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Nata

LumCAT: 4-1886-E	
Luminaire: 92.76.263.00	
Report No: NATA0100	Voltage(V): 30.0000
Test No: 2017011909	Current(A): 0.9500
LampCAT: brideglux VERO 18	Power (W): 28.5000
Lamp flux(lm): 3743.0	PF: 0.0000
Number of Lamps: 1	Ballast type:
Length(mm): 100	Width(mm): 100
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 3373.98
Efficiency(%): 90.14%
Lumens(lm)/Power(W): 120.13
Central intensity(cd): 8851.143
Maximum intensity(cd): 8851.143
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=27.8
 [C90/270]Total=27.8
Field angle(10%Imax): [C0/180]Total=69.1
 [C90/270]Total=69.1
Maximum s/h(1/2): C0_180=0.46 C90_270=0.46
Maximum s/h(1/4): C0_180=0.53 C90_270=0.53
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.47%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.125%

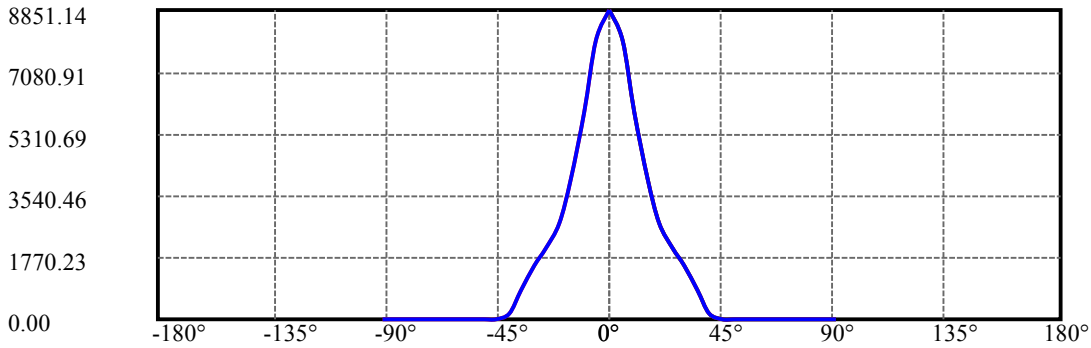
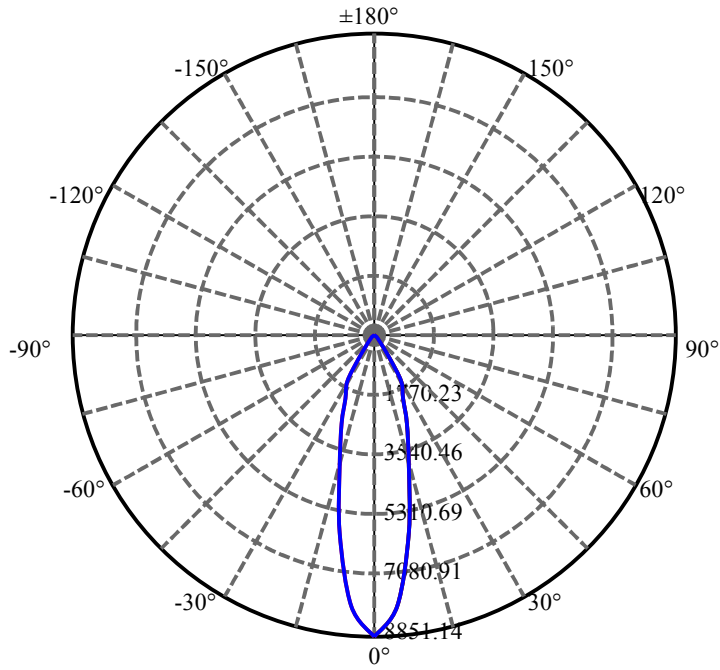
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8851.142	52.932	52.932	1.414%	1.569%
5.0	7952.691	379.926	432.858	10.150%	12.829%
10.0	5922.073	563.681	996.539	15.060%	29.536%
15.0	3994.755	566.729	1563.268	15.141%	46.333%
20.0	2775.187	520.275	2083.544	13.900%	61.753%
25.0	2045.001	473.730	2557.274	12.656%	75.794%
30.0	1531.580	419.758	2977.032	11.214%	88.235%
35.0	824.084	259.091	3236.123	6.922%	95.914%
40.0	167.757	59.107	3295.23	1.579%	97.666%
45.0	19.201	7.442	3302.672	.199%	97.886%
50.0	17.597	7.389	3310.061	.197%	98.105%
55.0	16.737	7.515	3317.576	.201%	98.328%
60.0	16.228	7.703	3325.28	.206%	98.557%
65.0	15.884	7.891	3333.171	.211%	98.790%
70.0	15.629	8.050	3341.221	.215%	99.029%
75.0	15.781	8.355	3349.576	.223%	99.277%
80.0	19.345	10.443	3360.019	.279%	99.586%
85.0	18.031	9.846	3369.865	.263%	99.878%
90.0	15.024	4.117	3373.982	.110%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2977.03	79.54%	88.23%
0-40	3295.23	88.04%	97.67%
0-60	3325.28	88.84%	98.56%
0-90	3369.86	90.03%	99.88%
0-120	3369.86	90.03%	99.88%
0-180	3373.98	90.14%	100.00%
60-90	52.29	1.40%	1.55%
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%
0-26.69	2699.19	72.11%	80.00%

