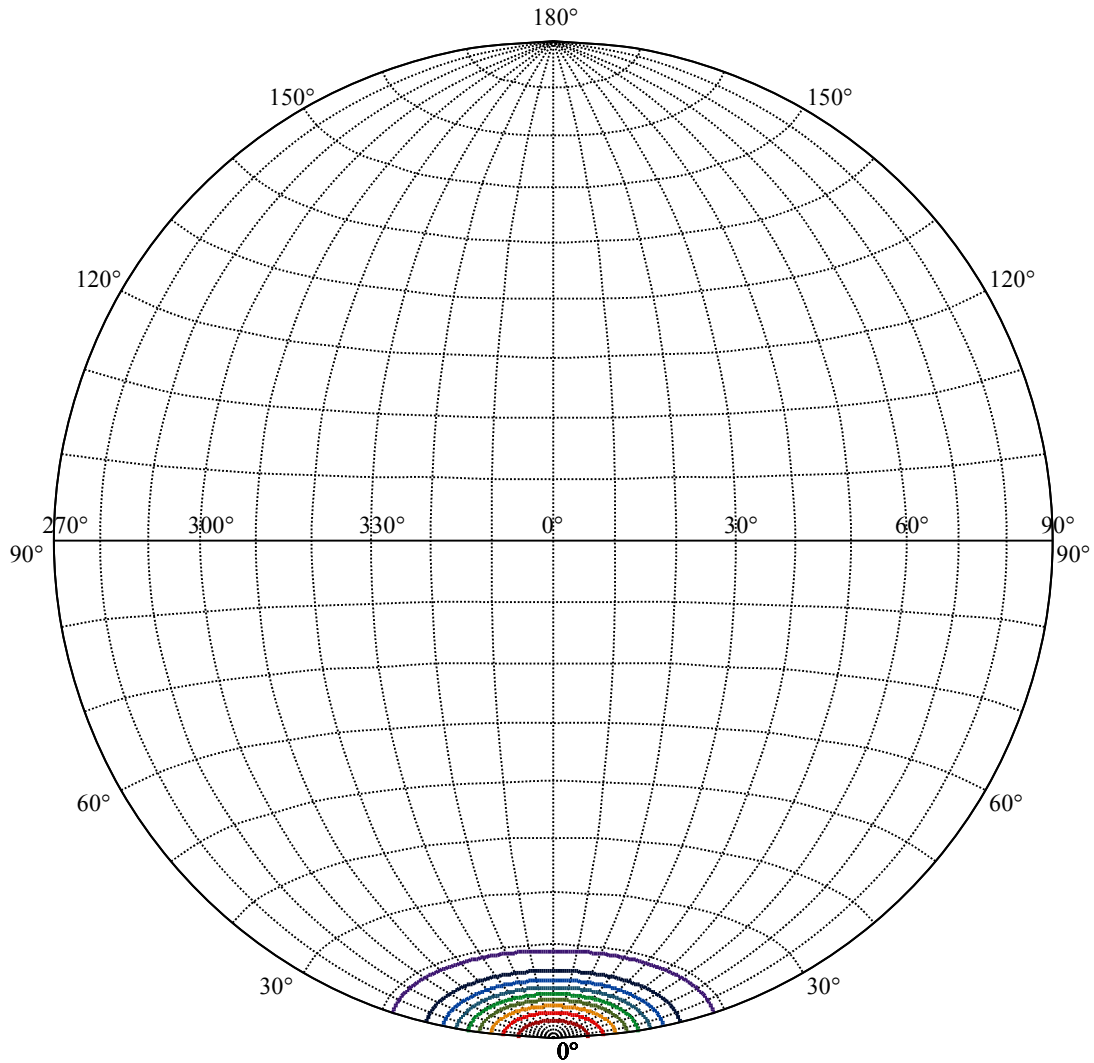
Beam Angle(50%Imax):C0/180Left:9.8 Right:9.8

