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NATA

LumCAT: 1450-E	
Luminaire: 92.70.051.00	
Report No: NATA0100	Voltage(V): 10.2400
Test No: GC2019010812	Current(A): 0.6000
LampCAT: BRIDGELUX V6	Power (W): 6.1440
Lamp flux(lm): 519.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 44	Width(mm): 44
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 460.85
Efficiency(%): 88.80%
Lumens(lm)/Power(W): 76.62
Central intensity(cd): 1734.469
Maximum intensity(cd): 1734.469
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=19.9
 [C90/270]Total=19.9
Field angle(10%Imax): [C0/180]Total=59.4
 [C90/270]Total=59.4
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.38 C90_270=0.38
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.71%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.326%

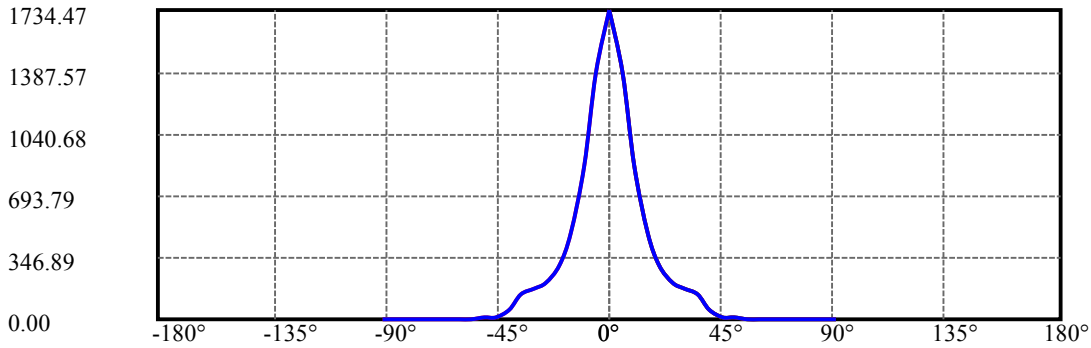
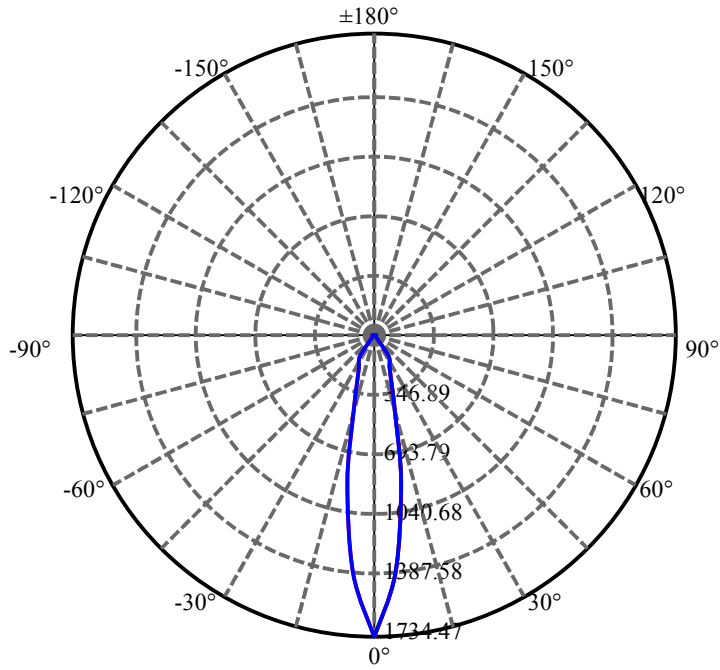
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1734.469	10.372	10.372	1.999%	2.251%
5.0	1374.279	65.654	76.026	12.650%	16.497%
10.0	862.298	82.076	158.103	15.814%	34.307%
15.0	485.459	68.871	226.974	13.270%	49.251%
20.0	299.517	56.152	283.125	10.819%	61.436%
25.0	208.209	48.232	331.358	9.293%	71.901%
30.0	171.084	46.889	378.247	9.034%	82.076%
35.0	138.994	43.699	421.946	8.420%	91.558%
40.0	55.589	19.586	441.532	3.774%	95.808%
45.0	12.523	4.854	446.386	.935%	96.861%
50.0	7.826	3.286	449.672	.633%	97.574%
55.0	4.634	2.081	451.752	.401%	98.026%
60.0	3.656	1.736	453.488	.334%	98.403%
65.0	3.108	1.544	455.032	.297%	98.738%
70.0	2.918	1.503	456.535	.290%	99.064%
75.0	2.735	1.448	457.983	.279%	99.378%
80.0	2.355	1.272	459.255	.245%	99.654%
85.0	1.983	1.083	460.337	.209%	99.889%
90.0	1.870	0.513	460.85	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	378.25	72.88%	82.08%
0-40	441.53	85.07%	95.81%
0-60	453.49	87.38%	98.40%
0-90	460.34	88.70%	99.89%
0-120	460.34	88.70%	99.89%
0-180	460.85	88.80%	100.00%
60-90	8.58	1.65%	1.86%
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%
0-28.98	368.68	71.04%	80.00%

