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## Nata

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LumCAT: 2-1552-A2	
Luminaire: 92.76.375.00	
Report No: NT2017083118	Voltage(V): 35.0000
Test No: GC2017083118	Current(A): 0.9000
LampCAT: bridgelux VERO SE 18B	Power (W): 31.5000
Lamp flux(lm): 3450.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 3165.63  
Efficiency(%): 91.76%  
Lumens(lm)/Power(W): 100.50  
Central intensity(cd): 13787.500  
Maximum intensity(cd): 13787.500  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=21.7  
                                  [C90/270]Total=21.7  
Field angle(10%Imax): [C0/180]Total=48.5  
                                  [C90/270]Total=48.5  
Maximum s/h(1/2): C0\_180=0.37 C90\_270=0.37  
Maximum s/h(1/4): C0\_180=0.36 C90\_270=0.36  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 94.06%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.274%

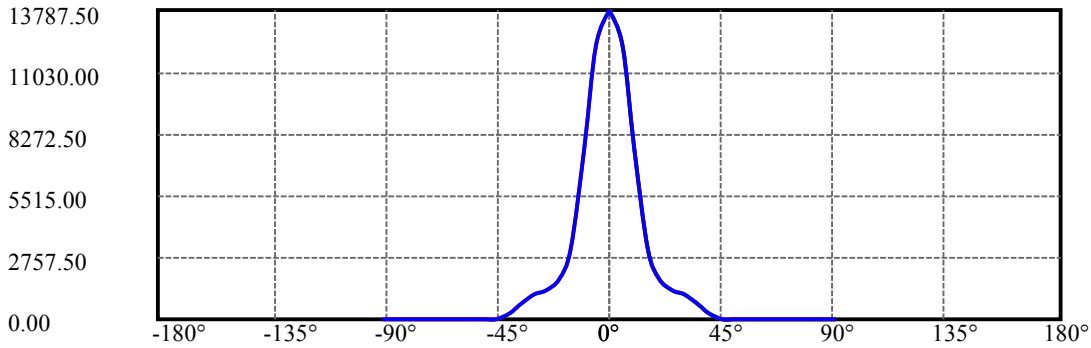
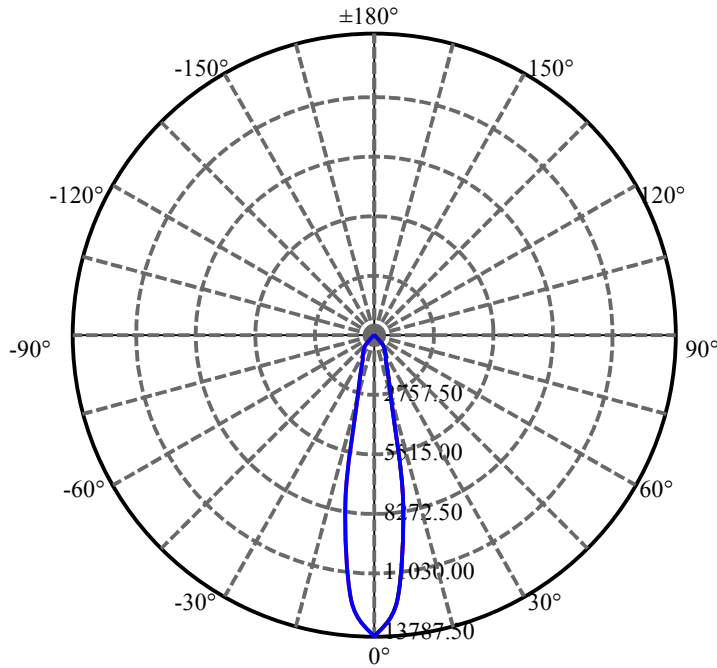
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13787.499	82.452	82.452	2.390%	2.605%
5.0	12185.014	582.119	664.571	16.873%	20.993%
10.0	7646.783	727.844	1392.415	21.097%	43.985%
15.0	3179.851	451.120	1843.535	13.076%	58.236%
20.0	1817.205	340.679	2184.214	9.875%	68.998%
25.0	1300.363	301.233	2485.447	8.731%	78.513%
30.0	1102.319	302.111	2787.558	8.757%	88.057%
35.0	692.355	217.675	3005.233	6.309%	94.933%
40.0	247.093	87.060	3092.293	2.523%	97.683%
45.0	27.205	10.544	3102.837	.306%	98.016%
50.0	16.434	6.901	3109.738	.200%	98.234%
55.0	15.849	7.116	3116.855	.206%	98.459%
60.0	15.409	7.315	3124.169	.212%	98.690%
65.0	14.927	7.416	3131.585	.215%	98.925%
70.0	14.597	7.519	3139.103	.218%	99.162%
75.0	14.335	7.590	3146.693	.220%	99.402%
80.0	14.108	7.616	3154.309	.221%	99.642%
85.0	13.867	7.572	3161.881	.219%	99.882%
90.0	13.682	3.750	3165.631	.109%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2787.56	80.80%	88.06%
0-40	3092.29	89.63%	97.68%
0-60	3124.17	90.56%	98.69%
0-90	3161.88	91.65%	99.88%
0-120	3161.88	91.65%	99.88%
0-180	3165.63	91.76%	100.00%
60-90	45.03	1.31%	1.42%
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%
0-25.78	2532.51	73.41%	80.00%