:C90/270Left:9.8 Right:9.8





(10%Imax) 518.645	—
(20%Imax) 1037.29	—
(30%Imax) 1555.94	—
(40%Imax) 2074.58	—
(50%Imax) 2593.23	—
(60%Imax) 3111.87	—
(70%Imax) 3630.52	—
(80%Imax) 4149.16	—
(90%Imax) 4667.81	—



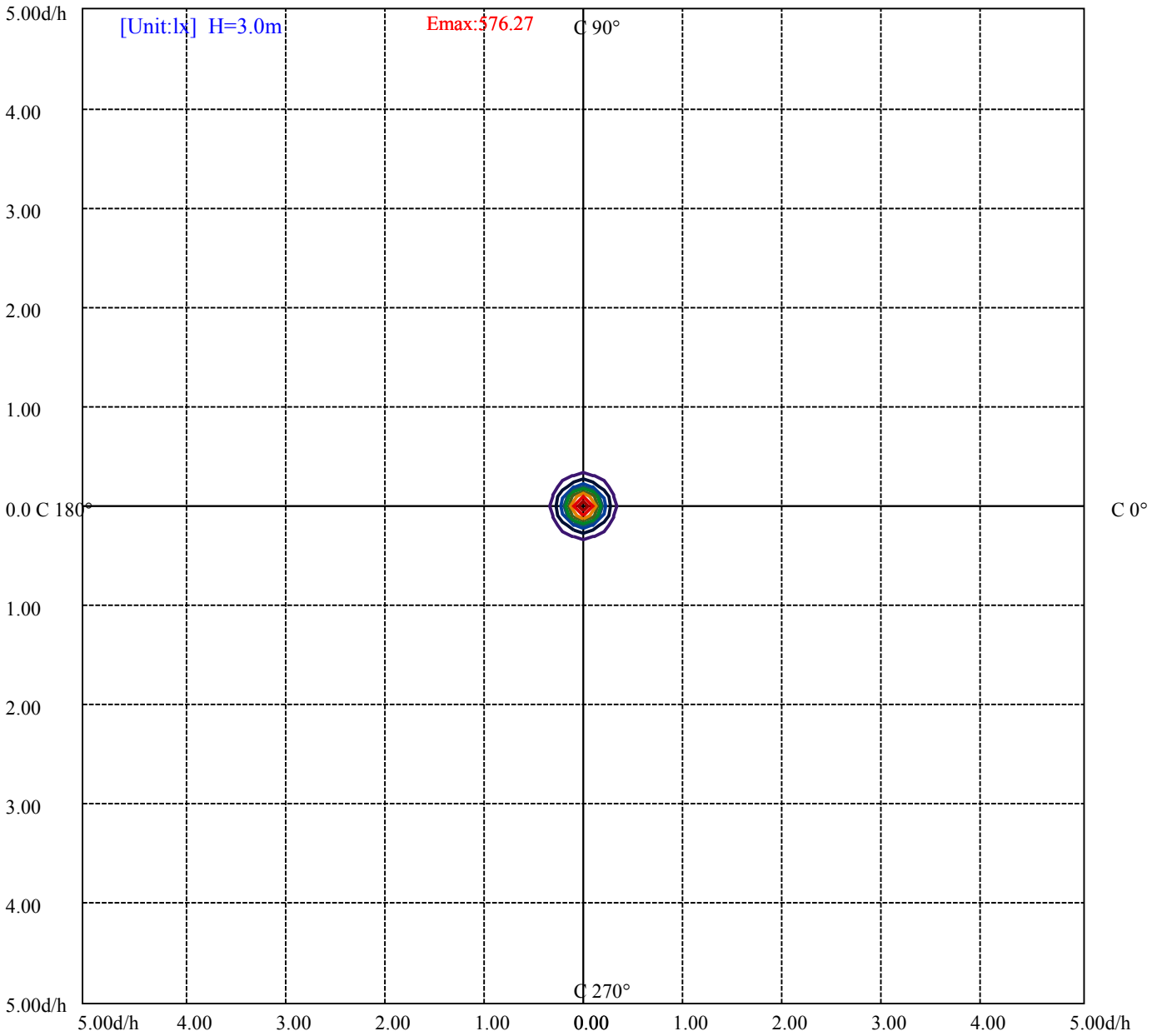
House

[Unit:cd]

