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Nata

LumCAT: 1733-A
Luminaire: 92.76.330.00
Report No: NATA0100
Test No: GC2017101701
LampCAT: BXR V-DR-1830-H-1000-B-13
Lamp flux(lm): 1191.5
Number of Lamps: 1
Length(mm): 39
Phm Type: C

Voltage(V): 34.7000
Current(A): 0.4000
Power (W): 13.8800
PF: 0.0000
Ballast type: DC
Width(mm): 39
Height(mm): 0

Photometric Results

Lumens(lm): 1069.04
Efficiency(%): 89.72%
Lumens(lm)/Power(W): 77.80
Central intensity(cd): 1971.019
Maximum intensity(cd): 1971.019
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=37.7
[C90/270]Total=37.7
Field angle(10%Imax): [C0/180]Total=80.5
[C90/270]Total=80.5
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.63 C90_270=0.63
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.63%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.596%

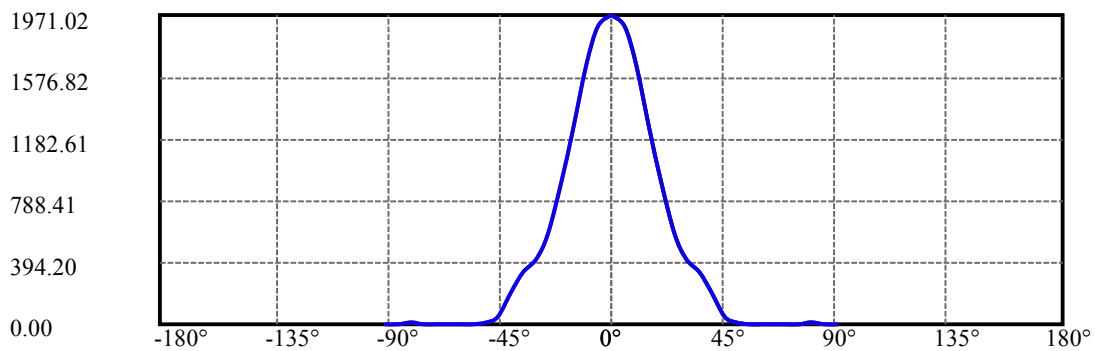
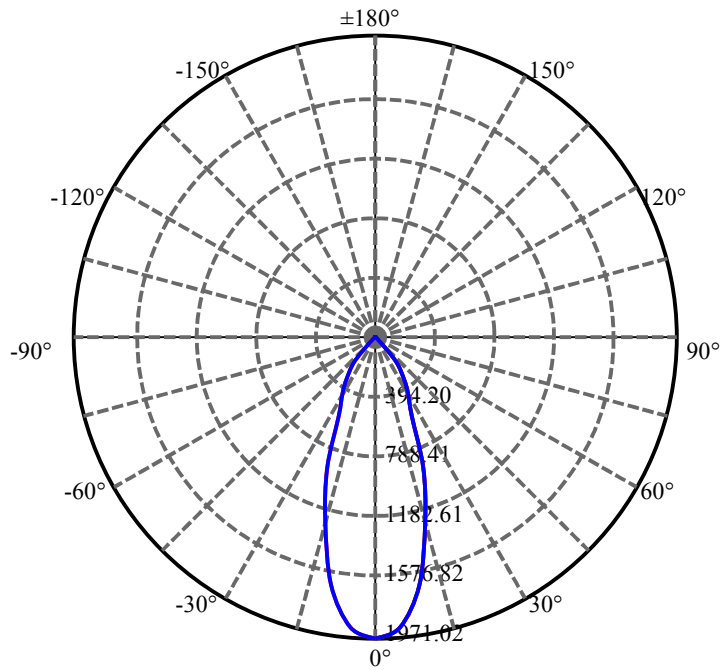
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1971.019	11.787	11.787	.989%	1.103%
5.0	1900.340	90.786	102.573	7.619%	9.595%
10.0	1647.356	156.800	259.373	13.160%	24.262%
15.0	1241.336	176.106	435.479	14.780%	40.735%
20.0	908.644	170.347	605.827	14.297%	56.670%
25.0	569.531	131.933	737.76	11.073%	69.011%
30.0	415.015	113.743	851.503	9.546%	79.651%
35.0	331.701	104.286	955.789	8.752%	89.406%
40.0	205.677	72.467	1028.256	6.082%	96.185%
45.0	45.717	17.720	1045.976	1.487%	97.842%
50.0	7.928	3.329	1049.305	.279%	98.154%
55.0	5.065	2.274	1051.579	.191%	98.366%
60.0	4.790	2.274	1053.853	.191%	98.579%
65.0	4.604	2.287	1056.14	.192%	98.793%
70.0	4.508	2.322	1058.462	.195%	99.010%
75.0	4.659	2.467	1060.929	.207%	99.241%
80.0	7.625	4.116	1065.045	.345%	99.626%
85.0	5.168	2.822	1067.868	.237%	99.890%
90.0	4.288	1.175	1069.043	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	851.50	71.46%	79.65%
0-40	1028.26	86.30%	96.18%
0-60	1053.85	88.45%	98.58%
0-90	1067.87	89.62%	99.89%
0-120	1067.87	89.62%	99.89%
0-180	1069.04	89.72%	100.00%
60-90	16.29	1.37%	1.52%
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%
0-30.18	855.23	71.78%	80.00%