ZONAL LUMEN SUMMARY

0-10	996.54
10-20	1087.00
20-30	893.49
30-40	318.20
40-50	14.83
50-60	15.22
60-70	15.94
70-80	18.80
80-90	9.85
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: —————

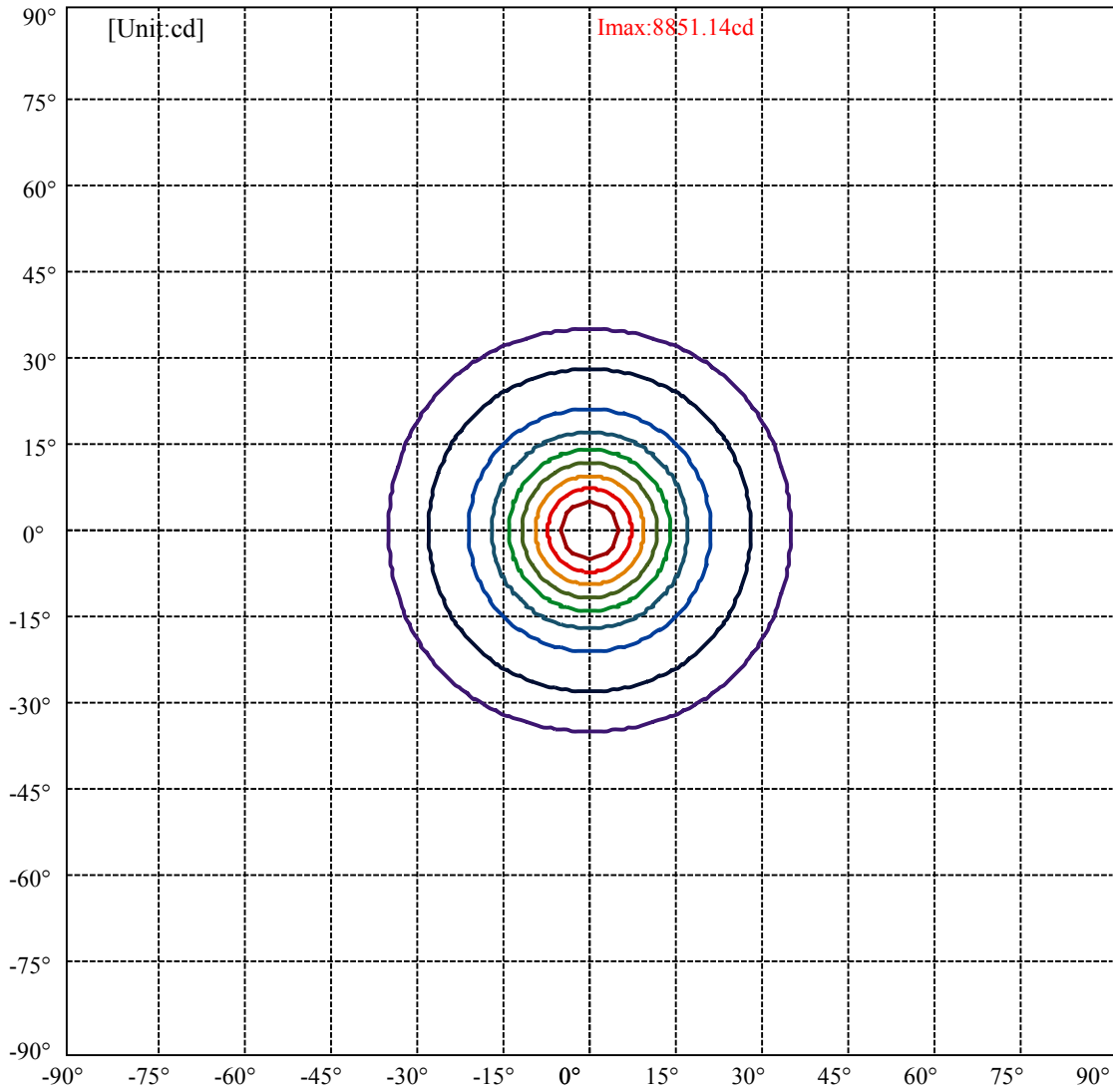
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.6 Right:34.6