ZONAL LUMEN SUMMARY

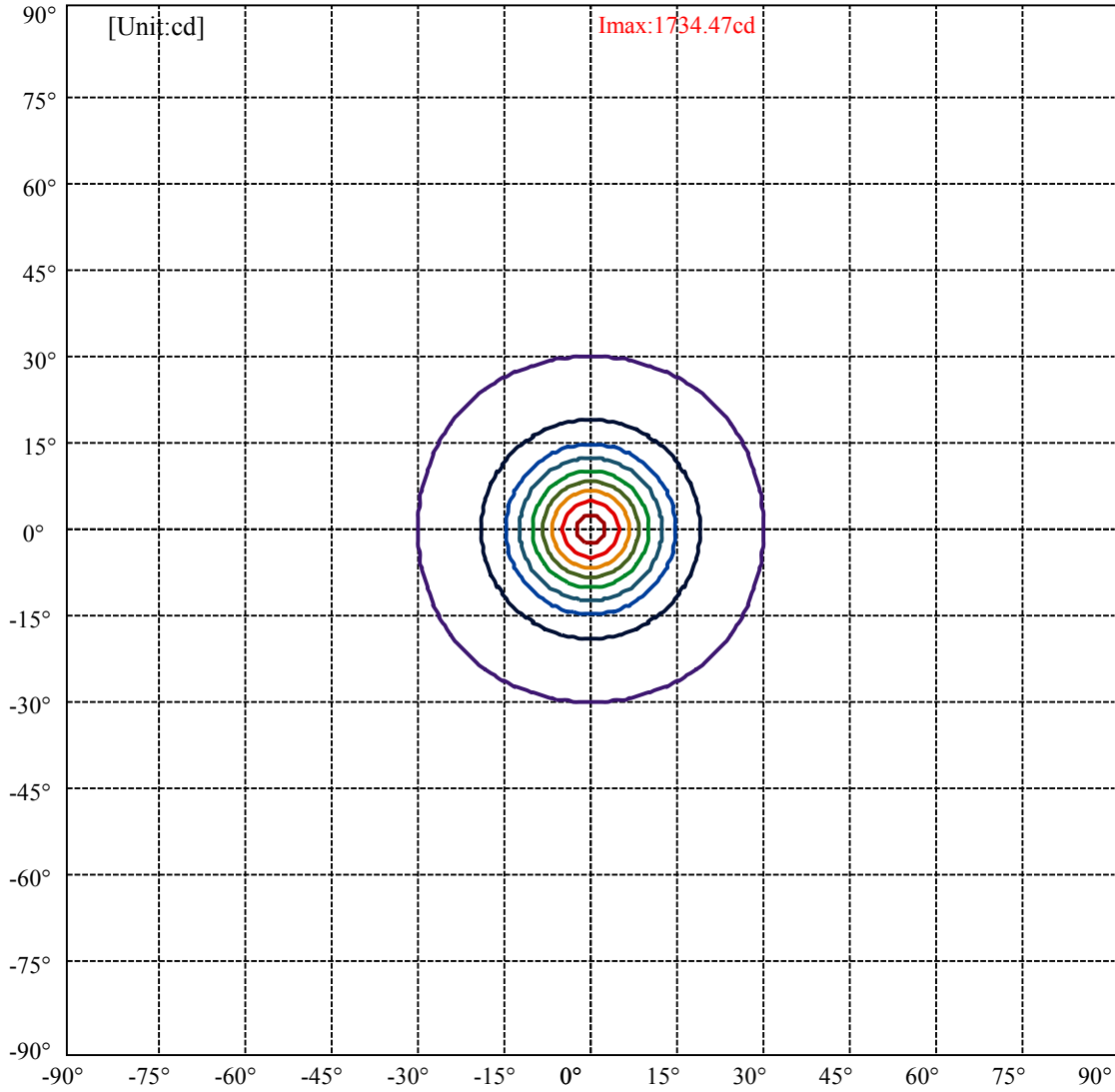
0-10	158.10
10-20	125.02
20-30	95.12
30-40	63.29
40-50	8.14
50-60	3.82
60-70	3.05
70-80	2.72
80-90	1.08
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