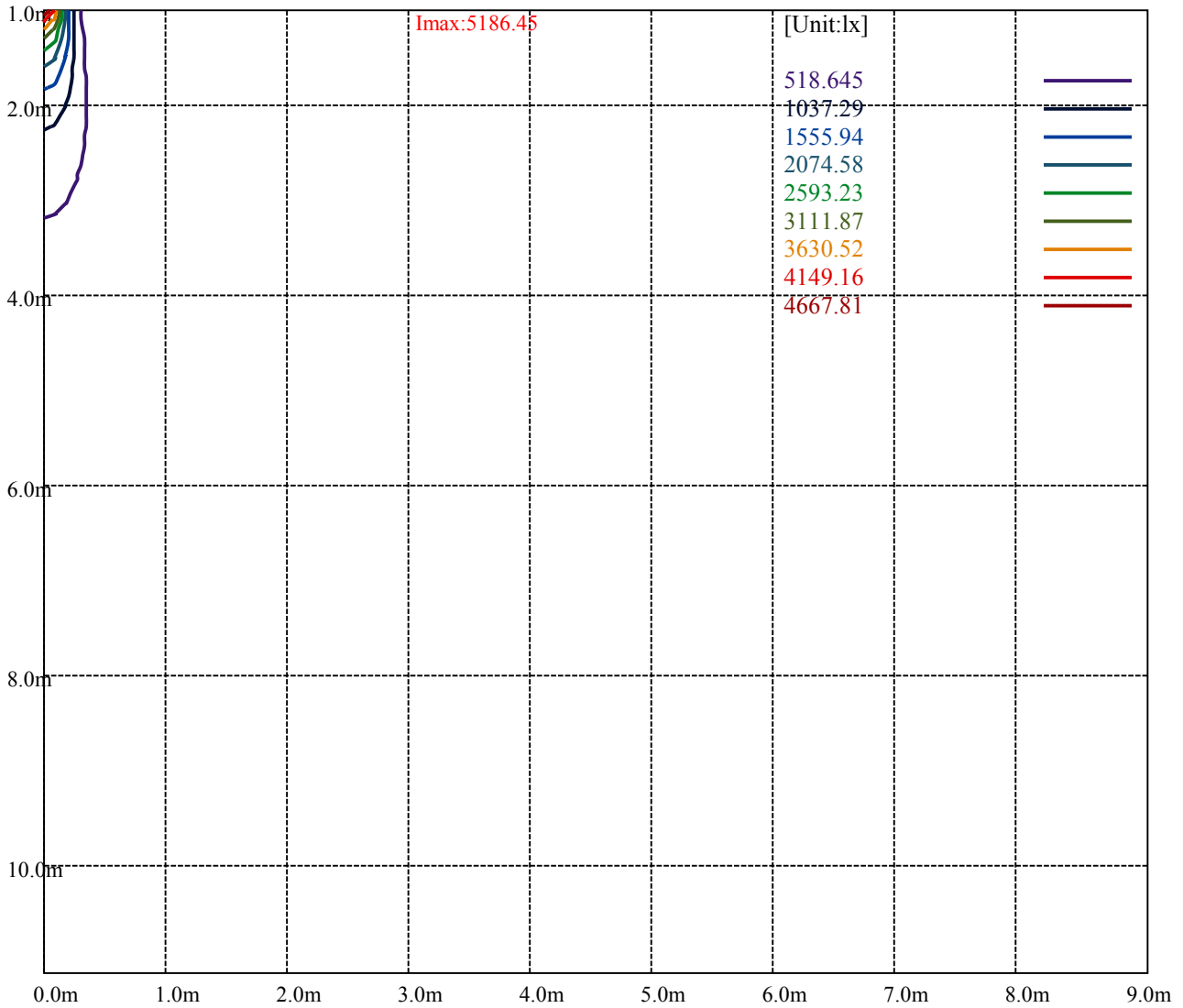
Road

Imax:5186.45

(10%Imax) 518.645	—
(20%Imax) 1037.29	—
(30%Imax) 1555.94	—
(40%Imax) 2074.58	—
(50%Imax) 2593.23	—
(60%Imax) 3111.87	—
(70%Imax) 3630.52	—
(80%Imax) 4149.16	—
(90%Imax) 4667.81	—



