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Nata

LumCAT: 3-1549-A3
Luminaire: 99.02.73.172+92.76.365.00
Report No: NATA0100
Test No: GC2018082806
LampCAT: BRIDGELUX V13B
Lamp flux(lm): 2575.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.5000
Power (W): 17.0000
PF: 0.0000
Ballast type: DC
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 2363.04
Efficiency(%): 91.77%
Lumens(lm)/Power(W): 139.00
Central intensity(cd): 9825.227
Maximum intensity(cd): 9825.227
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=22.3
 [C90/270]Total=22.3
Field angle(10%Imax): [C0/180]Total=51.2
 [C90/270]Total=51.2
Maximum s/h(1/2): C0_180=0.38 C90_270=0.38
Maximum s/h(1/4): C0_180=0.39 C90_270=0.39
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.96%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.400%

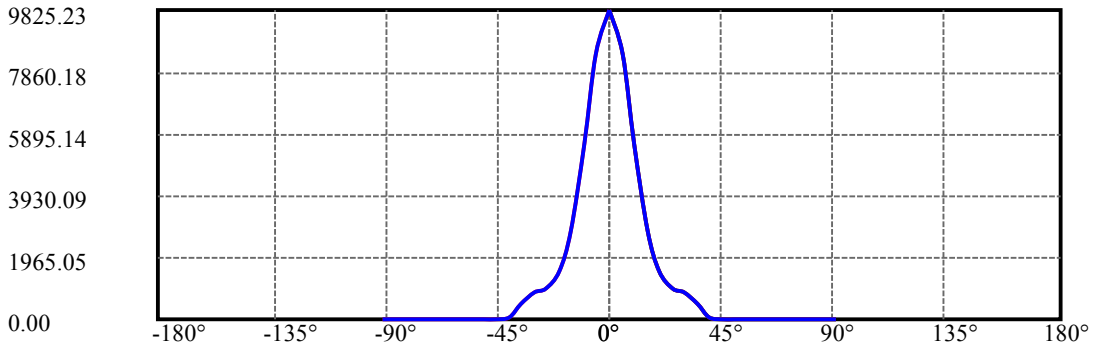
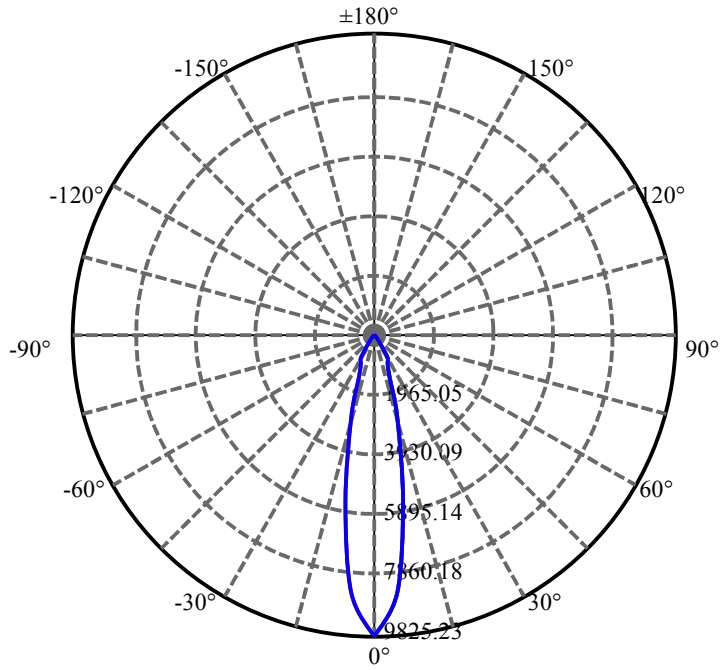
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9825.228	58.757	58.757	2.282%	2.486%
5.0	8405.529	401.560	460.317	15.595%	19.480%
10.0	5555.466	528.786	989.103	20.535%	41.857%
15.0	2814.827	399.335	1388.438	15.508%	58.757%
20.0	1496.295	280.517	1668.955	10.894%	70.628%
25.0	1002.990	232.346	1901.3	9.023%	80.460%
30.0	835.440	228.968	2130.268	8.892%	90.150%
35.0	483.815	152.111	2282.379	5.907%	96.587%
40.0	79.969	28.176	2310.555	1.094%	97.779%
45.0	17.047	6.607	2317.162	.257%	98.059%
50.0	11.878	4.988	2322.15	.194%	98.270%
55.0	11.321	5.083	2327.233	.197%	98.485%
60.0	10.970	5.207	2332.441	.202%	98.705%
65.0	10.743	5.337	2337.777	.207%	98.931%
70.0	10.647	5.484	2343.261	.213%	99.163%
75.0	10.550	5.586	2348.847	.217%	99.400%
80.0	10.474	5.654	2354.501	.220%	99.639%
85.0	10.468	5.716	2360.217	.222%	99.881%
90.0	10.289	2.820	2363.037	.110%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2130.27	82.73%	90.15%
0-40	2310.55	89.73%	97.78%
0-60	2332.44	90.58%	98.71%
0-90	2360.22	91.66%	99.88%
0-120	2360.22	91.66%	99.88%
0-180	2363.04	91.77%	100.00%
60-90	32.98	1.28%	1.40%
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%
0-24.77	1890.43	73.41%	80.00%

