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Nata

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LumCAT: 2-1551-A2  
Luminaire: 92.76.375.00  
Report No: NT2017083117  
Test No: GC2017083117  
LampCAT: VERO SE 18  
Lamp flux(lm): 3450.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 35.0000  
Current(A): 0.9000  
Power (W): 31.5000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm): 0

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Photometric Results

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Lumens(lm): 3162.03  
Efficiency(%): 91.65%  
Lumens(lm)/Power(W): 100.38  
Central intensity(cd): 9506.313  
Maximum intensity(cd): 9506.313  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=28.4  
                                  [C90/270]Total=28.4  
Field angle(10%Imax): [C0/180]Total=63.3  
                                  [C90/270]Total=63.3  
Maximum s/h(1/2): C0\_180=0.48 C90\_270=0.48  
Maximum s/h(1/4): C0\_180=0.47 C90\_270=0.47  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 93.21%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.009%

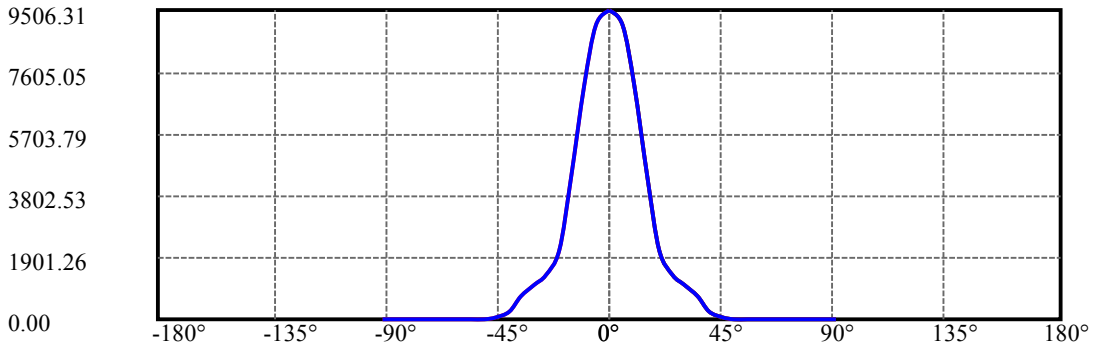
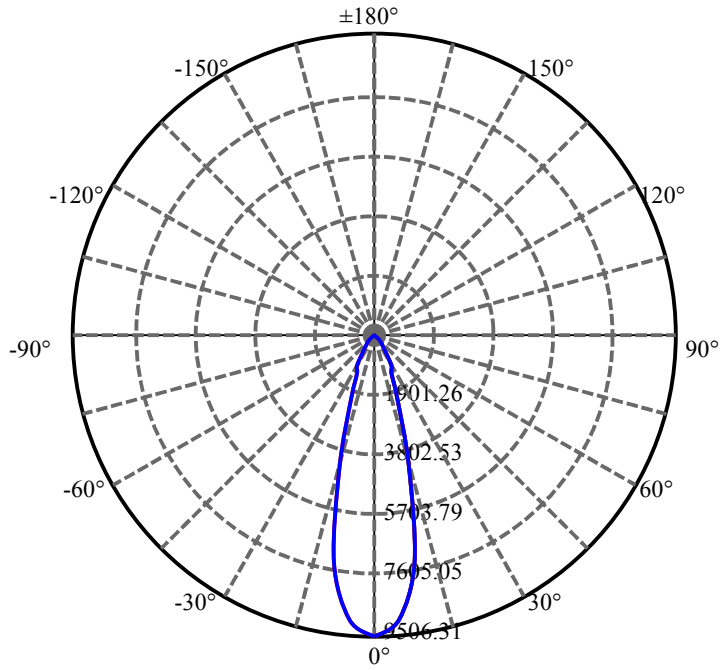
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9506.313	56.850	56.85	1.648%	1.798%
5.0	9009.429	430.410	487.26	12.476%	15.410%
10.0	7230.075	688.181	1175.441	19.947%	37.174%
15.0	4289.857	608.595	1784.036	17.640%	56.421%
20.0	2113.478	396.222	2180.258	11.485%	68.951%
25.0	1331.608	308.471	2488.729	8.941%	78.707%
30.0	1084.184	297.141	2785.87	8.613%	88.104%
35.0	679.568	213.655	2999.525	6.193%	94.861%
40.0	244.223	86.049	3085.574	2.494%	97.582%
45.0	30.673	11.889	3097.462	.345%	97.958%
50.0	17.329	7.276	3104.739	.211%	98.188%
55.0	16.386	7.358	3112.096	.213%	98.421%
60.0	15.966	7.579	3119.676	.220%	98.661%
65.0	15.560	7.730	3127.406	.224%	98.905%
70.0	15.099	7.777	3135.183	.225%	99.151%
75.0	14.659	7.761	3142.944	.225%	99.396%
80.0	14.322	7.731	3150.675	.224%	99.641%
85.0	13.916	7.599	3158.274	.220%	99.881%
90.0	13.702	3.755	3162.029	.109%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2785.87	80.75%	88.10%
0-40	3085.57	89.44%	97.58%
0-60	3119.68	90.43%	98.66%
0-90	3158.27	91.54%	99.88%
0-120	3158.27	91.54%	99.88%
0-180	3162.03	91.65%	100.00%
60-90	46.18	1.34%	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%
0-25.69	2529.62	73.32%	80.00%