ZONAL LUMEN SUMMARY

0-10	259.37
10-20	346.45
20-30	245.68
30-40	176.75
40-50	21.05
50-60	4.55
60-70	4.61
70-80	6.58
80-90	2.82
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: —————

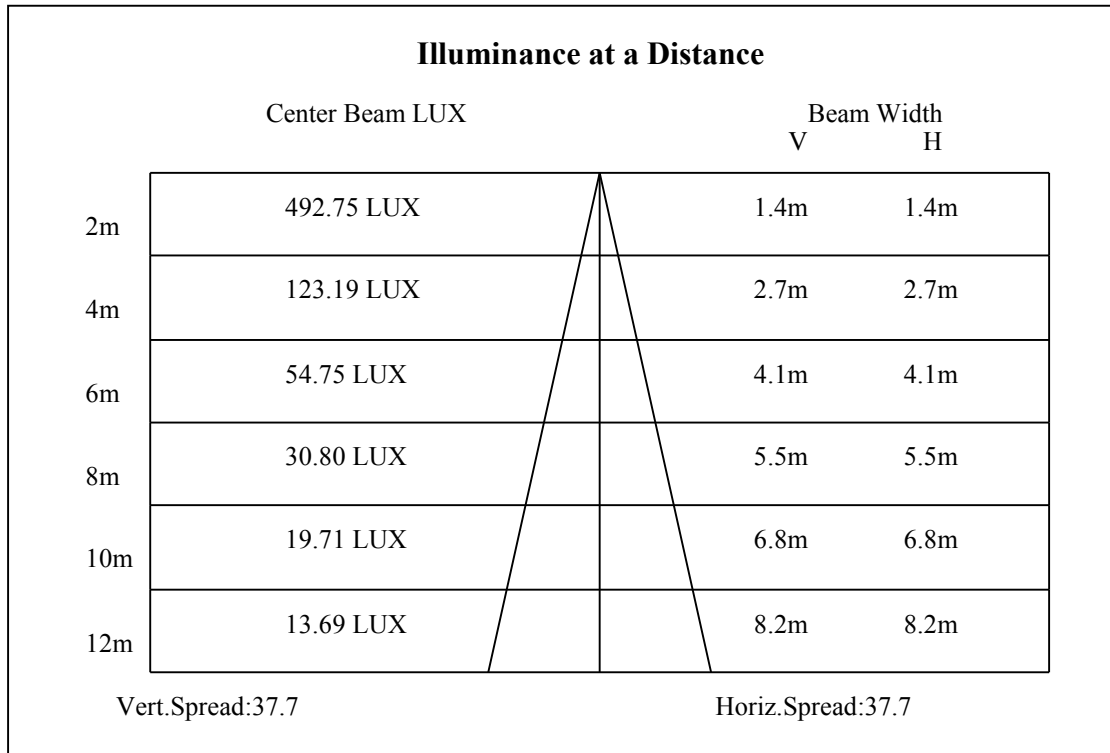
C90/C270: —————

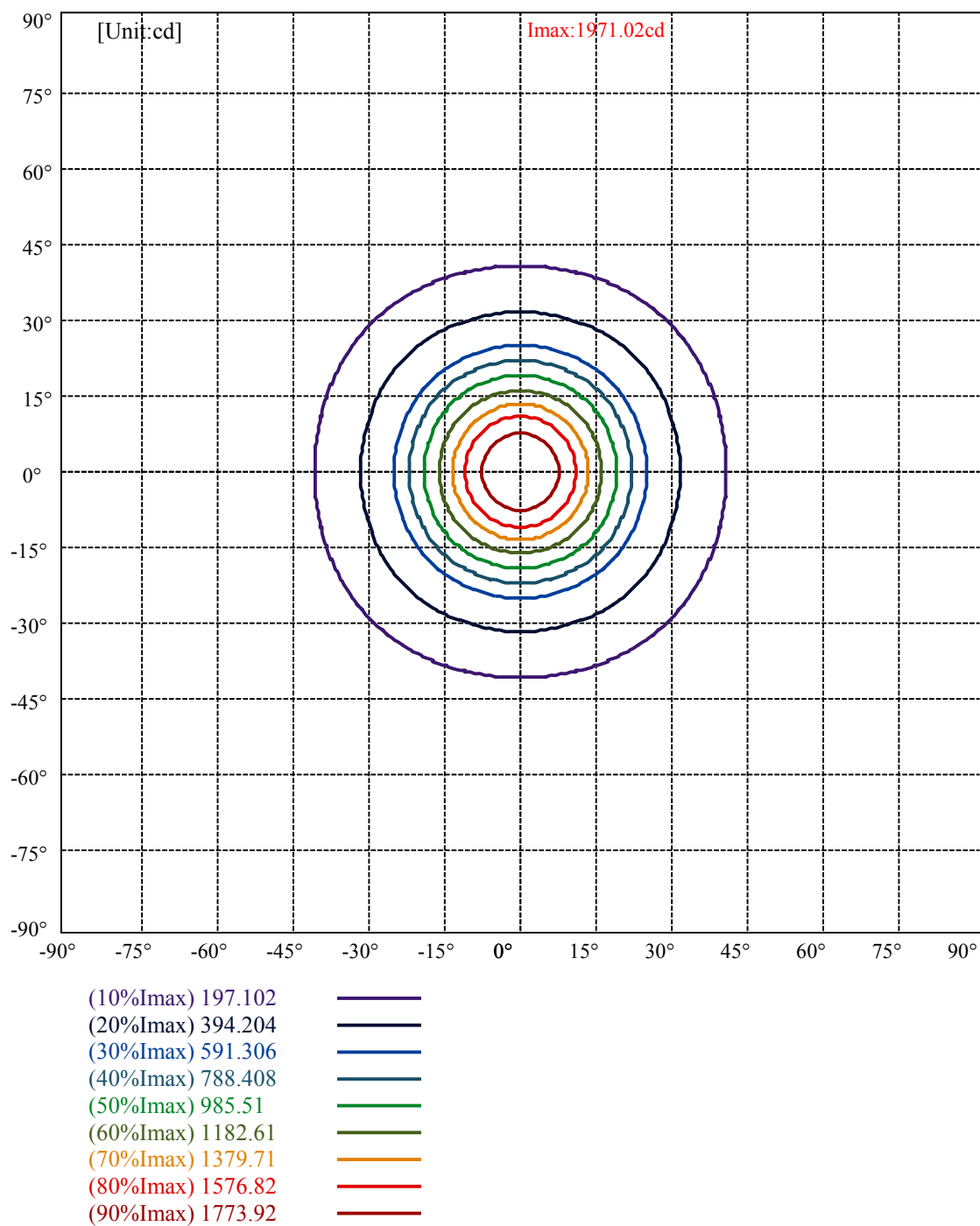
Field angle(10%Imax):C0/180Left:40.3 Right:40.3