- (10%Emax) 57.62711
- (20%Emax) 115.2544
- (30%Emax) 172.8811
- (40%Emax) 230.5089
- (50%Emax) 288.1356
- (60%Emax) 345.7622
- (70%Emax) 403.39
- (80%Emax) 461.0167
- (90%Emax) 518.6444



Luminance Table

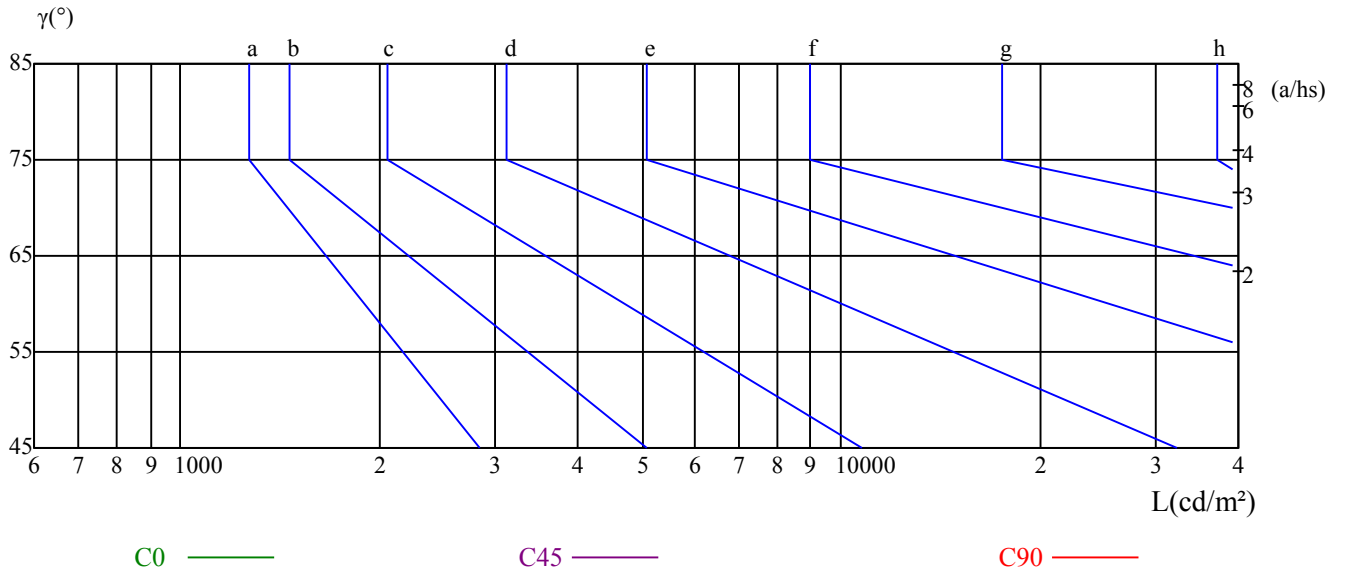
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