ZONAL LUMEN SUMMARY

0-10	1175.44
10-20	1004.82
20-30	605.61
30-40	299.70
40-50	19.17
50-60	14.94
60-70	15.51
70-80	15.49
80-90	7.60
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: —————

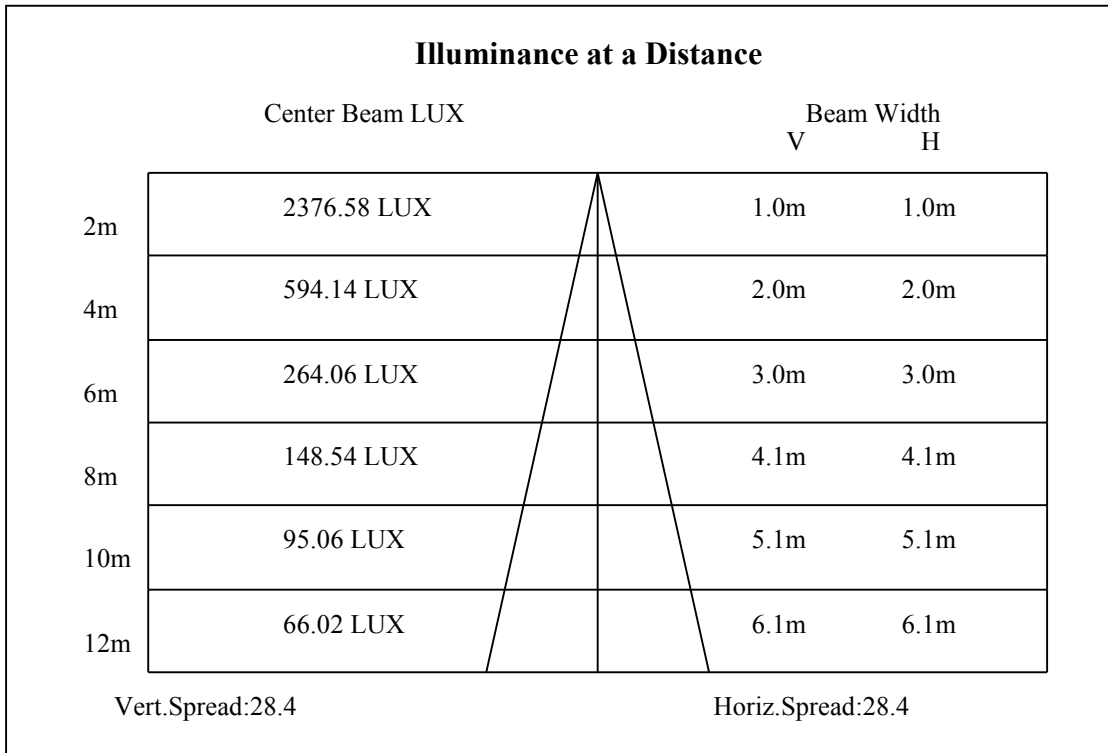