ZONAL LUMEN SUMMARY

0-10	989.10
10-20	679.85
20-30	461.31
30-40	180.29
40-50	11.59
50-60	10.29
60-70	10.82
70-80	11.24
80-90	5.72
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: —————

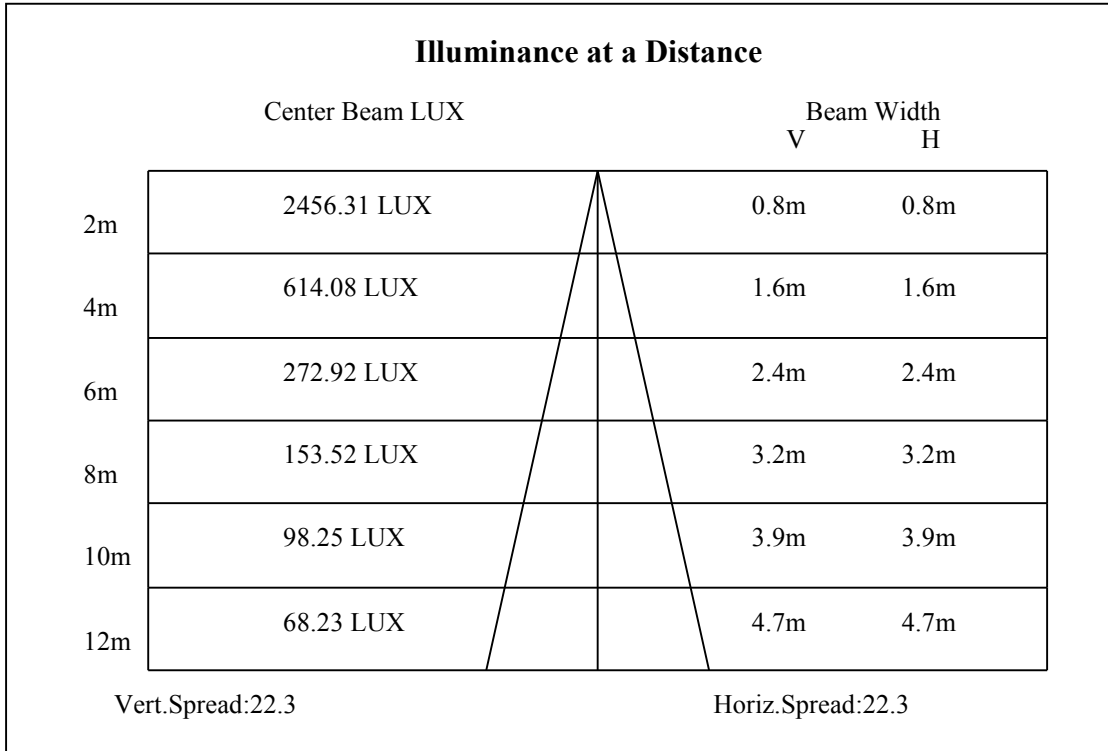