ZONAL LUMEN SUMMARY

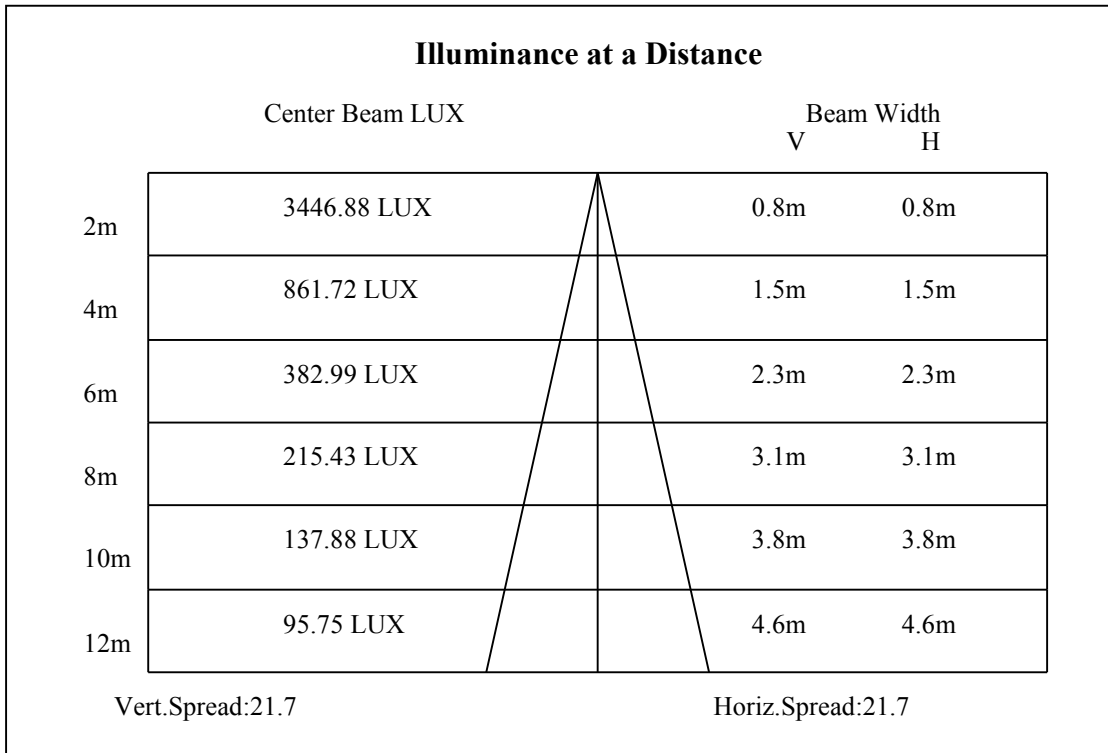
0-10	1392.41
10-20	791.80
20-30	603.34
30-40	304.74
40-50	17.45
50-60	14.43
60-70	14.93
70-80	15.21
80-90	7.57
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