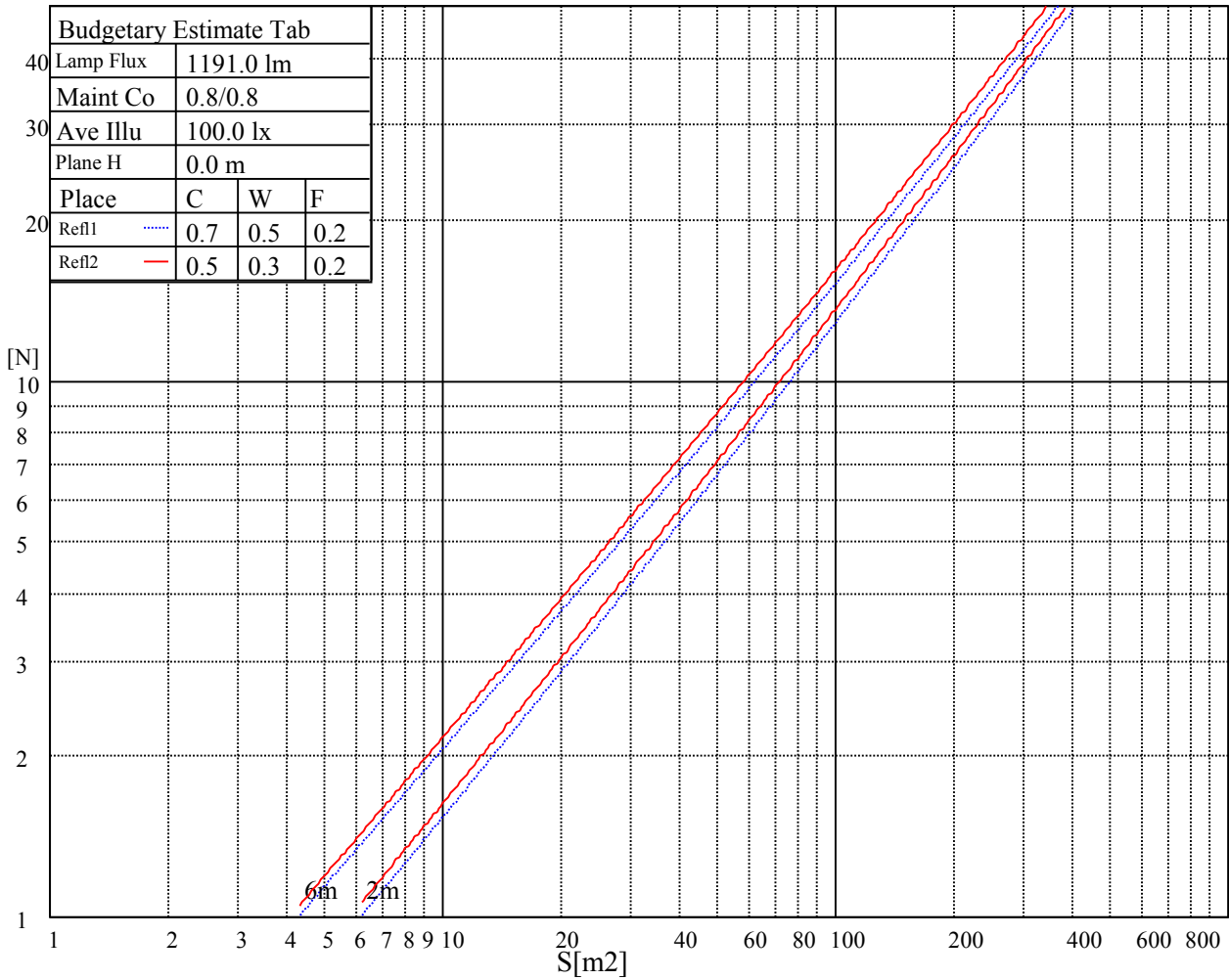
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