C90/C270: —————

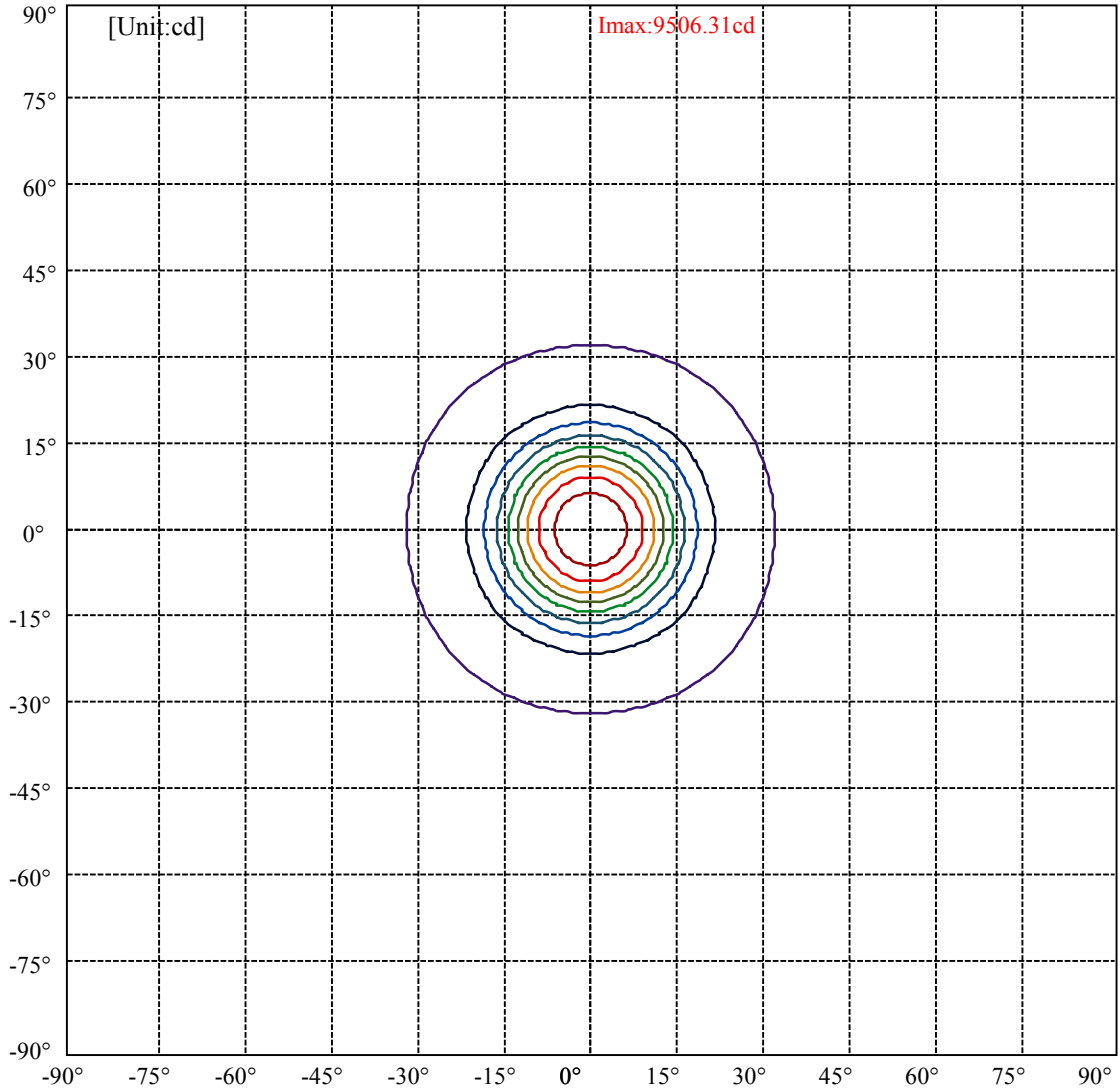
Field angle(10%Imax):C0/180Left:31.7 Right:31.7

:C90/270Left:31.7 Right:31.7

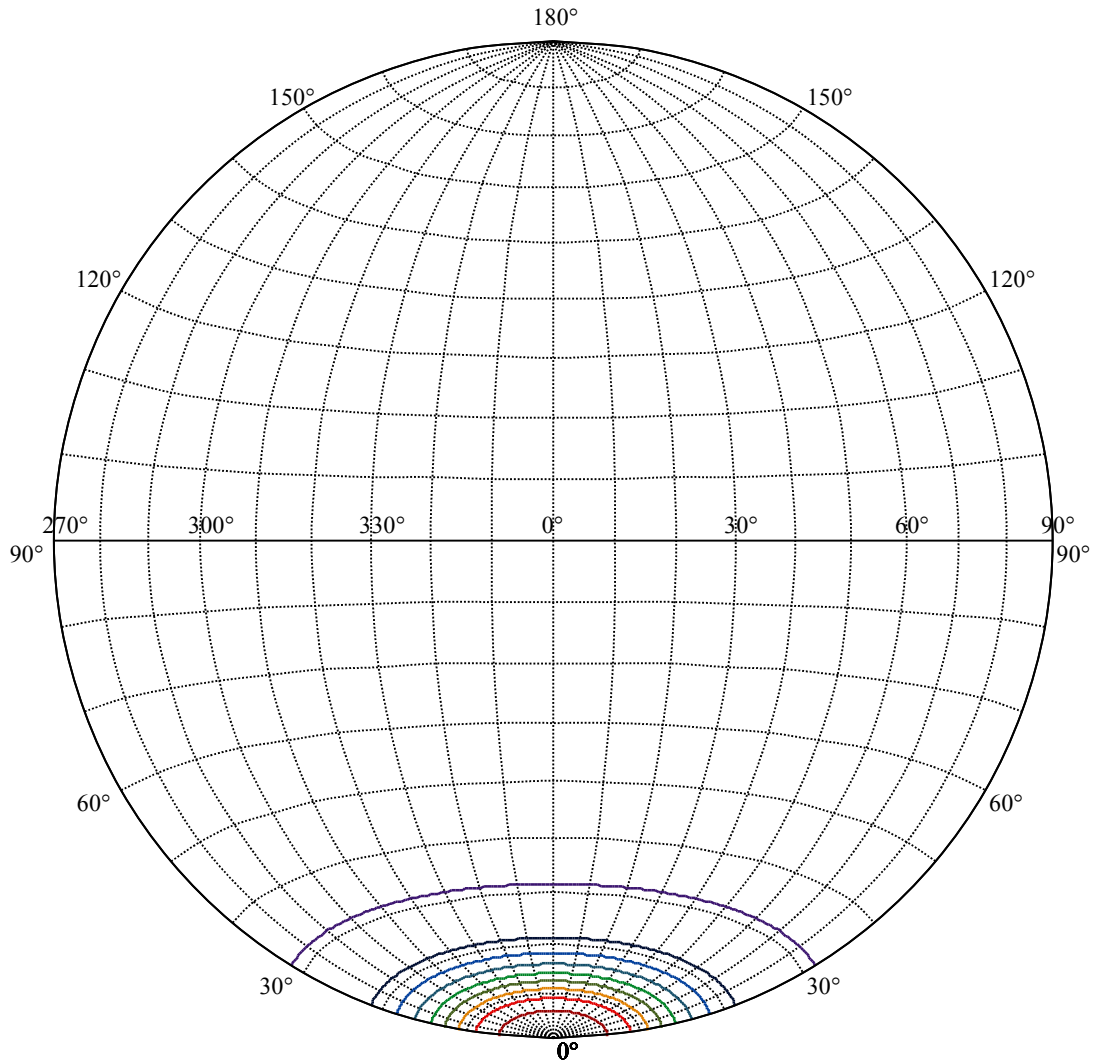
Beam Angle(50%Imax):C0/180Left:14.2 Right:14.2