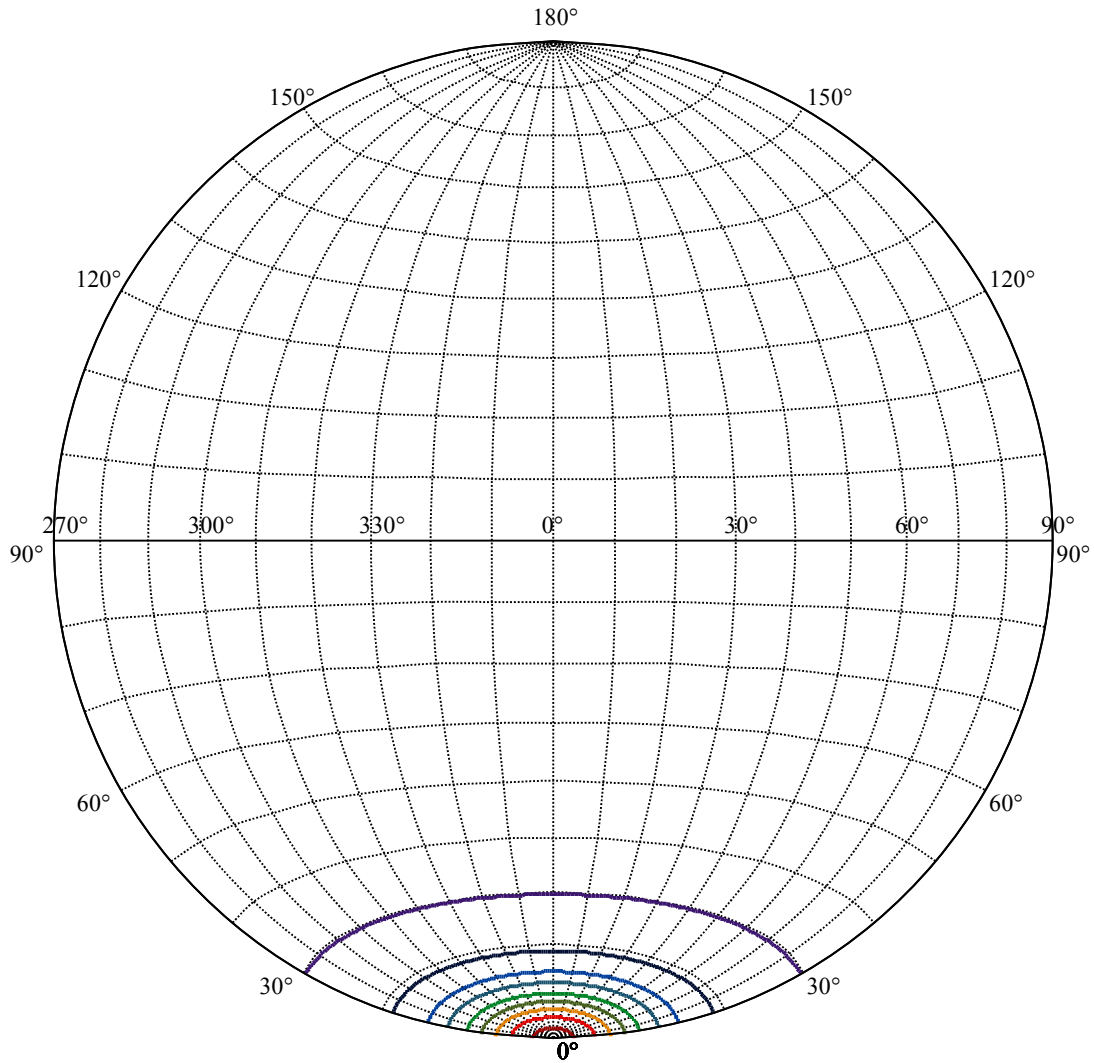
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:29.7 Right:29.7
:C90/270Left:29.7 Right:29.7

Beam Angle(50%Imax):C0/180Left:10.0 Right:10.0
:C90/270Left:10.0 Right:10.0



(10%Imax) 173.447	—
(20%Imax) 346.894	—
(30%Imax) 520.341	—
(40%Imax) 693.787	—
(50%Imax) 867.234	—
(60%Imax) 1040.68	—
(70%Imax) 1214.13	—
(80%Imax) 1387.57	—
(90%Imax) 1561.02	—