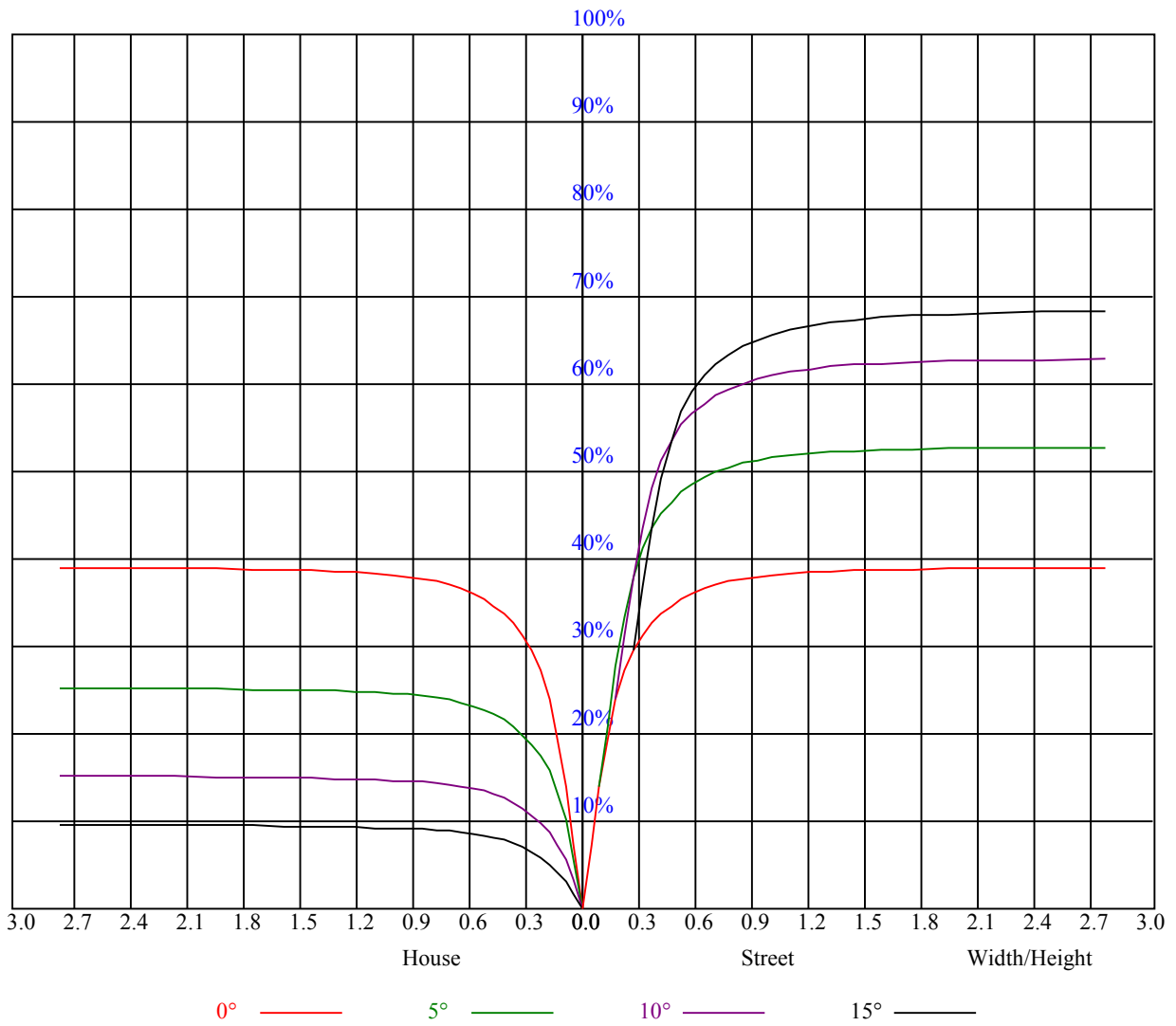
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	5164.29	5201.73	4991.96	4484.34	3858.35	3031.41	2228.68	1531.67	1013.59
45.0	5189.62	5173.10	4916.54	4426.53	3719.61	2869.54	2114.17	1410.54	960.18
90.0	5201.73	5096.57	4731.00	4160.61	3416.80	2551.86	1813.01	1086.54	815.05
135.0	5190.17	5056.38	4670.98	4095.10	3368.35	2522.13	1820.16	1196.93	782.90
180.0	5164.29	4878.55	4341.20	3708.05	2863.48	2037.64	1438.07	944.22	648.01
225.0	5189.62	4942.96	4467.28	3750.99	3017.09	2184.09	1510.75	1009.90	687.21
270.0	5201.73	5065.19	4671.54	4053.80	3304.49	2465.43	1775.02	1160.04	752.62
315.0	5190.17	5089.96	4723.84	4093.44	3400.83	2542.50	1746.94	1086.32	798.54
360.0	5164.29	5201.73	4991.96	4484.34	3858.35	3031.41	2228.68	1531.67	1013.59
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	677.74	508.72	405.77	330.89	282.99	238.23	205.09	171.61	145.73
45.0	650.22	481.74	393.65	324.83	278.59	233.77	200.30	168.97	144.30
90.0	561.30	437.81	352.80	292.73	253.09	216.32	178.71	152.78	129.60
135.0	567.08	426.69	352.36	295.65	251.77	214.66	185.21	152.89	127.79
180.0	477.78	380.05	312.17	268.73	228.70	192.53	163.13	135.44	114.02
225.0	499.09	403.56	331.60	276.11	237.18	200.46	170.51	142.98	120.08
270.0	553.32	427.24	351.81	295.10	249.68	212.02	179.10	149.20	125.91
315.0	571.10	444.64	360.01	305.12	258.21	221.05	189.17	157.24	132.41
360.0	677.74	508.72	405.77	330.89	282.99	238.23	205.09	171.61	145.73
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	123.49	104.11	86.99	73.61	60.89	49.99	41.68	32.76	26.43
45.0	120.02	101.58	84.90	69.70	57.53	47.46	38.87	30.89	25.22