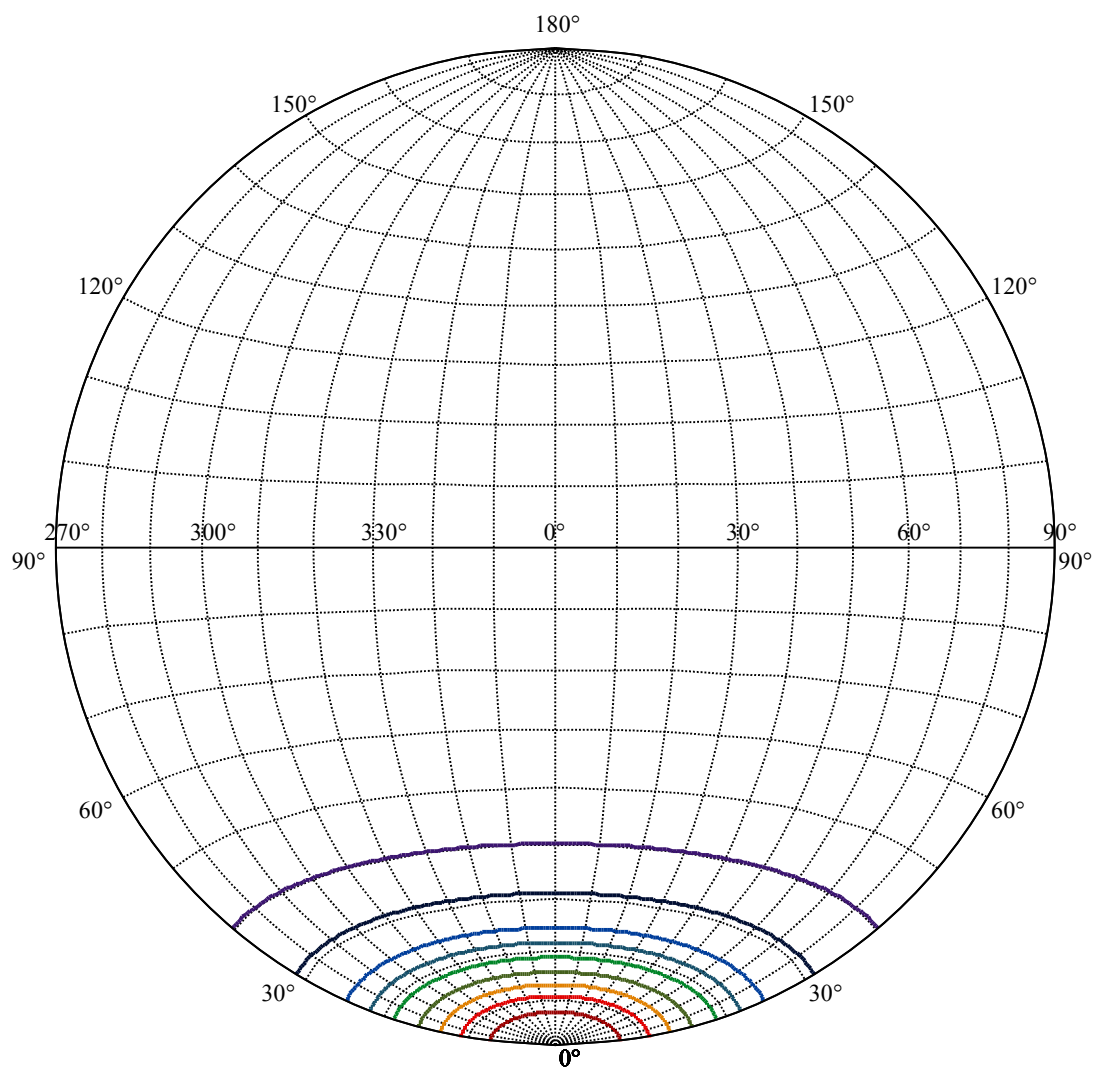
:C90/270Left:40.3 Right:40.3

Beam Angle(50%Imax):C0/180Left:18.8 Right:18.8

:C90/270Left:18.8 Right:18.8





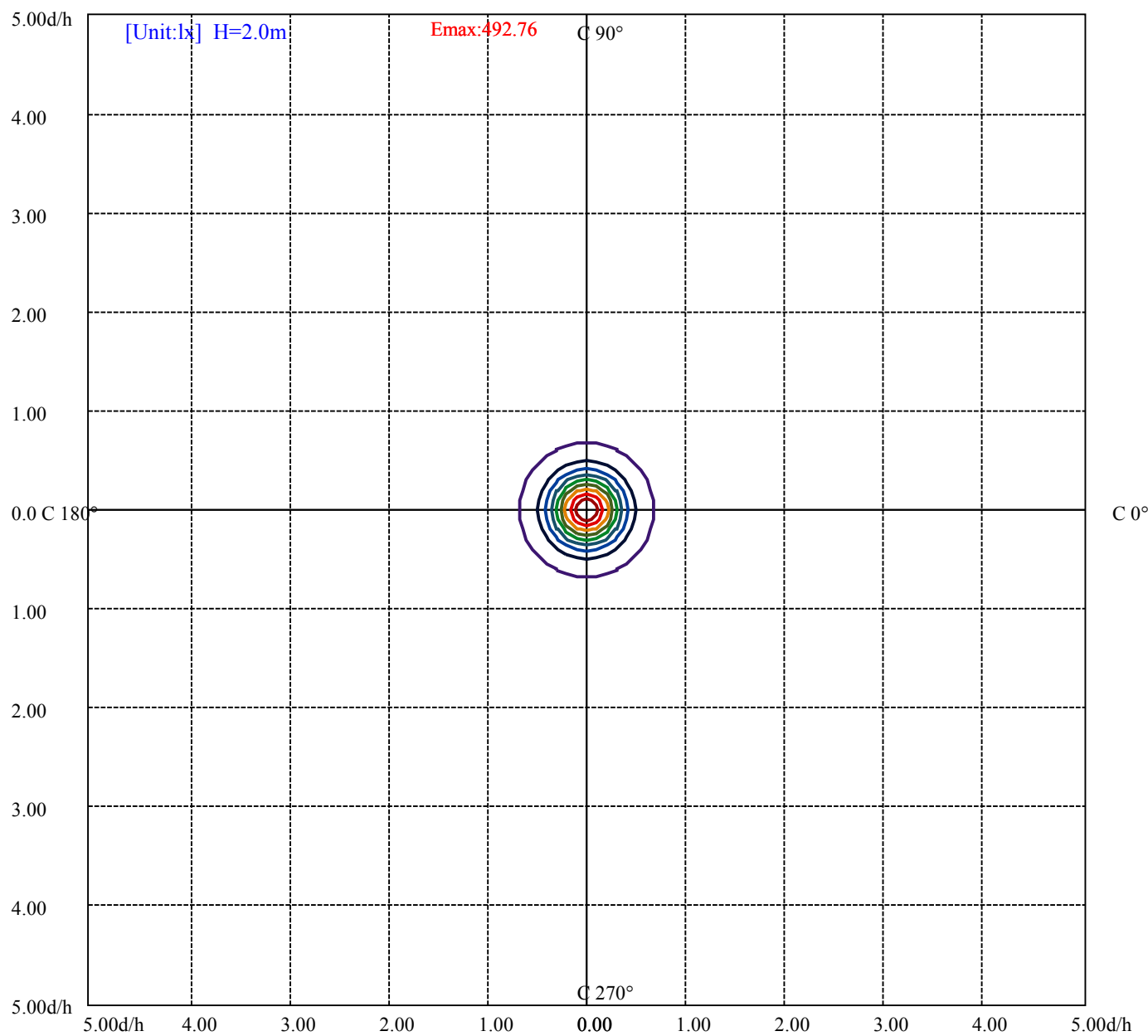


House