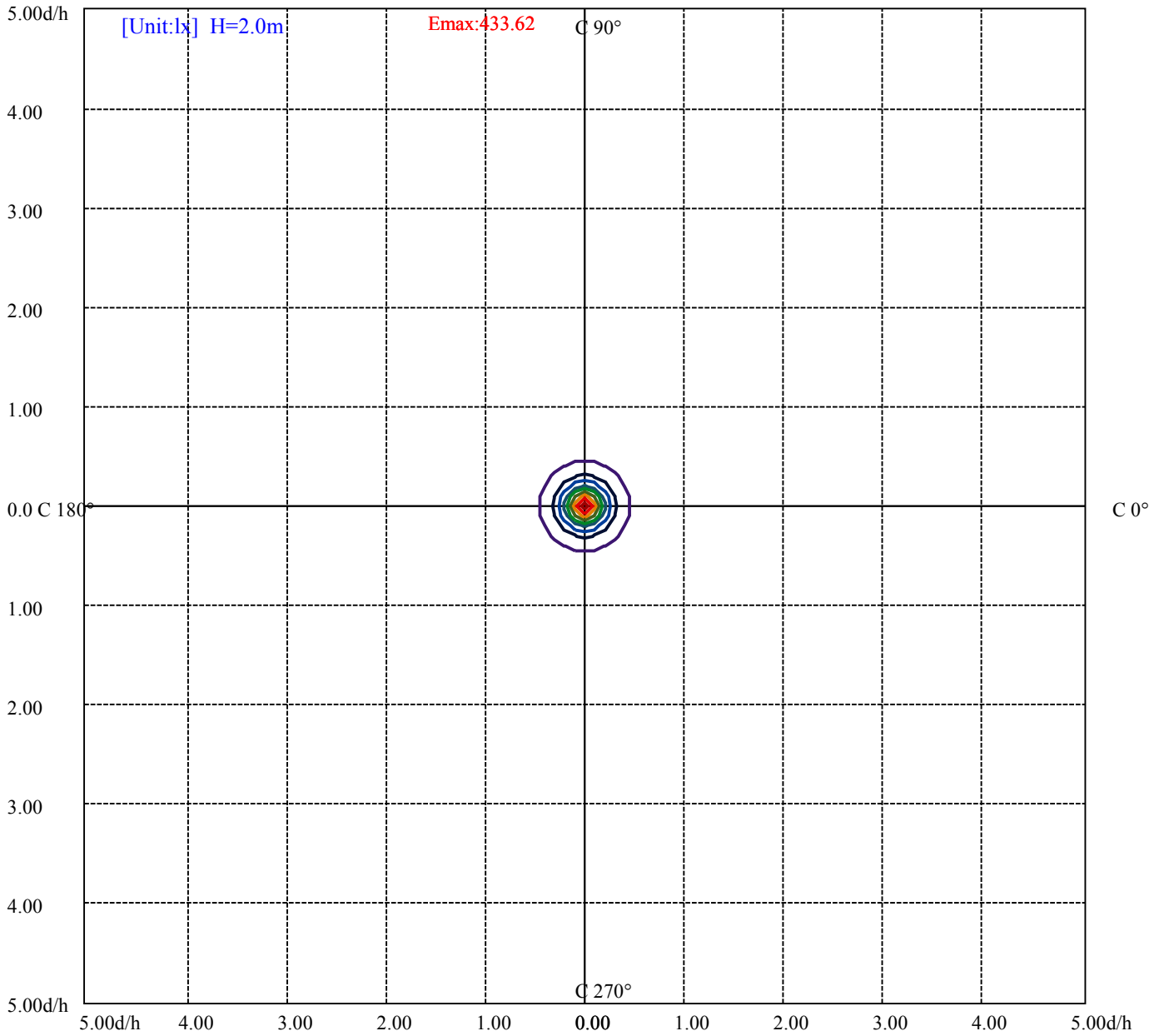
House

[Unit:cd]