C90/C270: —————

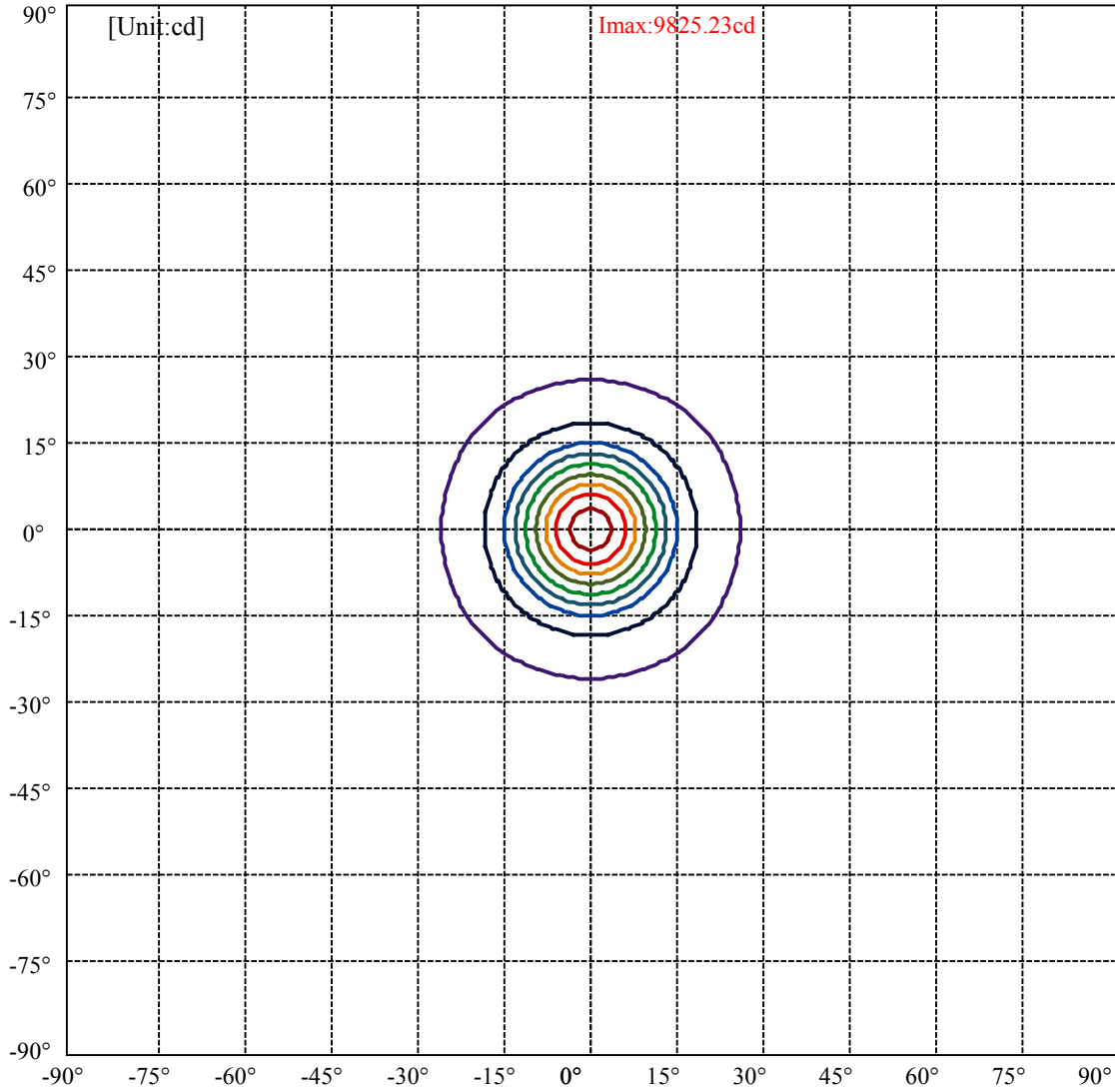
Field angle(10%Imax):C0/180Left:25.6 Right:25.6

:C90/270Left:25.6 Right:25.6

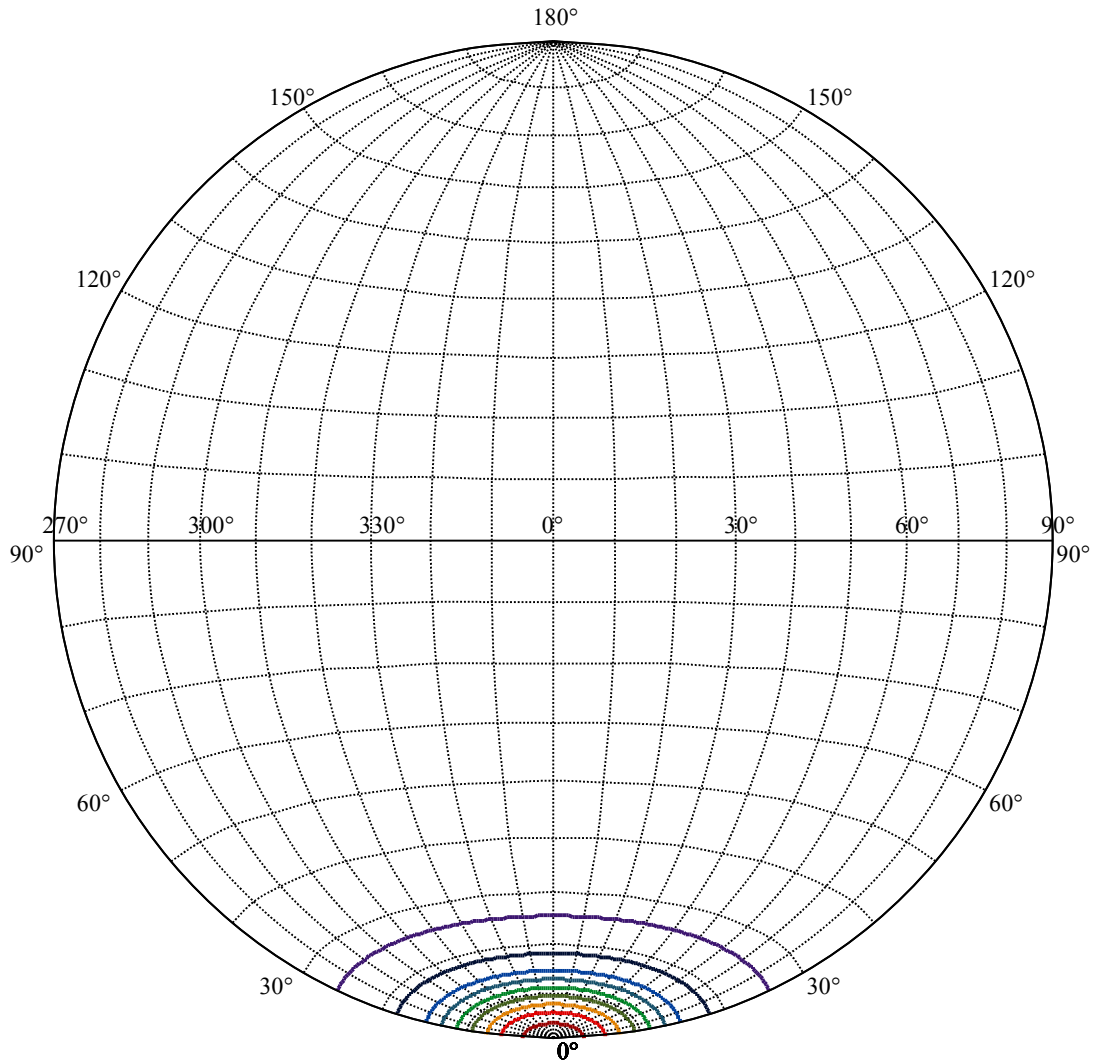
Beam Angle(50%Imax):C0/180Left:11.2 Right:11.2