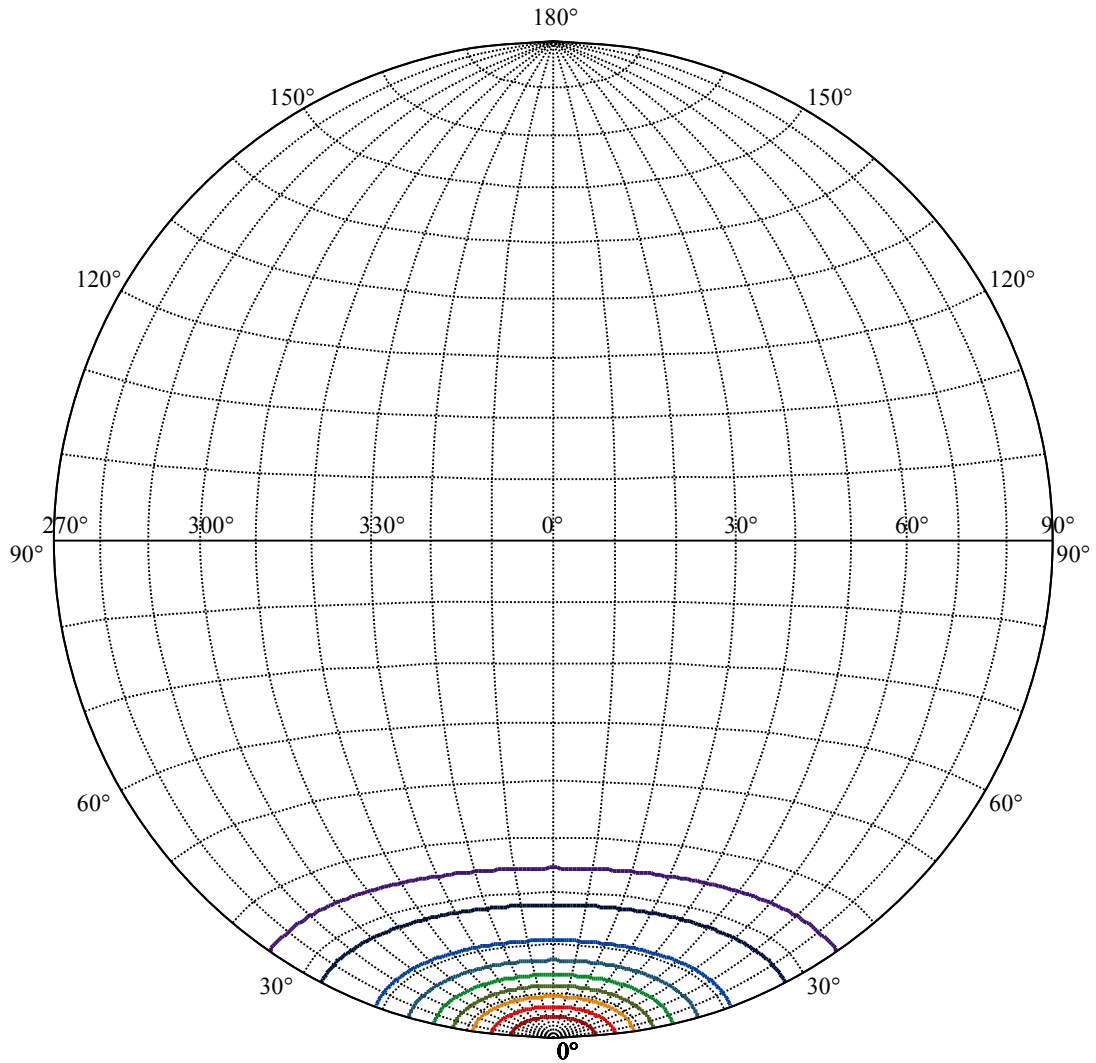
:C90/270Left:34.6 Right:34.6

Beam Angle(50%Imax):C0/180Left:13.9 Right:13.9

:C90/270Left:13.9 Right:13.9



(10%Imax) 885.114	—
(20%Imax) 1770.23	—
(30%Imax) 2655.34	—
(40%Imax) 3540.46	—
(50%Imax) 4425.57	—
(60%Imax) 5310.69	—
(70%Imax) 6195.8	—
(80%Imax) 7080.91	—
(90%Imax) 7966.03	—