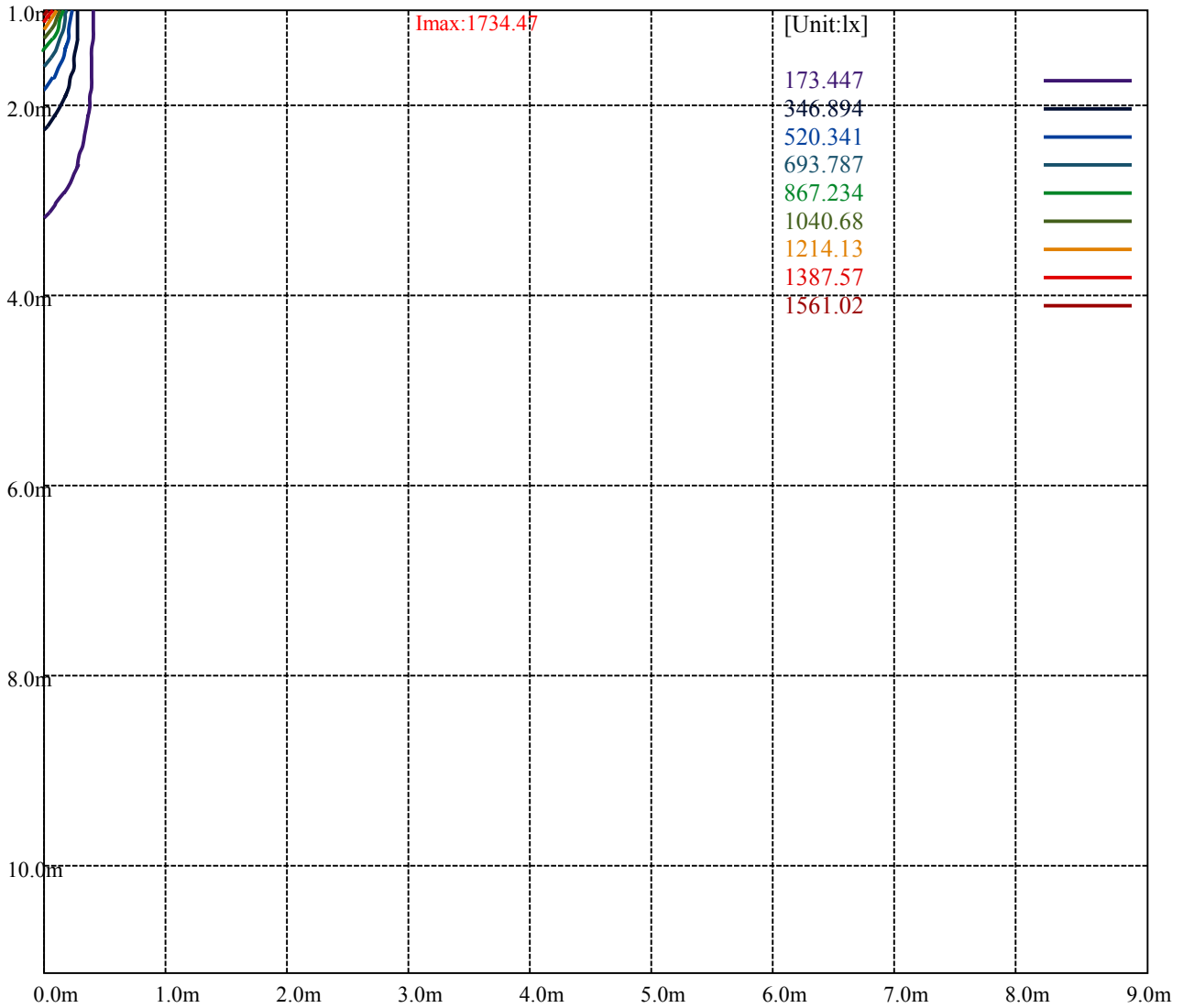
Road

Imax:1734.47

(10%Imax) 173.447	—
(20%Imax) 346.894	—
(30%Imax) 520.341	—
(40%Imax) 693.787	—
(50%Imax) 867.234	—
(60%Imax) 1040.68	—
(70%Imax) 1214.13	—
(80%Imax) 1387.57	—
(90%Imax) 1561.02	—



- (10%Emax) 43.3615
- (20%Emax) 86.723
- (30%Emax) 130.0842
- (40%Emax) 173.4458
- (50%Emax) 216.8073
- (60%Emax) 260.1675
- (70%Emax) 303.53
- (80%Emax) 346.8925
- (90%Emax) 390.2525



Luminance Table

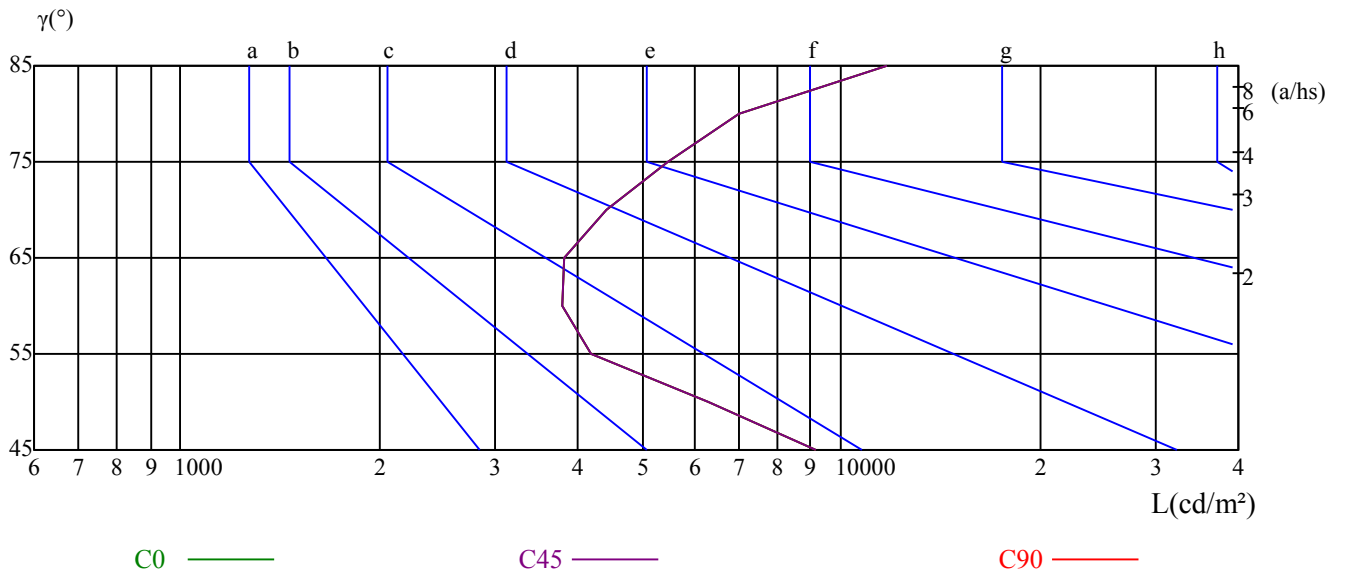
γ	45	50	55	60	65	70	75	80	85
C0	9148	6289	4173	3777	3798	4407	5459	7007	11751
C45	9148	6289	4173	3777	3798	4407	5459	7007	11751
C90	9148	6289	4173	3777	3798	4407	5459	7007	11751