:C90/270Left:11.2 Right:11.2





(10%Imax) 982.523	—
(20%Imax) 1965.05	—
(30%Imax) 2947.57	—
(40%Imax) 3930.09	—
(50%Imax) 4912.61	—
(60%Imax) 5895.14	—
(70%Imax) 6877.66	—
(80%Imax) 7860.18	—
(90%Imax) 8842.7	—



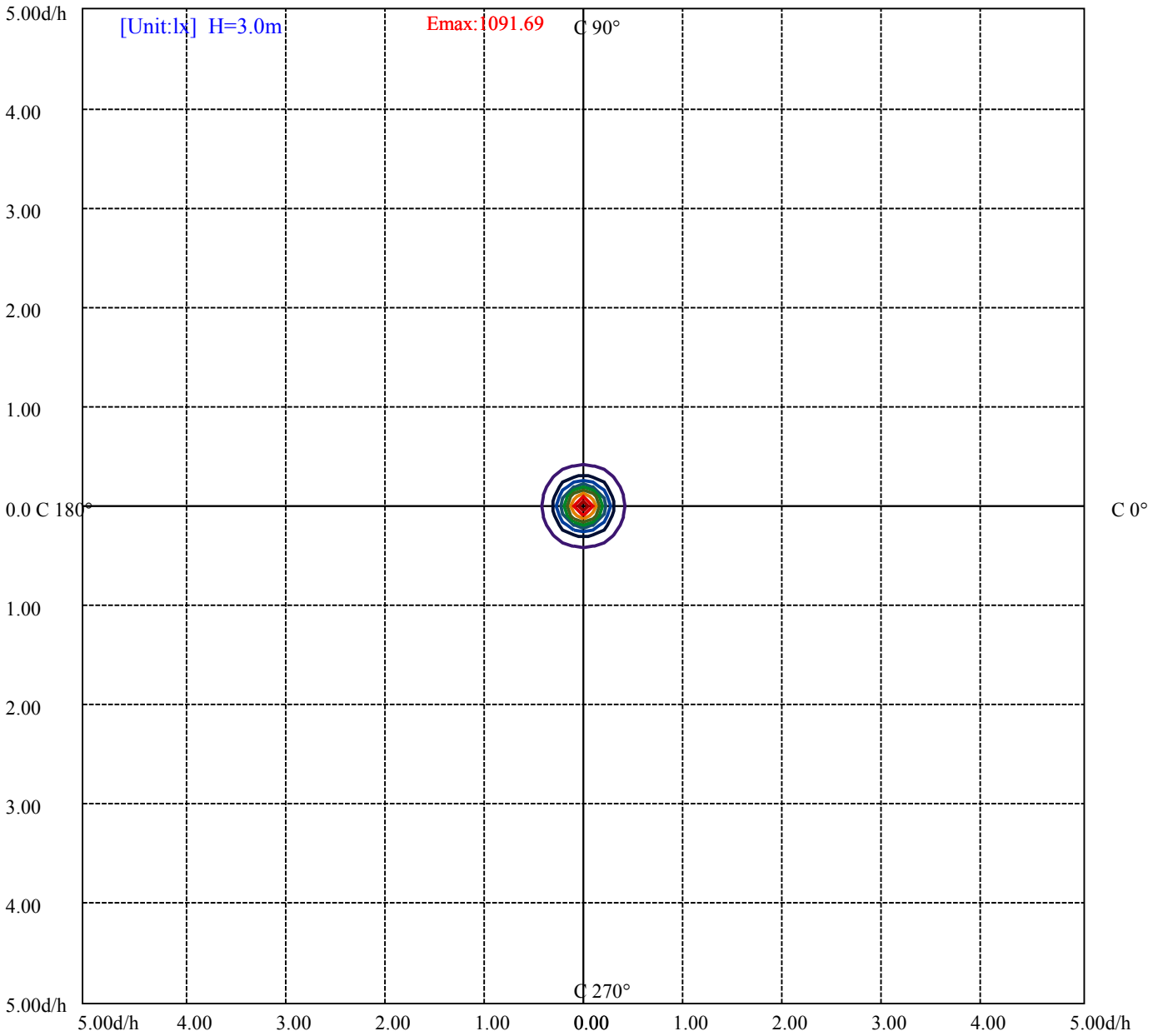
House

[Unit:cd]