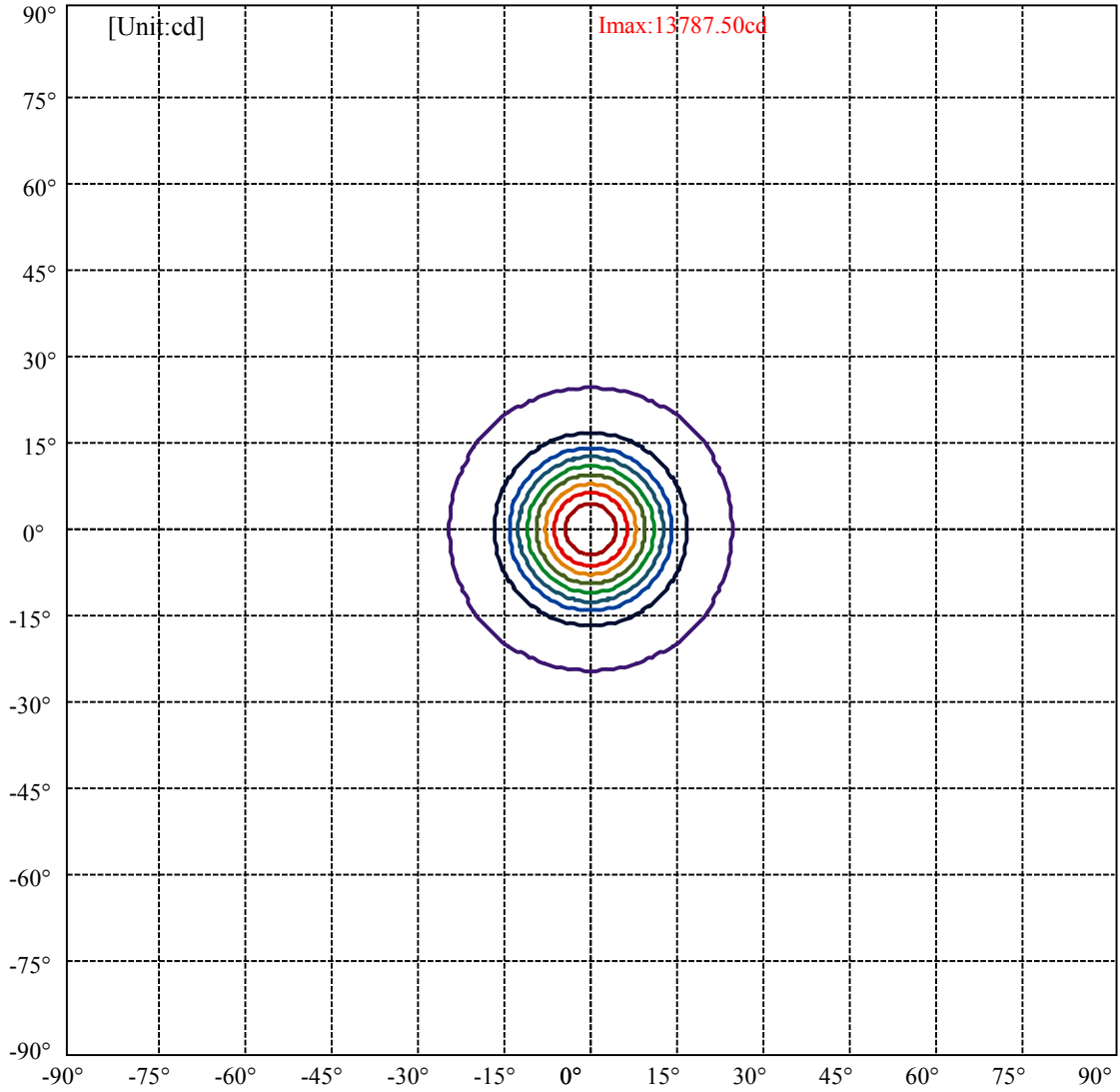


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