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3798	3798	3798	5459	5459	5459	11751	11751	11751

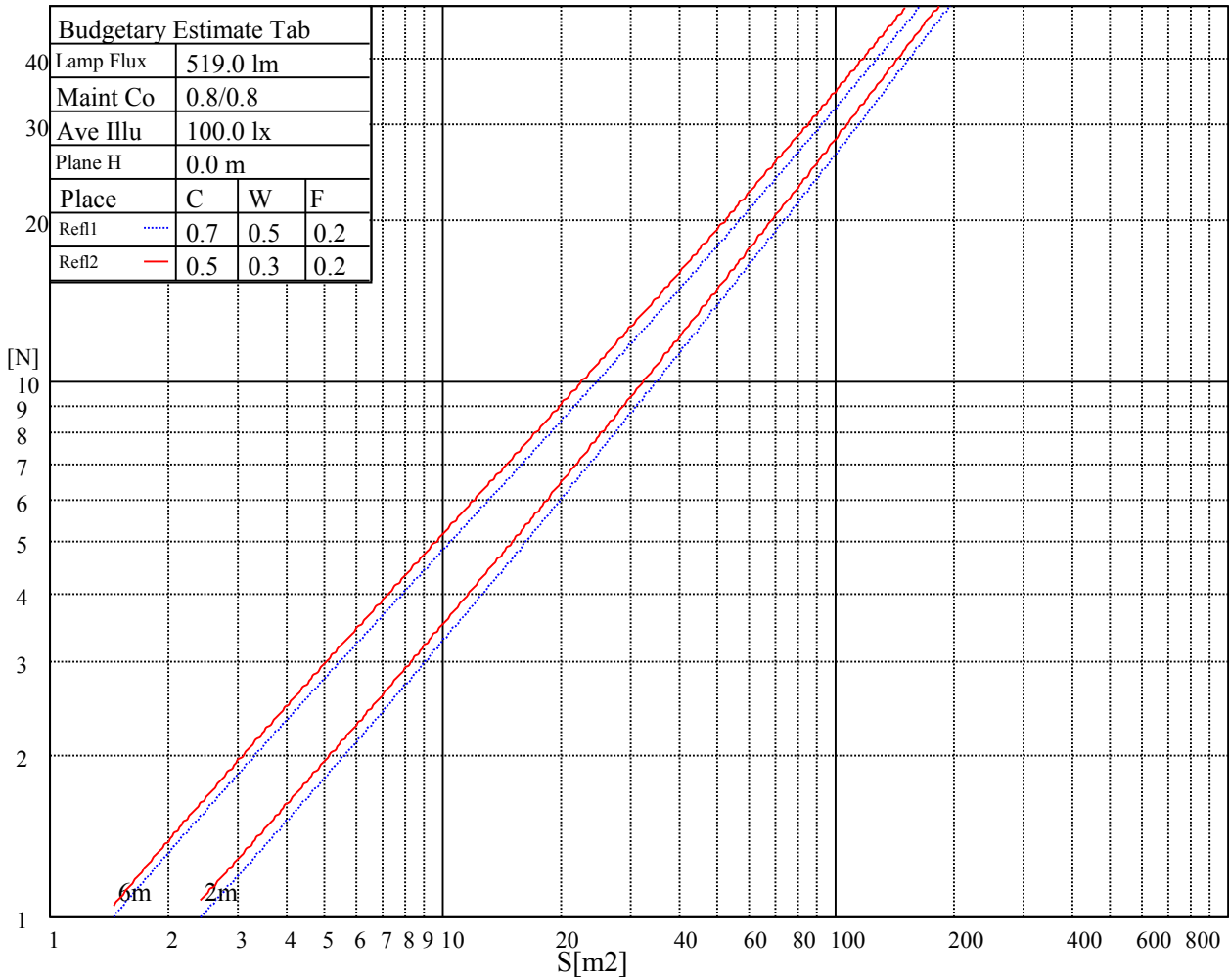
Glare Table

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

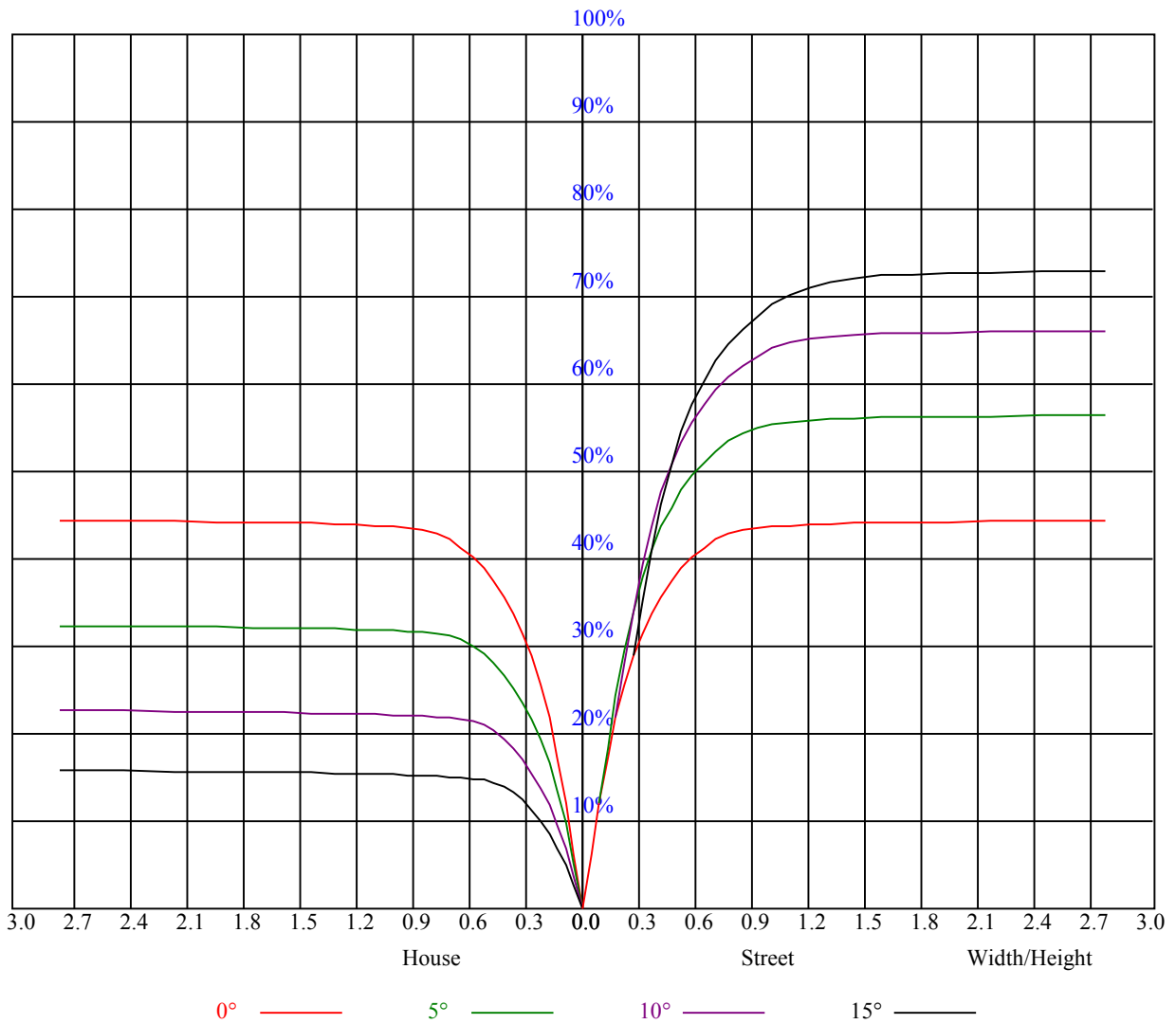
Luminance Limiting Curve



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	12.37	13.32	12.74	13.63	13.94	8.13	9.08	8.50	9.39	9.70
	3H	14.87	15.70	15.25	16.03	16.40	10.53	11.36	10.91	11.69	12.06
	4H	16.20	16.97	16.61	17.33	17.72	12.05	12.82	12.46	13.17	13.56
	6H	17.53	18.24	17.95	18.61	19.01	13.66	14.37	14.08	14.75	15.14
	8H	18.12	18.78	18.55	19.17	19.58	14.57	15.23	15.01	15.63	16.04
	12H	18.93	19.56	19.37	19.95	20.38	16.14	16.77	16.58	17.16	17.59
4H	2H	12.41	13.18	12.82	13.54	13.93	8.90	9.67	9.31	10.03	10.42
	3H	15.23	15.86	15.64	16.27	16.67	11.61	12.25	12.03	12.66	13.06
	4H	16.80	17.37	17.24	17.79	18.24	13.34	13.90	13.78	14.33	14.78
	6H	18.25	18.73	18.72	19.18	19.66	15.09	15.57	15.56	16.02	16.50
	8H	19.00	19.45	19.48	19.90	20.38	16.10	16.55	16.58	17.00	17.48
	12H	19.89	20.27	20.38	20.76	21.24	17.60	17.98	18.09	18.47	18.95
8H	4H	17.00	17.45	17.48	17.90	18.37	14.13	14.58	14.61	15.03	15.51
	6H	18.70	19.06	19.21	19.56	20.05	16.11	16.46	16.62	16.97	17.45
	8H	19.64	19.95	20.17	20.48	20.97	17.29	17.61	17.83	18.13	18.63
	12H	20.81	21.09	21.34	21.58	22.17	18.94	19.21	19.46	19.71	20.29