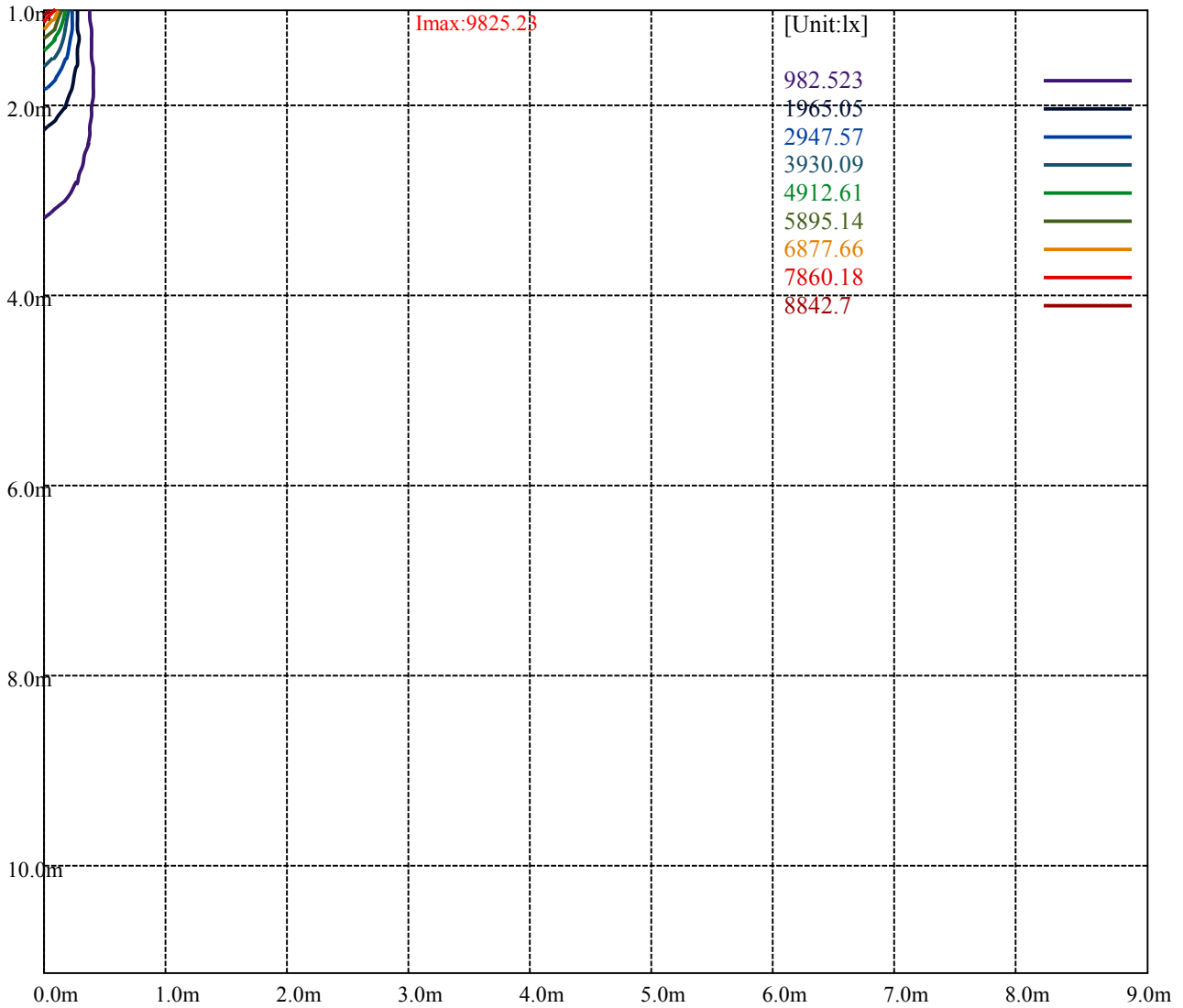
Road

Imax:9825.23

(10%Imax)	982.523	—
(20%Imax)	1965.05	—
(30%Imax)	2947.57	—
(40%Imax)	3930.09	—
(50%Imax)	4912.61	—
(60%Imax)	5895.14	—
(70%Imax)	6877.66	—
(80%Imax)	7860.18	—
(90%Imax)	8842.7	—



(10%Emax) 109.1687	—
(20%Emax) 218.3378	—
(30%Emax) 327.5067	—
(40%Emax) 436.6744	—
(50%Emax) 545.8433	—
(60%Emax) 655.0122	—
(70%Emax) 764.1811	—
(80%Emax) 873.35	—
(90%Emax) 982.5189	—