:C90/270Left:14.2 Right:14.2





(10%Imax) 950.631	—
(20%Imax) 1901.26	—
(30%Imax) 2851.89	—
(40%Imax) 3802.53	—
(50%Imax) 4753.16	—
(60%Imax) 5703.79	—
(70%Imax) 6654.42	—
(80%Imax) 7605.05	—
(90%Imax) 8555.68	—



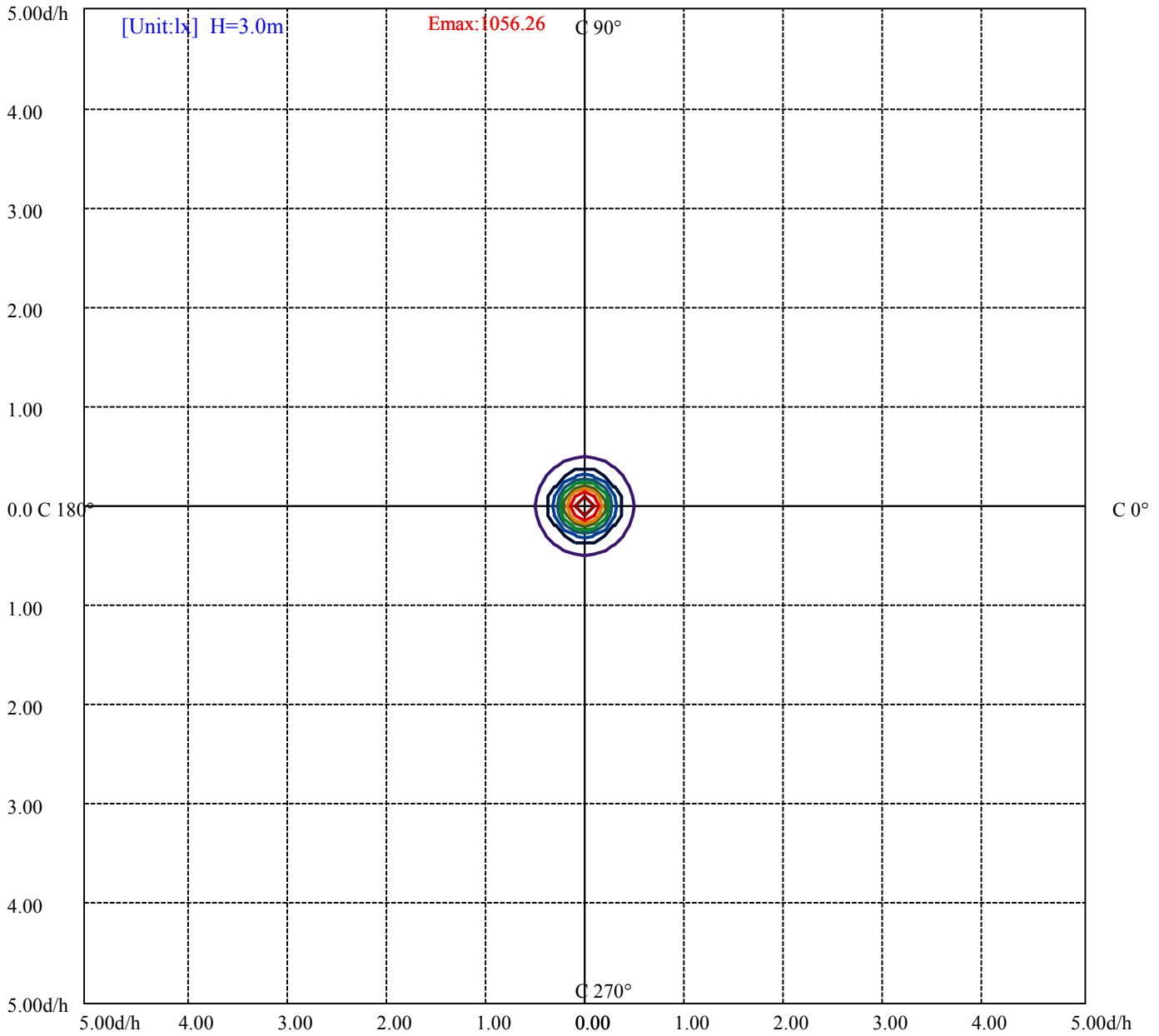
House

[Unit:cd]