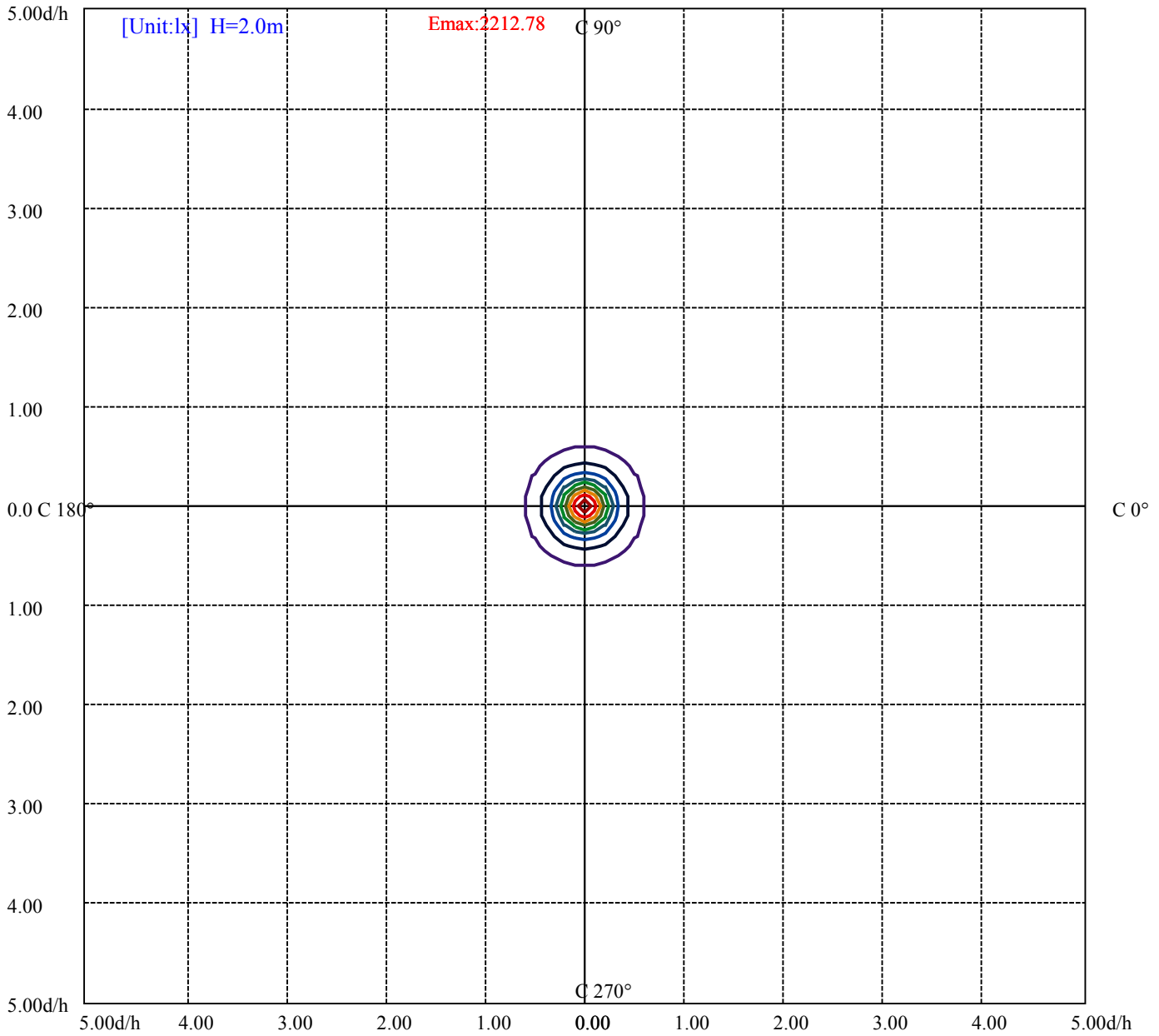
House

[Unit:cd]