12H	4H	17.03	17.42	17.52	17.91	18.38	14.37	14.76	14.87	15.25	15.73
	6H	19.03	19.12	19.34	19.59	20.14	16.66	16.75	16.97	17.22	17.77
	8H	19.84	20.11	20.37	20.61	21.20	17.74	18.01	18.27	18.51	19.09
Variation with the observer position at spacings:											
S = 1.0H	4.2/-6.0					4.2/-6.0					
S = 1.5H	6.4/-4.6					6.4/-4.6					
S = 2.0H	7.8/-3.8					7.8/-3.8					
Standard tables:	BK2					BK2					
Uncorrected UGR	0.7					0.7					



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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.93	0.93	0.93	0.91
1	0.99	0.96	0.94	0.97	0.94	0.92	0.93	0.91	0.89	0.90	0.88	0.87	0.87	0.85	0.84	0.82
2	0.93	0.89	0.86	0.92	0.88	0.85	0.89	0.86	0.83	0.86	0.84	0.82	0.83	0.82	0.80	0.78
3	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.81	0.78	0.82	0.80	0.77	0.80	0.78	0.76	0.75
4	0.84	0.79	0.76	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.71
5	0.80	0.75	0.72	0.79	0.75	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.68
6	0.76	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
7	0.73	0.69	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.63
8	0.70	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
9	0.68	0.63	0.60	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.59
10	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57



NATA 1450-E