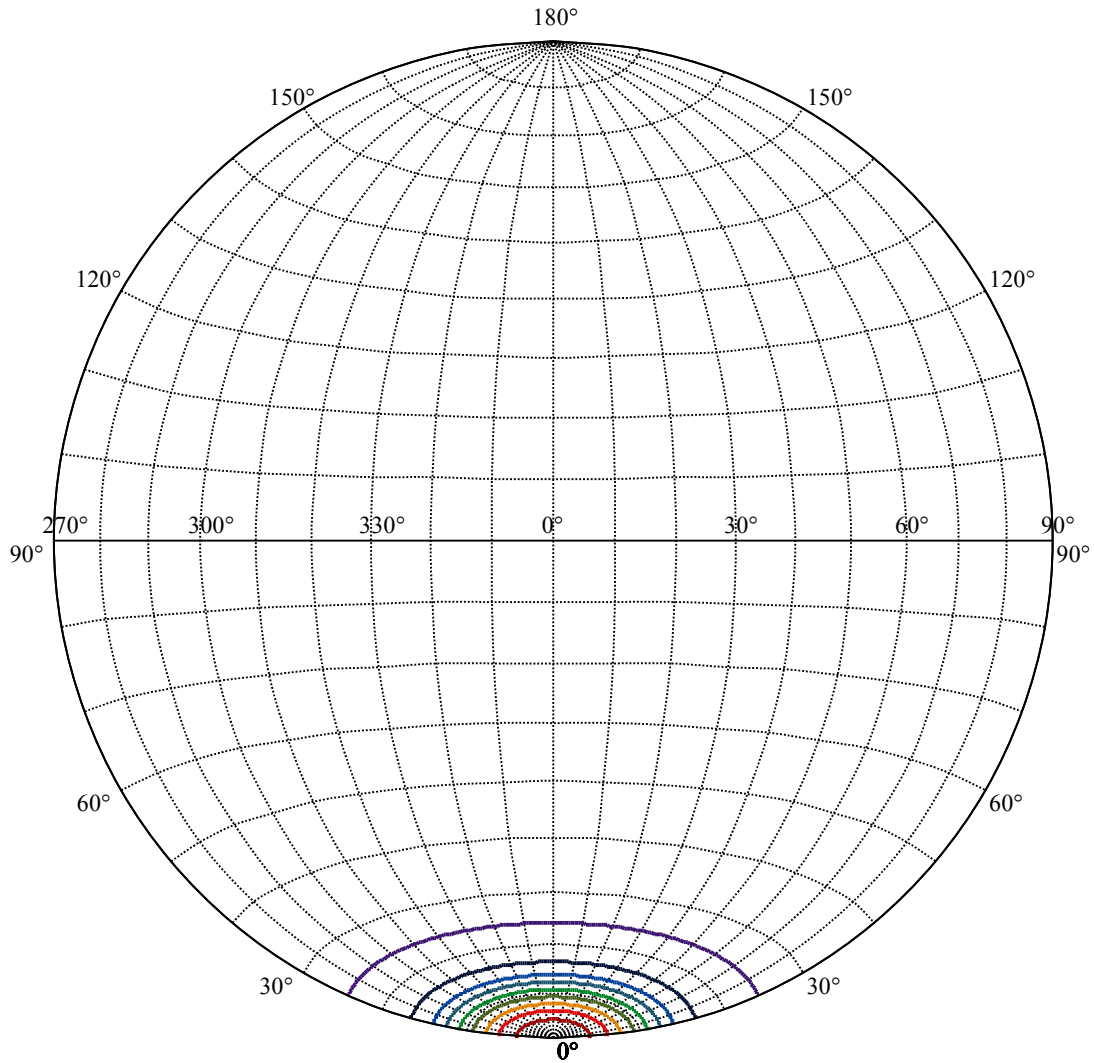
Field angle(10%Imax):C0/180Left:24.2 Right:24.2  
:C90/270Left:24.2 Right:24.2