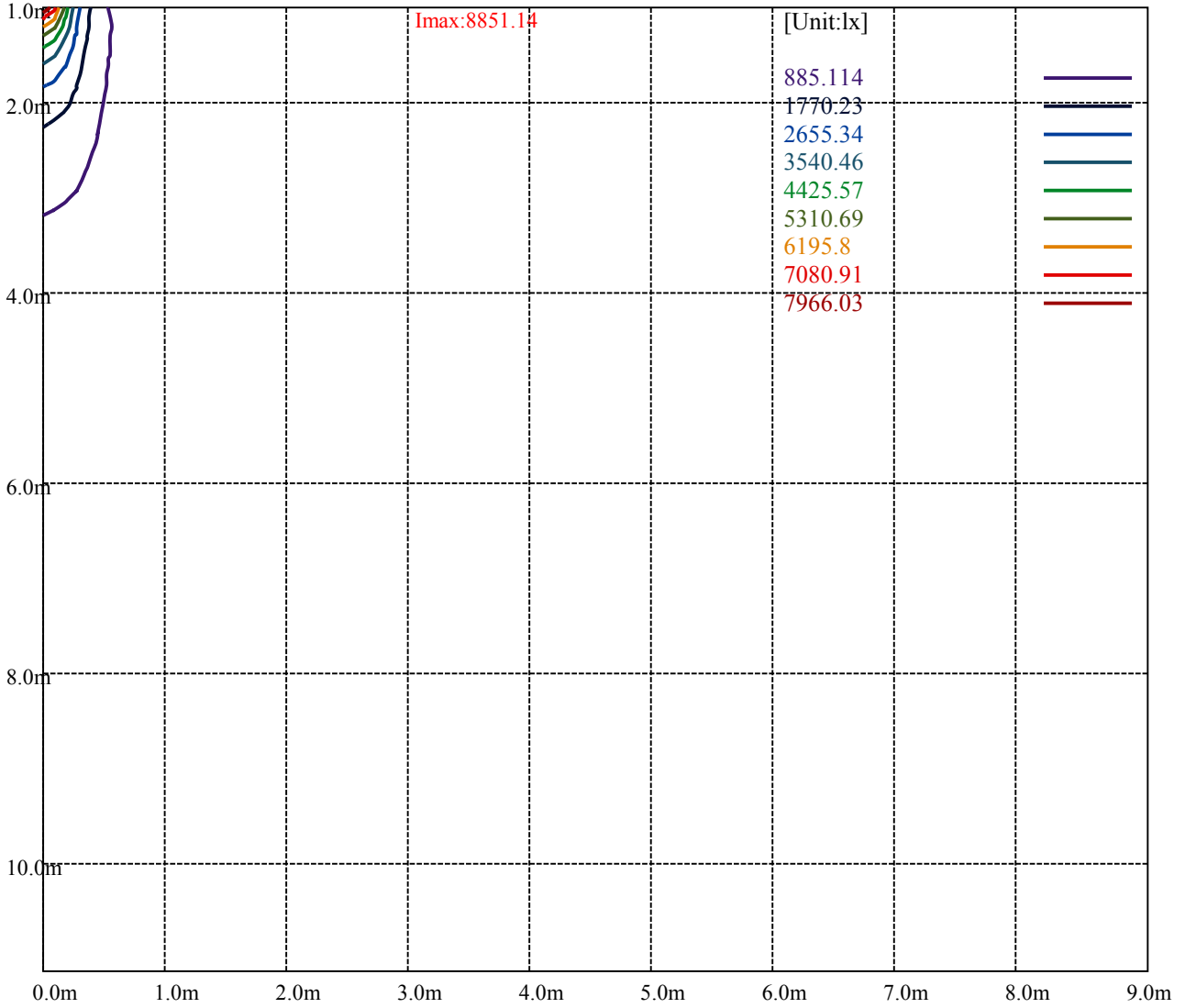
Road

Imax:8851.14

(10%Imax)	885.114	—
(20%Imax)	1770.23	—
(30%Imax)	2655.34	—
(40%Imax)	3540.46	—
(50%Imax)	4425.57	—
(60%Imax)	5310.69	—
(70%Imax)	6195.8	—
(80%Imax)	7080.91	—
(90%Imax)	7966.03	—



- (10%Emax) 221.278
- (20%Emax) 442.555
- (30%Emax) 663.8325
- (40%Emax) 885.1125
- (50%Emax) 1106.39
- (60%Emax) 1327.667
- (70%Emax) 1548.945
- (80%Emax) 1770.223
- (90%Emax) 1991.5



Luminance Table

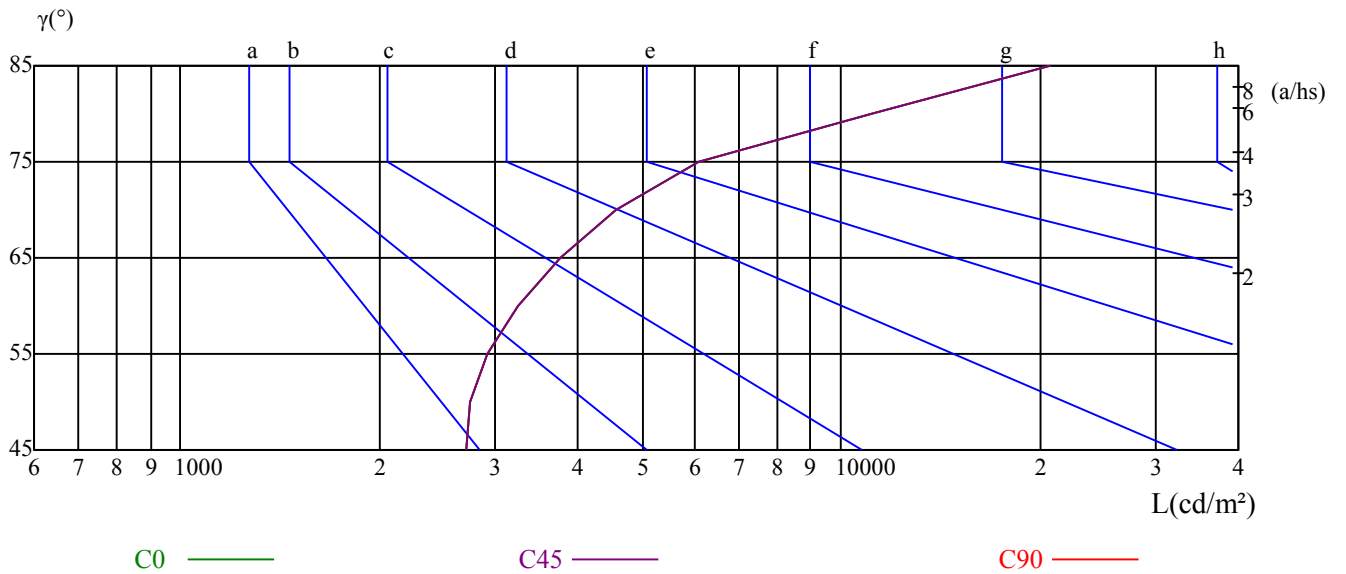
γ	45	50	55	60	65	70	75	80	85
C0	2715	2738	2918	3246	3758	4570	6097	11141	20688
C45	2715	2738	2918	3246	3758	4570	6097	11141	20688
C90	2715	2738	2918	3246	3758	4570	6097	11141	20688