Luminance Table

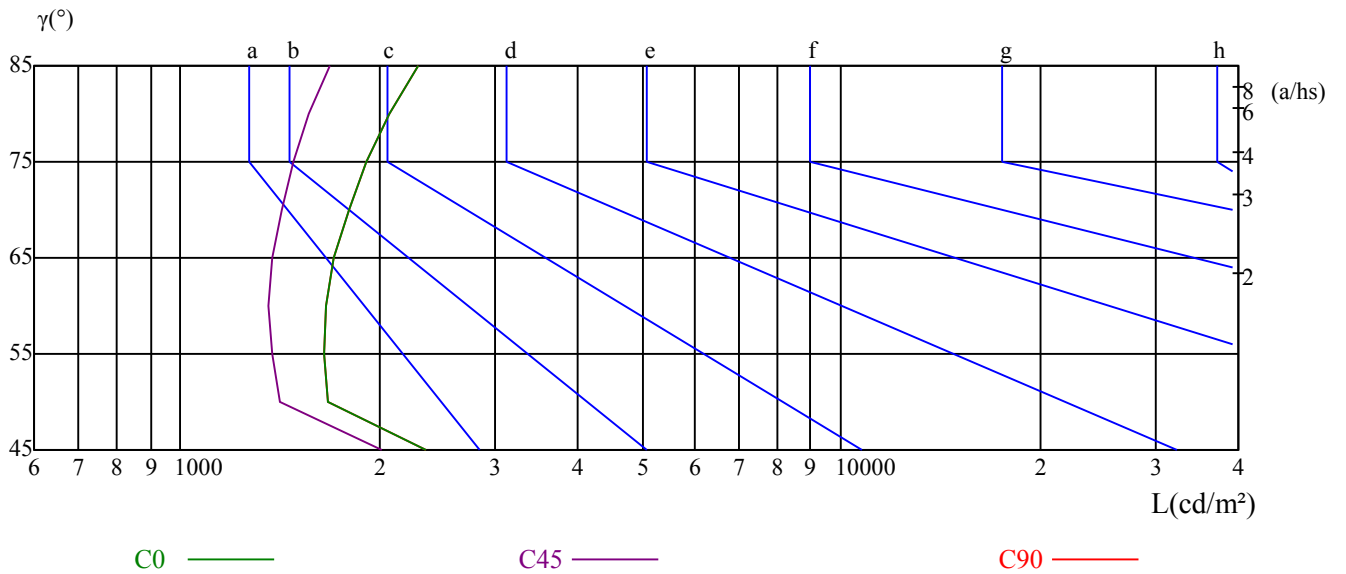
γ	45	50	55	60	65	70	75	80	85
C0	2347	1673	1645	1660	1708	1798	1916	2074	2297
C45	2019	1418	1373	1362	1377	1422	1482	1565	1683
C90	2347	1673	1645	1660	1708	1798	1916	2074	2297

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4073	4073	4073	6531	6531	6531	19244	19244	19244