Beam Angle(50%Imax):C0/180Left:10.8 Right:10.8  
:C90/270Left:10.8 Right:10.8





(10%I <sub>max</sub> ) 1378.75	—
(20%I <sub>max</sub> ) 2757.5	—
(30%I <sub>max</sub> ) 4136.25	—
(40%I <sub>max</sub> ) 5515	—
(50%I <sub>max</sub> ) 6893.75	—
(60%I <sub>max</sub> ) 8272.5	—
(70%I <sub>max</sub> ) 9651.25	—
(80%I <sub>max</sub> ) 11030	—
(90%I <sub>max</sub> ) 12408.7	—



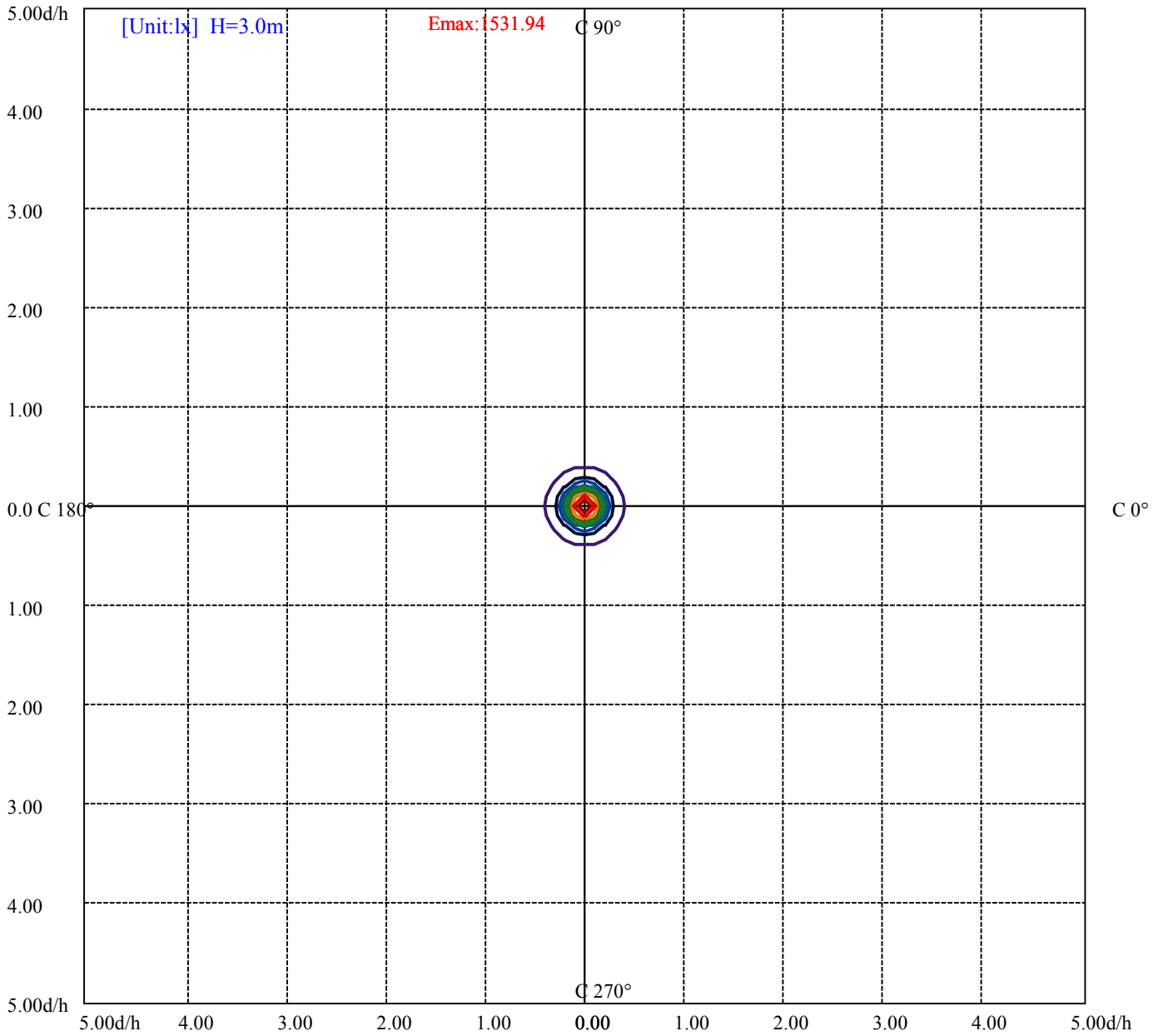
House

[Unit:cd]