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3758	3758	3758	6097	6097	6097	20688	20688	20688

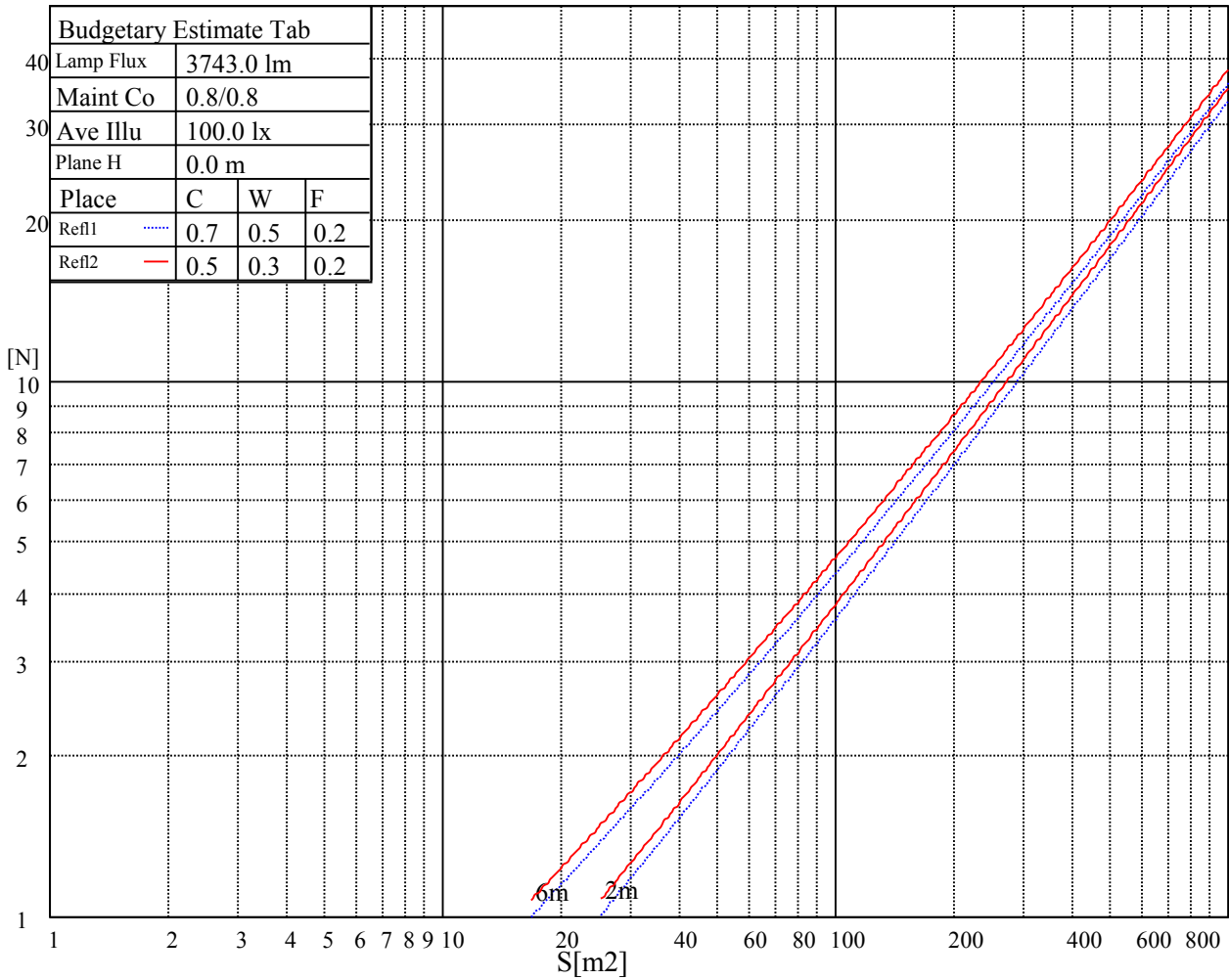
Glare Table

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

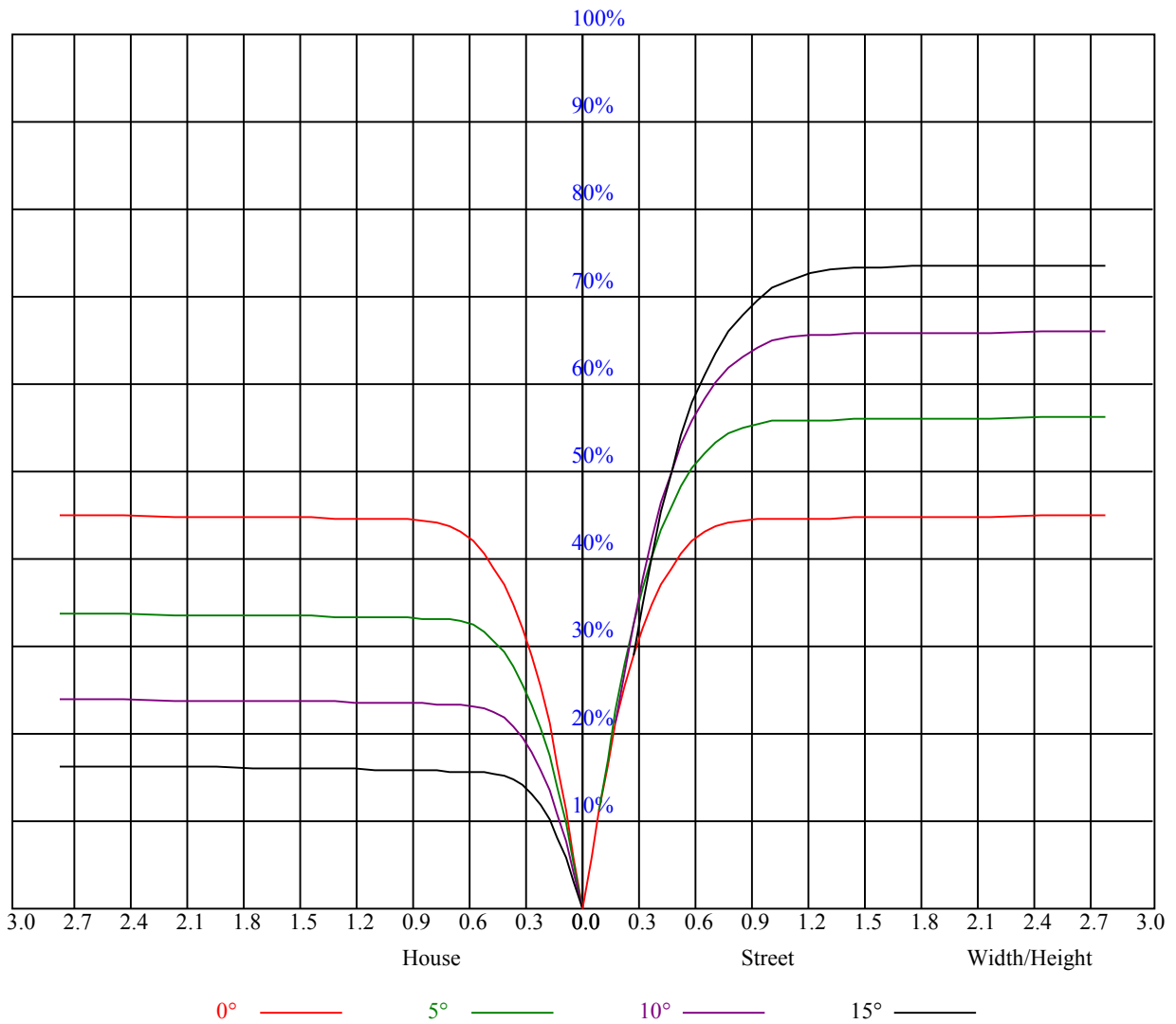
Luminance Limiting Curve



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	0.58	1.50	0.95	1.81	2.13	0.53	1.44	0.89	1.75	2.07
	3H	3.89	4.70	4.27	5.03	5.40	3.81	4.62	4.19	4.95	5.32
	4H	5.77	6.52	6.18	6.87	7.26	5.60	6.34	6.00	6.70	7.09
	6H	8.50	9.19	8.92	9.56	9.96	8.29	8.97	8.71	9.35	9.75
	8H	9.89	10.53	10.33	10.93	11.34	9.68	10.32	10.11	10.71	11.12
	12H	11.82	12.44	12.26	12.82	13.25	11.61	12.22	12.04	12.60	13.04
4H	2H	1.52	2.27	1.93	2.62	3.01	1.48	2.23	1.89	2.58	2.97
	3H	5.06	5.67	5.48	6.08	6.49	5.00	5.61	5.42	6.03	6.43
	4H	7.12	7.67	7.56	8.09	8.54	6.97	7.52	7.41	7.94	8.39
	6H	9.82	10.29	10.29	10.74	11.22	9.63	10.10	10.11	10.56	11.03
	8H	11.36	11.80	11.84	12.25	12.73	11.17	11.61	11.65	12.06	12.54
8H	12H	13.21	13.59	13.71	14.08	14.56	13.02	13.39	13.51	13.88	14.36
	4H	7.95	8.39	8.43	8.84	9.31	7.83	8.27	8.31	8.72	9.20
	6H	10.96	11.30	11.47	11.81	12.29	10.81	11.16	11.32	11.66	12.15
	8H	12.63	12.94	13.17	13.46	13.96	12.48	12.79	13.02	13.31	13.81
12H	12H	14.54	14.81	15.07	15.30	15.89	14.38	14.64	14.90	15.14	15.72
	4H	8.25	8.63	8.75	9.12	9.60	8.16	8.54	8.65	9.03	9.51