Road

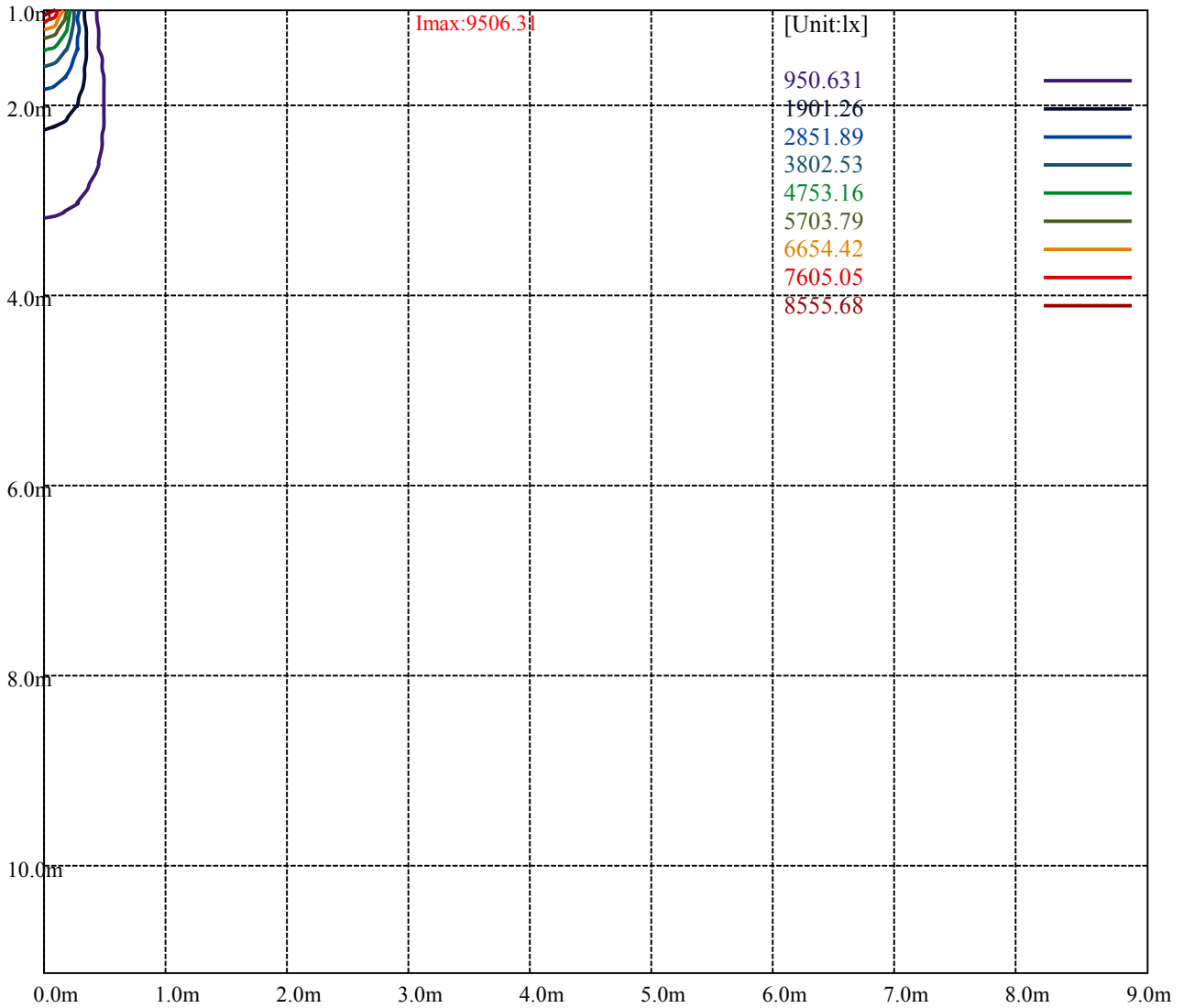
**Imax:9506.31**

(10%Imax)	950.631	—
(20%Imax)	1901.26	—
(30%Imax)	2851.89	—
(40%Imax)	3802.53	—
(50%Imax)	4753.16	—
(60%Imax)	5703.79	—
(70%Imax)	6654.42	—
(80%Imax)	7605.05	—
(90%Imax)	8555.68	—



- (10%Emax) 105.6256
- (20%Emax) 211.2511
- (30%Emax) 316.8766
- (40%Emax) 422.5022