90.0	107.97	93.38	78.29	65.08	53.96	44.49	35.68	29.01	23.51
135.0	109.73	92.16	78.40	63.59	52.52	42.89	35.46	28.52	23.34
180.0	96.46	81.32	67.44	56.32	46.36	38.10	31.16	25.16	20.26
225.0	100.04	84.73	70.31	57.20	48.23	39.09	31.55	25.99	21.03
270.0	106.42	88.81	76.64	62.27	52.08	43.60	35.07	28.13	23.12
315.0	111.76	94.42	78.90	66.29	54.45	44.82	36.34	29.07	23.56
360.0	123.49	104.11	86.99	73.61	60.89	49.99	41.68	32.76	26.43
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	21.64	17.12	13.43	10.79	9.08	8.37	7.93	7.54	7.16
45.0	20.15	15.86	12.66	10.08	8.86	8.26	7.76	7.38	7.10
90.0	18.61	14.98	11.78	9.69	8.59	8.04	7.65	7.27	6.99
135.0	18.66	14.53	11.84	9.63	8.64	8.09	7.65	7.32	6.99
180.0	16.13	12.88	10.08	8.81	8.15	7.65	7.32	7.05	6.72
225.0	16.57	13.27	10.46	8.92	8.26	7.76	7.38	7.10	6.83
270.0	18.44	14.53	11.73	9.41	8.53	8.04	7.65	7.27	6.99
315.0	18.94	15.03	11.78	9.74	8.75	8.20	7.76	7.43	7.10
360.0	21.64	17.12	13.43	10.79	9.08	8.37	7.93	7.54	7.16
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	6.88	6.61	6.22	6.00	5.62	5.34	5.01	4.68	4.29
45.0	6.83	6.50	6.22	5.89	5.56	5.18	4.84	4.57	4.18
90.0	6.66	6.39	6.06	5.73	5.40	4.96	4.68	4.35	4.07
135.0	6.66	6.39	6.00	5.67	5.29	4.96	4.68	4.35	4.07
180.0	6.44	6.17	5.84	5.51	5.12	4.84	4.51	4.24	3.96
225.0	6.50	6.22	5.95	5.56	5.23	4.96	4.62	4.29	4.02
270.0	6.66	6.39	6.06	5.73	5.45	5.12	4.79	4.40	4.07
315.0	6.77	6.50	6.11	5.84	5.56	5.23	4.90	4.51	4.13
360.0	6.88	6.61	6.22	6.00	5.62	5.34	5.01	4.68	4.29

Intensity data(cd)

C/γ(°)	90.0
0.0	4.02
45.0	3.96
90.0	3.96
135.0	3.96
180.0	3.91
225.0	3.96
270.0	3.96
315.0	3.96
360.0	4.02