	6H	11.53	11.63	11.86	12.10	12.65	11.41	11.51	11.74	11.98	12.53
	8H	13.10	13.37	13.63	13.87	14.45	12.97	13.23	13.49	13.73	14.31
Variation with the observer position at spacings:											
S = 1.0H	5.6/-7.7					5.6/-7.7					
S = 1.5H	7.6/-5.6					7.6/-5.6					
S = 2.0H	8.7/-3.8					8.7/-3.8					
Standard tables:	BK3					BK3					
Uncorrected UGR	1.4					1.4					



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	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.98	0.96	0.98	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.89	0.88	0.87	0.86	0.84
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.85	0.88	0.85	0.84	0.85	0.83	0.82	0.80
3	0.90	0.86	0.82	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.86	0.81	0.78	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.75	0.73
5	0.82	0.77	0.74	0.81	0.77	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
6	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.67
7	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
9	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.67	0.64	0.61	0.60
10	0.67	0.62	0.60	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58



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	8858.02	7994.19	5896.54	3992.14	2768.24	2028.83	1580.67	828.05	290.70
45.0	8815.08	8476.48	6590.80	4425.43	3016.54	2174.18	1696.84	1048.82	291.25
90.0	8909.23	8395.00	6394.80	4380.84	2970.29	2158.21	1697.94	1046.51	215.05
135.0	8822.24	8600.91	6737.80	4669.88	3174.55	2273.83	1739.78	1238.22	338.60
180.0	8858.02	7963.36	5826.62	3915.06	2718.69	2031.58	1547.08	747.23	104.44
225.0	8815.08	7324.15	5369.10	3560.50	2536.45	1925.87	1456.79	581.62	35.84
270.0	8909.23	7607.14	5459.39	3703.64	2556.82	1926.97	1459.55	599.56	34.63
315.0	8822.24	7260.29	5101.53	3310.54	2459.92	1840.54	1073.99	502.66	31.55
360.0	8858.02	7994.19	5896.54	3992.14	2768.24	2028.83	1580.67	828.05	290.70
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	19.38	17.51	16.63	16.13	15.80	15.53	15.42	23.12	19.93
45.0	19.77	18.06	17.07	16.57	16.19	15.86	15.69	18.66	18.72
90.0	19.82	17.89	16.85	16.30	15.91	15.64	15.36	17.12	17.67
135.0	19.99	18.00	16.85	16.19	15.80	15.53	15.31	15.42	15.97
180.0	18.61	17.23	16.46	15.97	15.64	15.36	15.25	16.90	15.97
225.0	18.83	17.45	16.74	16.35	16.02	15.86	16.41	20.04	17.62
270.0	18.88	17.51	16.79	16.35	16.02	15.80	17.23	24.39	19.43
315.0	18.33	17.12	16.52	15.97	15.69	15.47	15.58	19.10	18.94
360.0	19.38	17.51	16.63	16.13	15.80	15.53	15.42	23.12	19.93
C/ γ (°)	90.0								
0.0	14.87								
45.0	15.25								
90.0	15.09								
135.0	14.92								
180.0	14.81								
225.0	15.25								
270.0	15.09								
315.0	14.92								
360.0	14.87								