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	1732.50	1515.38	954.56	529.31	331.88	223.65	180.06	160.82	80.38
45.0	1732.50	1500.75	924.19	528.75	325.69	219.38	181.58	157.67	80.83
90.0	1739.81	1405.69	824.51	478.13	292.89	202.61	156.71	125.04	53.61
135.0	1733.06	1466.44	932.06	537.75	335.25	225.73	173.42	143.38	58.50
180.0	1732.50	1278.56	793.18	461.25	290.76	204.36	169.65	128.03	33.58
225.0	1732.50	1104.92	779.18	451.80	269.78	201.21	171.90	123.41	37.97
270.0	1739.81	1436.63	906.75	464.63	288.56	190.91	159.81	130.11	51.13
315.0	1733.06	1285.88	783.96	432.06	261.34	197.83	175.56	143.49	48.71
360.0	1732.50	1515.38	954.56	529.31	331.88	223.65	180.06	160.82	80.38
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	18.06	11.36	2.93	2.42	2.25	2.14	2.03	1.97	1.97
45.0	20.98	11.70	3.94	2.87	2.31	2.19	2.14	2.03	1.91
90.0	17.16	11.19	7.54	5.51	4.84	4.67	3.99	3.26	1.97
135.0	7.99	5.51	4.28	3.94	3.04	2.53	2.53	2.25	2.03
180.0	5.63	2.93	2.42	2.42	2.19	2.25	2.36	1.97	1.97
225.0	7.14	4.56	4.33	3.54	2.76	2.36	2.64	2.08	2.03
270.0	13.33	10.58	8.27	6.02	5.23	5.01	4.11	3.32	2.03
315.0	9.90	4.78	3.38	2.53	2.25	2.19	2.08	1.97	1.97
360.0	18.06	11.36	2.93	2.42	2.25	2.14	2.03	1.97	1.97
C/ γ (°)	90.0								
0.0	1.97								
45.0	1.91								
90.0	1.86								
135.0	1.86								
180.0	1.80								
225.0	1.91								
270.0	1.80								
315.0	1.86								
360.0	1.97								