- (50%Emax) 528.1277
- (60%Emax) 633.7533
- (70%Emax) 739.3789
- (80%Emax) 845.0045
- (90%Emax) 950.63





Luminance Table

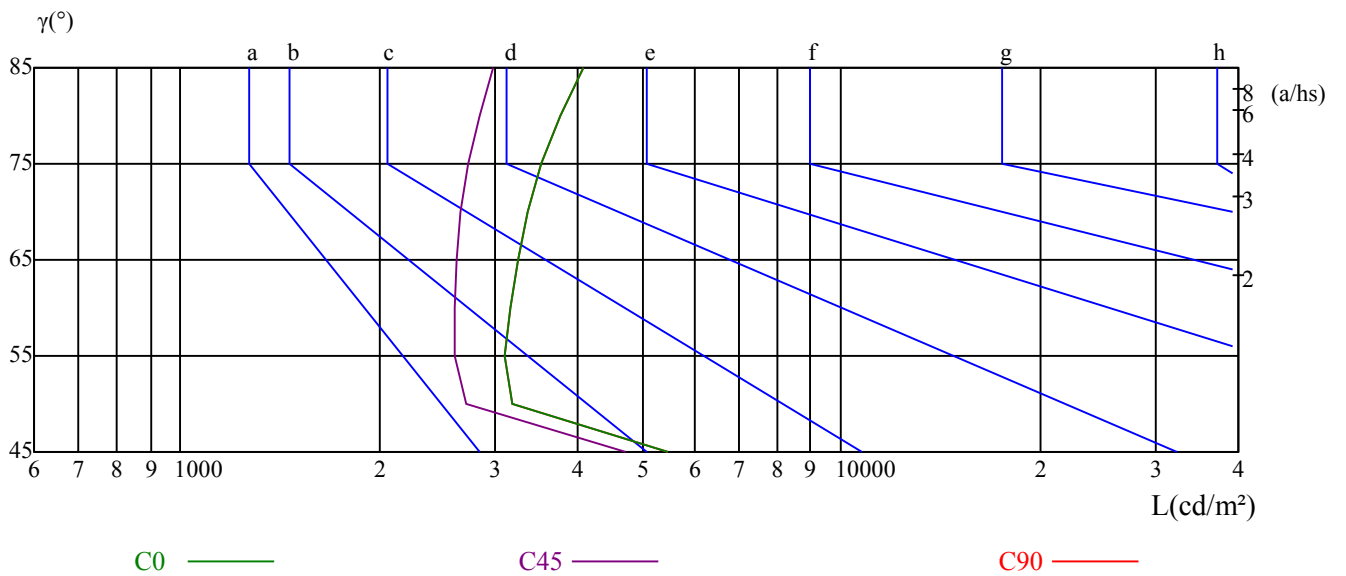
$\gamma$	45	50	55	60	65	70	75	80	85
C0	5484	3176	3106	3157	3243	3352	3511	3754	4062
C45	4737	2703	2602	2602	2625	2660	2725	2840	2981
C90	5484	3176	3106	3157	3243	3352	3511	3754	4062