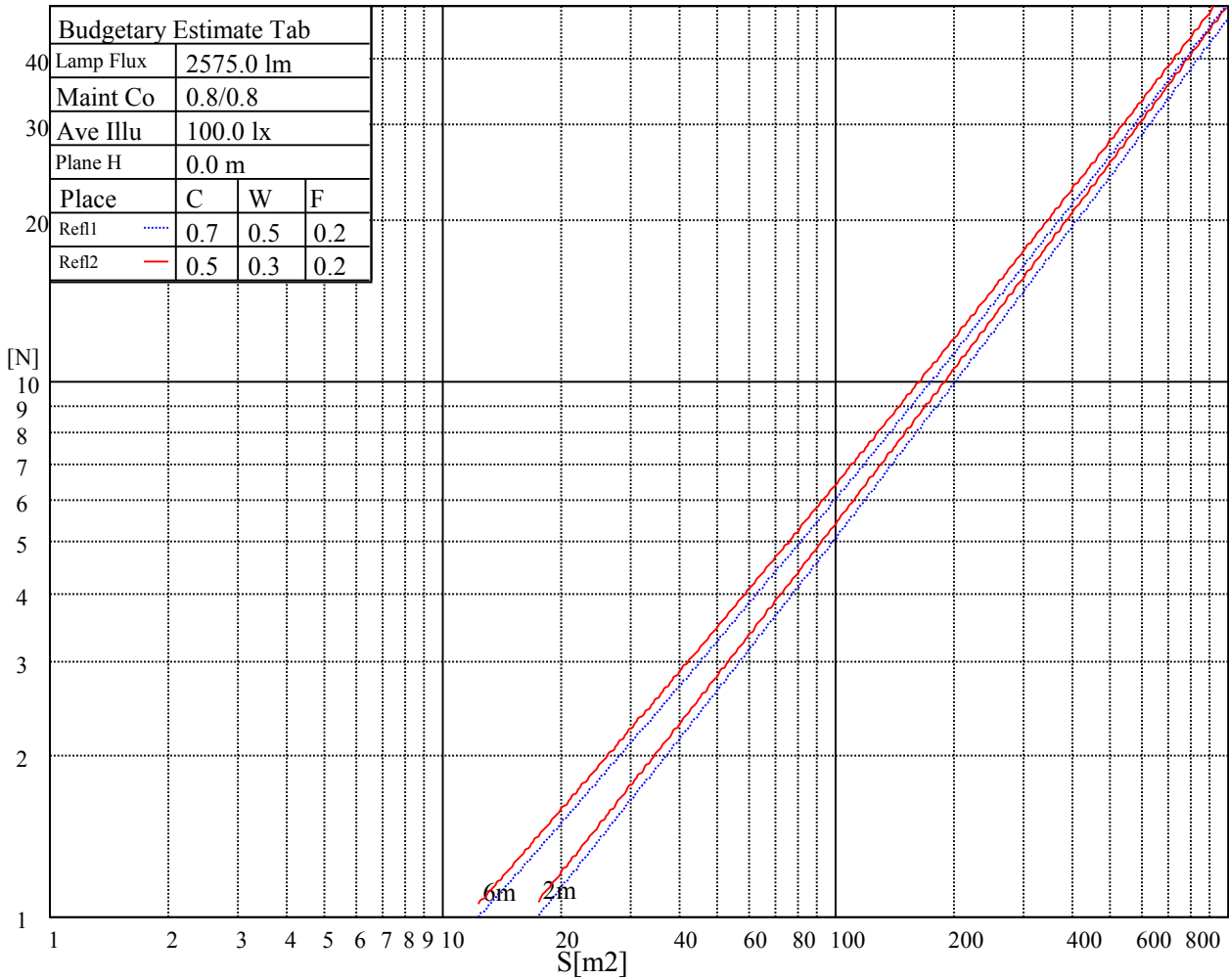
Glare Table

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

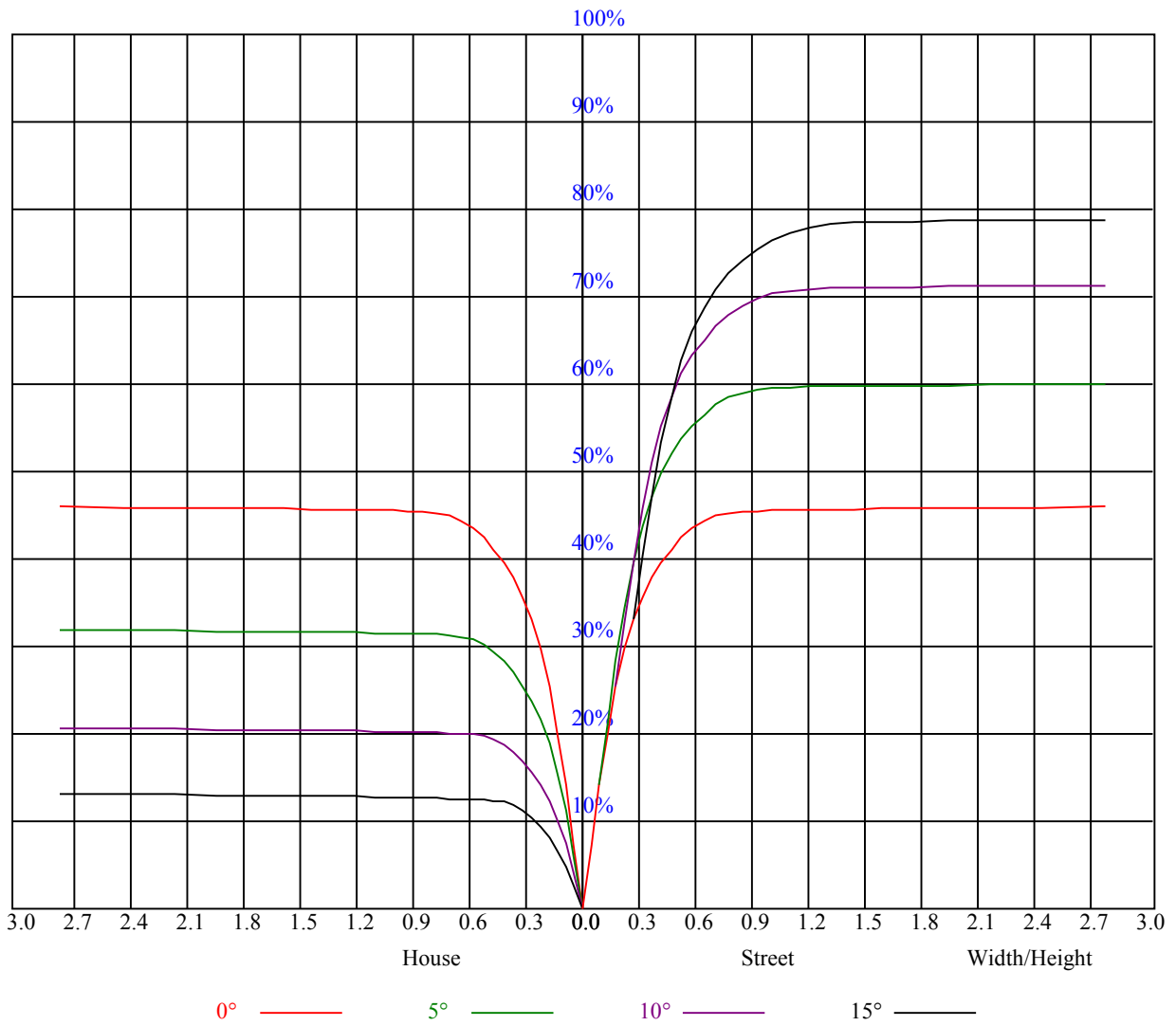
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	-0.11	0.81	0.26	1.12	1.43	-0.11	0.80	0.26	1.11	1.43
	3H	2.24	3.04	2.62	3.38	3.75	2.23	3.03	2.61	3.37	3.74
	4H	3.51	4.26	3.92	4.61	5.00	3.51	4.25	3.91	4.61	5.00
	6H	4.85	5.53	5.27	5.91	6.30	4.85	5.53	5.27	5.91	6.30
	8H	5.52	6.15	5.95	6.55	6.96	5.52	6.16	5.96	6.55	6.96
	12H	6.55	7.16	6.98	7.54	7.97	6.55	7.16	6.99	7.54	7.98
4H	2H	0.40	1.14	0.81	1.50	1.89	0.40	1.14	0.80	1.50	1.89
	3H	3.03	3.65	3.45	4.06	4.46	3.02	3.64	3.44	4.05	4.45
	4H	4.48	5.03	4.92	5.46	5.91	4.48	5.02	4.92	5.45	5.90
	6H	5.91	6.38	6.38	6.83	7.31	5.91	6.38	6.38	6.83	7.31
	8H	6.69	7.13	7.17	7.58	8.06	6.69	7.13	7.17	7.58	8.06
	12H	7.72	8.09	8.21	8.58	9.06	7.72	8.09	8.21	8.58	9.06
8H	4H	4.93	5.37	5.41	5.82	6.29	4.92	5.36	5.40	5.81	6.29
	6H	6.60	6.94	7.11	7.44	7.93	6.60	6.94	7.11	7.45	7.93
	8H	7.53	7.83	8.06	8.35	8.85	7.53	7.84	8.07	8.36	8.86
	12H	8.68	8.94	9.21	9.44	10.02	8.69	8.95	9.21	9.45	10.03
12H	4H	5.02	5.40	5.51	5.89	6.36	5.02	5.39	5.51	5.88	6.36
	6H	6.97	7.07	7.31	7.55	8.10	6.97	7.08	7.31	7.55	8.10
	8H	7.80	8.06	8.32	8.56	9.14	7.81	8.07	8.33	8.56	9.15
Variation with the observer position at spacings:											
S = 1.0H		5.6/-7.6					5.6/-7.6				
S = 1.5H		7.9/-5.9					7.9/-5.9				
S = 2.0H		9.5/-4.7					9.5/-4.7				
Standard tables:		BK2					BK2				
Uncorrected UGR		-3.2					-3.2				