Road

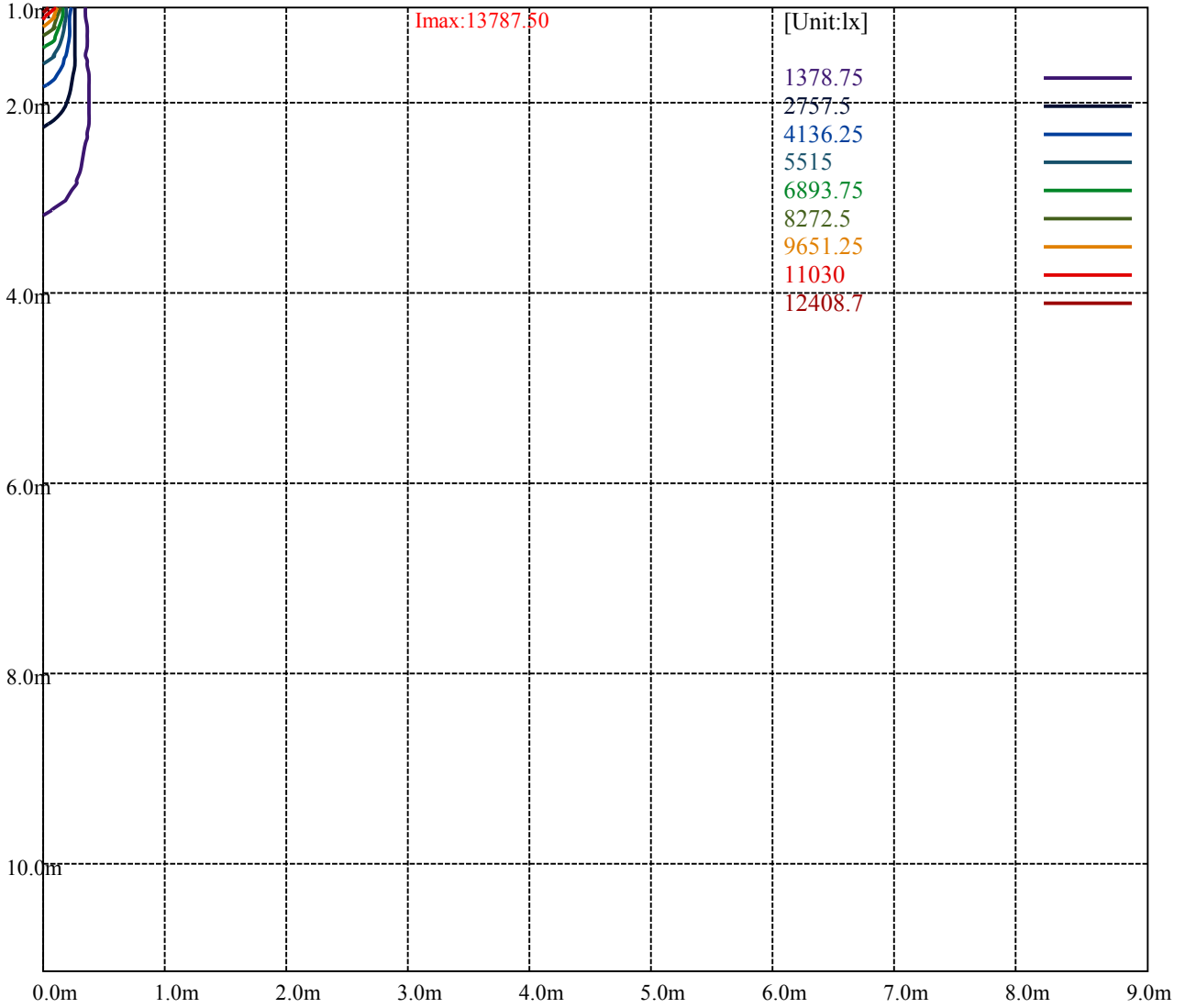
Imax:13787.50

(10%Imax)	1378.75	—
(20%Imax)	2757.5	—
(30%Imax)	4136.25	—
(40%Imax)	5515	—
(50%Imax)	6893.75	—
(60%Imax)	8272.5	—
(70%Imax)	9651.25	—
(80%Imax)	11030	—
(90%Imax)	12408.7	—



(10%Emax) 153.1933	—
(20%Emax) 306.3878	—
(30%Emax) 459.5811	—
(40%Emax) 612.7756	—
(50%Emax) 765.97	—
(60%Emax) 919.1633	—
(70%Emax) 1072.357	—
(80%Emax) 1225.556	—
(90%Emax) 1378.745	—





Luminance Table

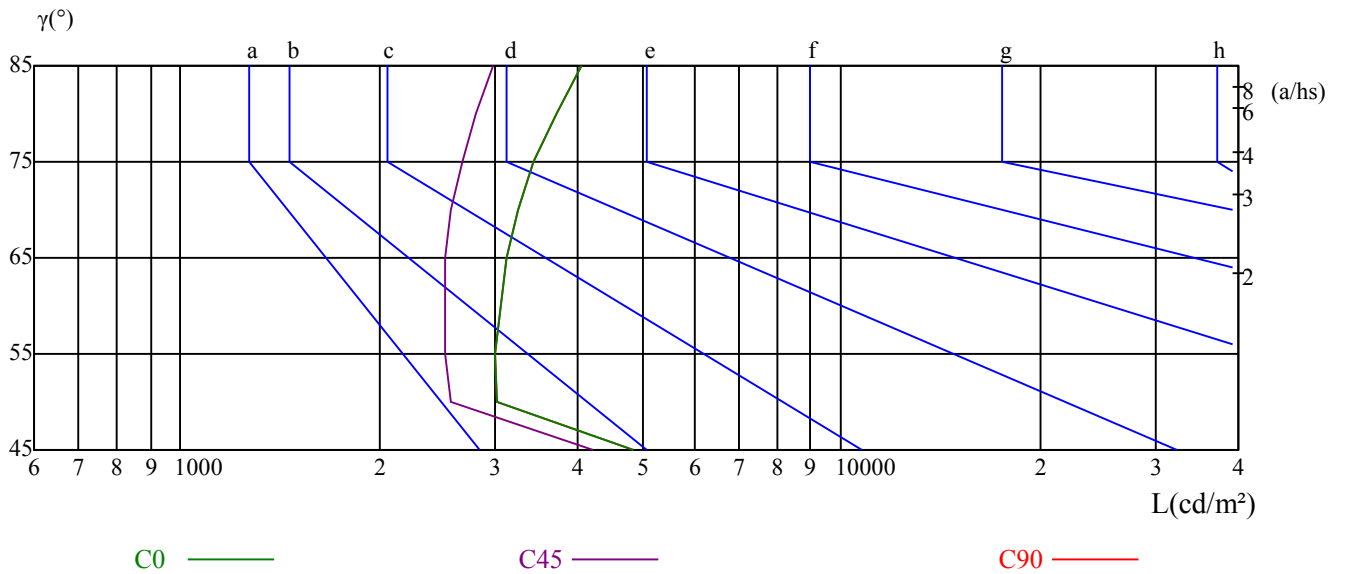
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4864	3012	3004	3047	3111	3241	3433	3698	4048
C45	4202	2564	2517	2511	2518	2572	2665	2798	2971
C90	4864	3012	3004	3047	3111	3241	3433	3698	4048