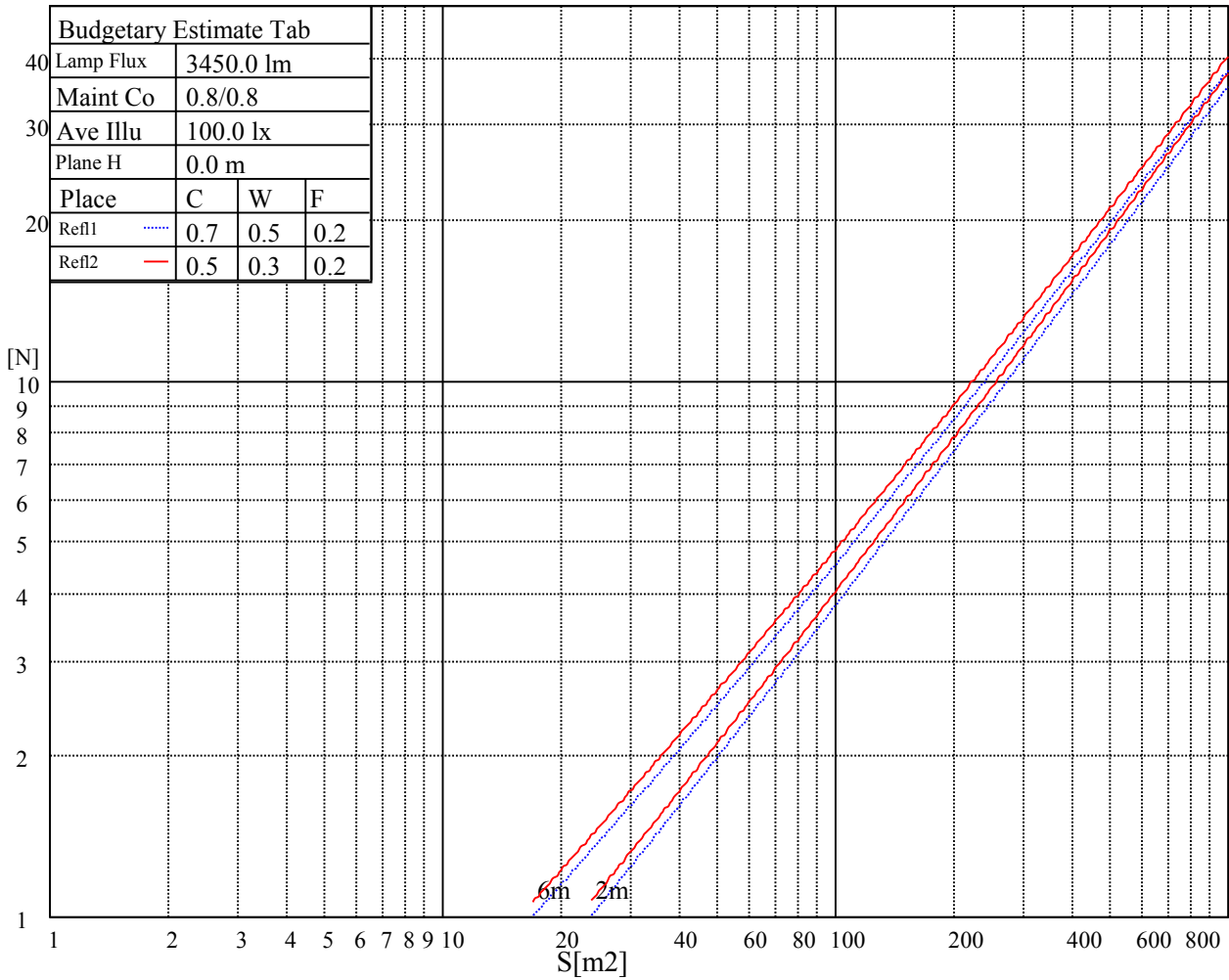
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7514	7514	7514	11559	11559	11559	32584	32584	32584