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	1.04	1.04	1.04	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	0.88	0.86
2	0.97	0.94	0.91	0.96	0.92	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.93	0.89	0.85	0.92	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	0.85	0.81	0.88	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.83	0.80	0.78	0.77
5	0.85	0.81	0.78	0.85	0.80	0.77	0.83	0.79	0.77	0.82	0.78	0.76	0.80	0.78	0.75	0.74
6	0.82	0.78	0.75	0.82	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
7	0.80	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.70
8	0.77	0.73	0.70	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.69	0.68
9	0.75	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	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.71	0.68	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	9840.23	8405.46	5814.51	2958.18	1561.40	1053.23	867.14	531.84	69.87
45.0	9860.60	8191.84	5503.99	2726.39	1456.79	998.72	837.41	459.72	48.72
90.0	9776.36	7962.81	4852.12	2268.32	1340.07	942.84	796.94	383.74	32.65
135.0	9823.71	8498.51	5712.65	2979.10	1510.75	993.77	838.51	507.62	56.10
180.0	9840.23	8339.94	5456.64	2713.18	1409.99	962.06	811.48	436.60	36.34
225.0	9860.60	8590.45	5461.04	2930.10	1510.20	985.40	827.66	492.31	53.13
270.0	9776.36	8879.50	6245.05	3272.00	1714.46	1082.41	866.59	640.86	294.00
315.0	9823.71	8375.73	5397.73	2671.34	1466.70	1005.50	837.79	417.82	48.95
360.0	9840.23	8405.46	5814.51	2958.18	1561.40	1053.23	867.14	531.84	69.87
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.66	11.95	11.34	11.01	10.74	10.57	10.52	10.46	10.41
45.0	16.79	11.78	11.29	10.90	10.68	10.57	10.46	10.41	10.35
90.0	12.44	11.67	11.18	10.90	10.68	10.63	10.52	10.41	10.52
135.0	16.41	11.89	11.34	10.96	10.79	10.74	10.63	10.52	10.57
180.0	14.37	11.84	11.29	10.96	10.74	10.68	10.63	10.52	10.52
225.0	17.34	11.84	11.29	10.96	10.74	10.63	10.57	10.52	10.52
270.0	22.02	12.22	11.51	11.12	10.85	10.74	10.57	10.52	10.46
315.0	18.33	11.84	11.34	10.96	10.74	10.63	10.52	10.46	10.41
360.0	18.66	11.95	11.34	11.01	10.74	10.57	10.52	10.46	10.41
C/ γ (°)	90.0								
0.0	10.30								
45.0	10.30								
90.0	10.30								
135.0	10.30								
180.0	10.30								
225.0	10.24								
270.0	10.30								
315.0	10.30								
360.0	10.30								