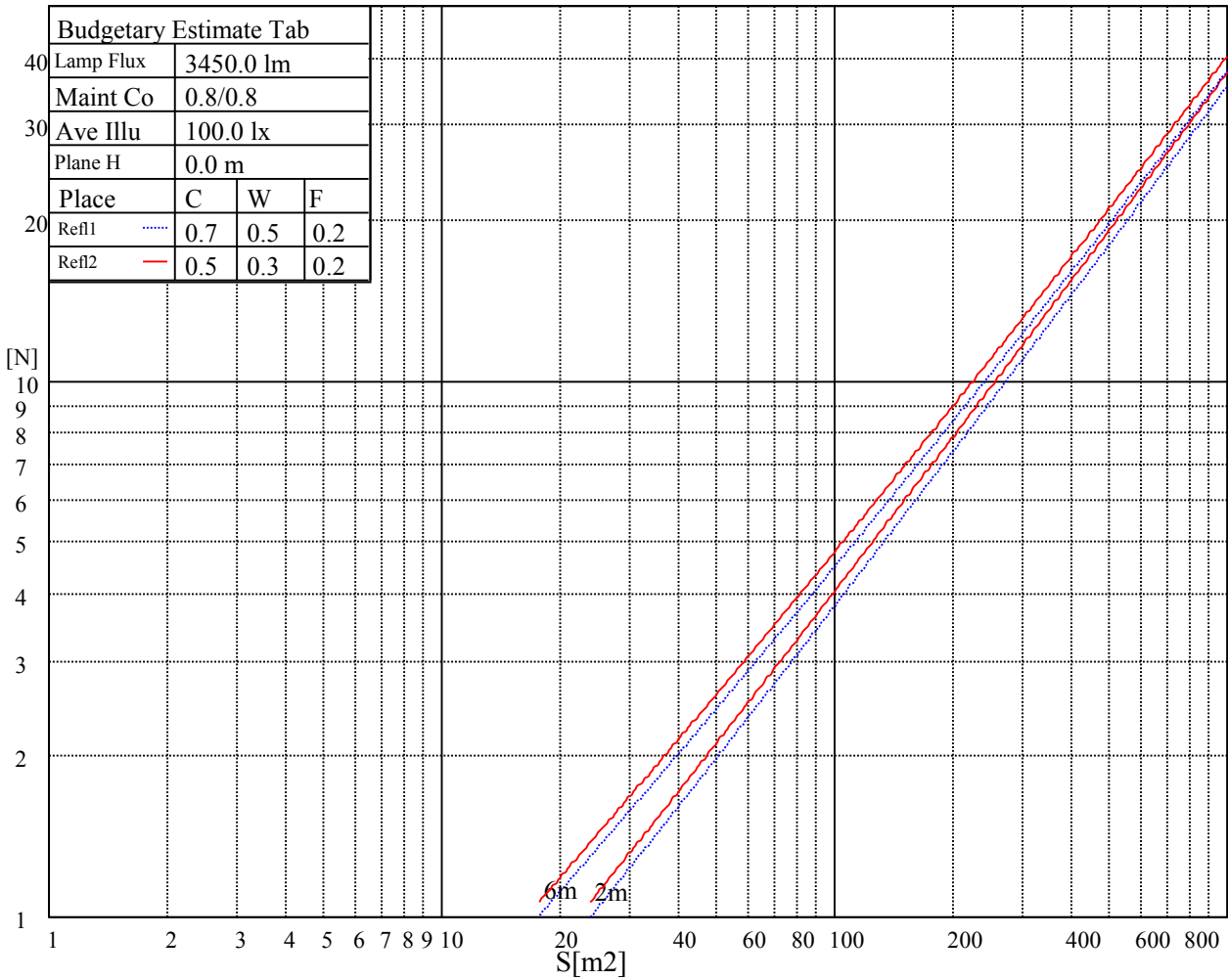
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7208	7208	7208	11304	11304	11304	32471	32471	32471