Glare Table

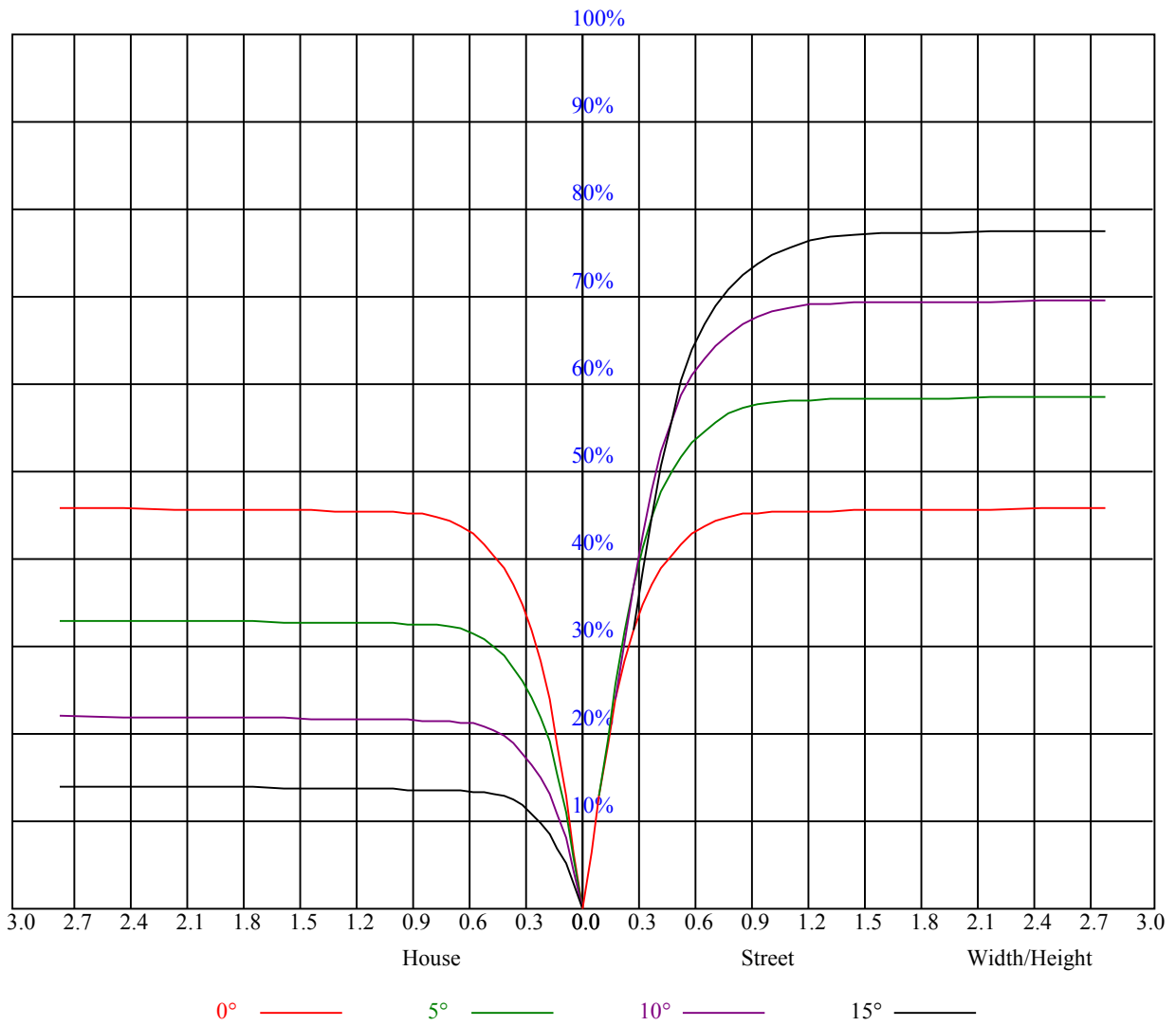
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.11	1.11	1.11	1.08	1.08	1.08	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.02	1.00	0.98	1.00	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.86
2	0.97	0.94	0.91	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.86	0.87	0.85	0.84	0.82
3	0.92	0.88	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.82	0.81	0.79
4	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.76
5	0.85	0.80	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.75	0.73
6	0.81	0.77	0.74	0.81	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
8	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.67	0.66
9	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.65	0.64
10	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.69	0.66	0.63	0.63



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	9502.73	9114.59	7460.14	4665.48	2257.86	1340.62	1084.06	709.13	287.39
45.0	9502.18	9219.74	7685.87	4880.20	2414.77	1389.07	1103.88	721.79	286.84
90.0	9527.51	9000.62	7277.91	4308.16	2097.10	1351.63	1084.39	646.91	221.33
135.0	9492.82	9262.69	7729.92	4783.30	2339.90	1412.75	1123.15	750.97	297.30
180.0	9502.73	8956.58	7058.78	4013.61	2007.91	1305.94	1072.72	671.19	205.80
225.0	9502.18	8862.43	6798.36	3721.26	1906.60	1278.96	1060.17	648.62	202.28
270.0	9527.51	8955.47	7166.69	4163.92	2037.64	1324.66	1103.33	690.96	299.51
315.0	9492.82	8703.32	6662.93	3782.93	1846.04	1249.23	1041.78	596.98	153.33
360.0	9502.73	9114.59	7460.14	4665.48	2257.86	1340.62	1084.06	709.13	287.39

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	27.20	16.24	15.42	15.36	15.20	14.53	13.98	13.87	13.76
45.0	27.80	17.62	16.68	16.24	15.97	15.47	14.92	14.48	14.09
90.0	28.90	19.10	17.56	16.68	16.02	15.58	15.14	14.65	14.04
135.0	30.39	17.40	16.52	16.13	15.75	15.42	14.92	14.53	13.98
180.0	29.01	15.80	15.31	15.36	14.92	14.31	13.98	13.93	13.71
225.0	36.34	17.12	16.41	15.97	15.58	15.14	14.65	14.26	13.98
270.0	37.60	18.50	17.07	16.30	15.69	15.31	14.98	14.59	13.93
315.0	28.13	16.85	16.13	15.69	15.36	15.03	14.70	14.26	13.82
360.0	27.20	16.24	15.42	15.36	15.20	14.53	13.98	13.87	13.76

C/γ(°)	90.0
0.0	13.60
45.0	13.87
90.0	13.71
135.0	13.65
180.0	13.60
225.0	13.82
270.0	13.71
315.0	13.65
360.0	13.60