Glare Table

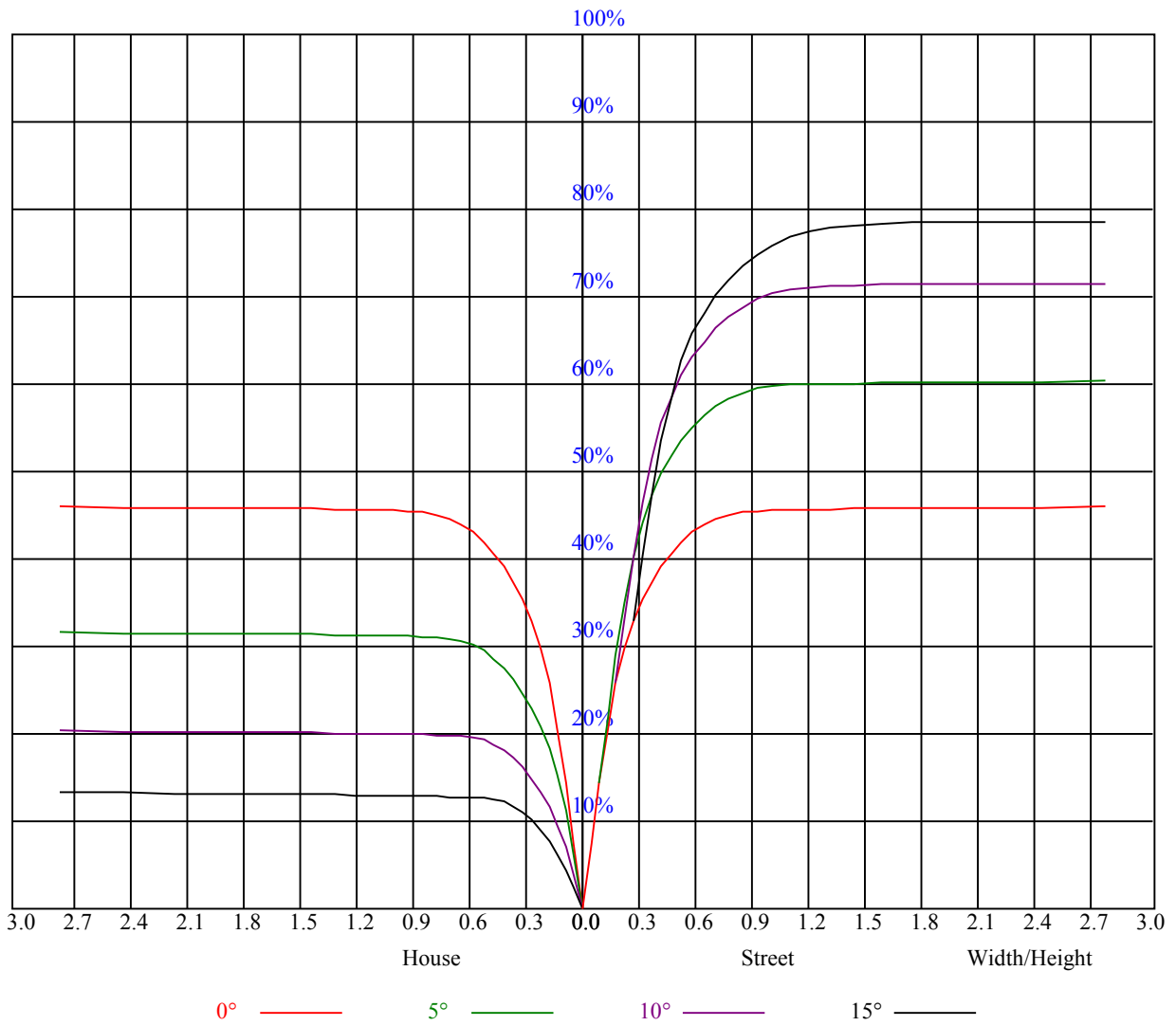
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.03	1.00	0.97	1.01	0.98	0.96	0.97	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.87	0.86
2	0.97	0.94	0.90	0.96	0.92	0.89	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.85	0.84	0.82
3	0.93	0.89	0.85	0.91	0.88	0.85	0.89	0.86	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.79
4	0.89	0.84	0.81	0.88	0.84	0.80	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.76
5	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
7	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.69
8	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.67
9	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.67	0.66
10	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64



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	13775.11	12817.13	8203.40	3545.63	1870.82	1312.54	1123.70	745.46	291.25
45.0	13813.65	12602.41	7614.30	3033.61	1812.46	1310.89	1111.04	710.78	289.60
90.0	13758.59	10806.47	6202.65	2672.44	1631.87	1261.89	1052.68	589.21	163.19
135.0	13802.64	12569.38	7465.65	3171.25	1821.27	1319.70	1118.20	727.30	294.00
180.0	13775.11	10960.08	6980.60	2910.28	1765.11	1291.07	1086.65	626.49	194.68
225.0	13813.65	12222.52	7648.99	3095.27	1816.31	1293.83	1088.52	676.48	216.92
270.0	13758.59	13279.60	9359.59	3798.89	2029.38	1343.38	1144.07	770.79	303.36
315.0	13802.64	12222.52	7699.09	3211.44	1790.43	1269.60	1093.70	692.33	223.75
360.0	13775.11	12817.13	8203.40	3545.63	1870.82	1312.54	1123.70	745.46	291.25

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	24.17	16.19	15.75	15.58	14.92	14.31	14.09	13.98	13.87
45.0	21.80	16.52	15.91	15.58	15.09	14.76	14.42	14.15	13.82
90.0	20.98	16.79	16.08	15.42	15.14	14.87	14.59	14.15	13.82
135.0	34.30	16.41	15.86	15.47	15.03	14.70	14.42	14.15	13.87
180.0	27.53	15.58	15.42	15.03	14.31	13.98	13.87	13.82	13.82
225.0	25.82	16.24	15.69	15.20	14.81	14.48	14.26	14.04	13.76
270.0	33.80	17.29	16.30	15.58	15.09	14.92	14.65	14.37	13.98
315.0	29.23	16.46	15.80	15.42	15.03	14.76	14.37	14.20	13.98
360.0	24.17	16.19	15.75	15.58	14.92	14.31	14.09	13.98	13.87

C/γ(°)	90.0
0.0	13.71
45.0	13.60
90.0	13.65
135.0	13.71
180.0	13.76
225.0	13.60
270.0	13.71
315.0	13.71
360.0	13.71