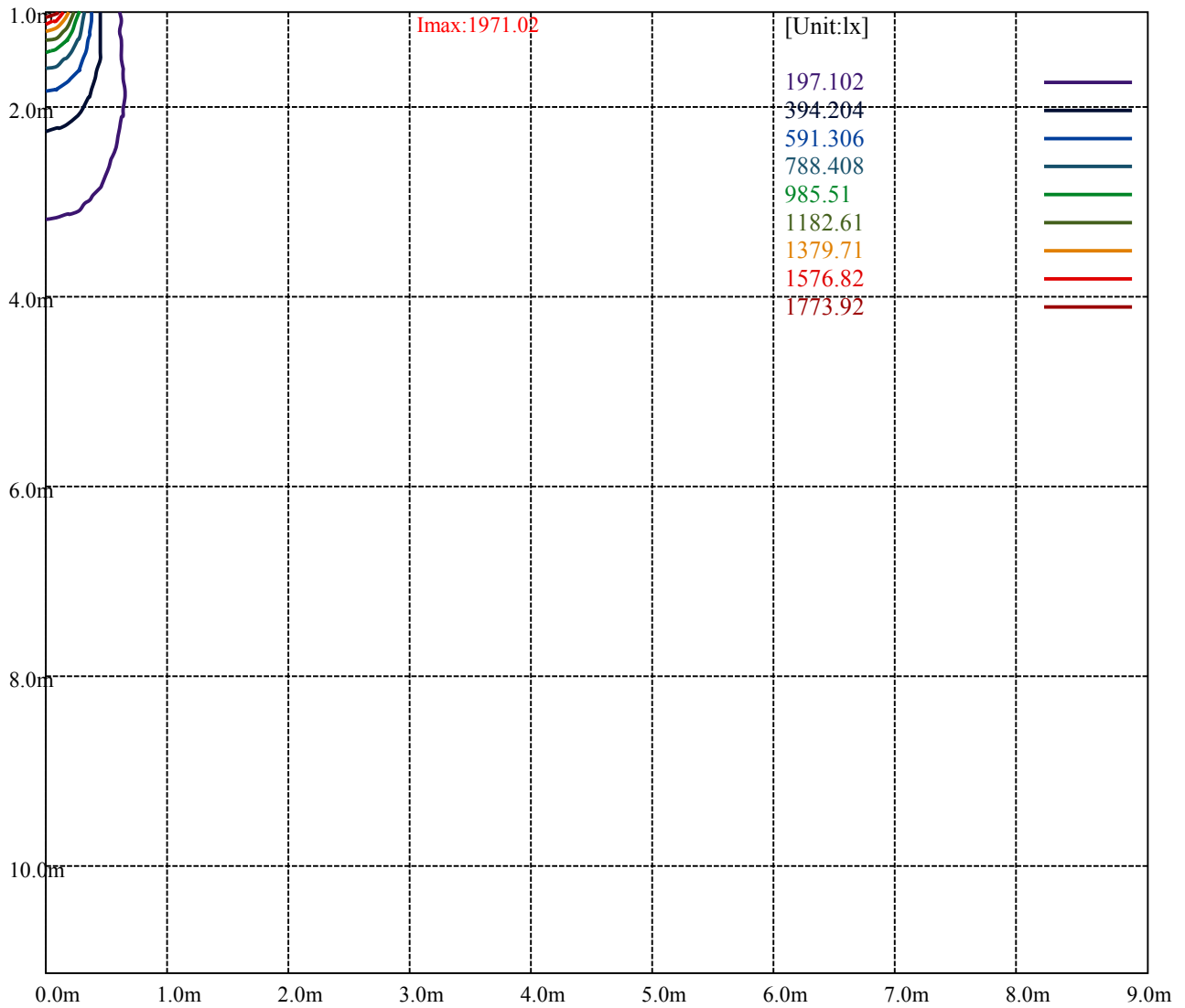
[Unit:cd]

Road

I_{max}:1971.02(10%I_{max}) 197.102(20%I_{max}) 394.204(30%I_{max}) 591.306(40%I_{max}) 788.408(50%I_{max}) 985.51(60%I_{max}) 1182.61(70%I_{max}) 1379.71(80%I_{max}) 1576.82(90%I_{max}) 1773.92



(10%Emax) 49.2755	—
(20%Emax) 98.55075	—
(30%Emax) 147.8262	—
(40%Emax) 197.1017	—
(50%Emax) 246.377	—
(60%Emax) 295.6525	—
(70%Emax) 344.9275	—
(80%Emax) 394.2025	—
(90%Emax) 443.48	—



Luminance Table

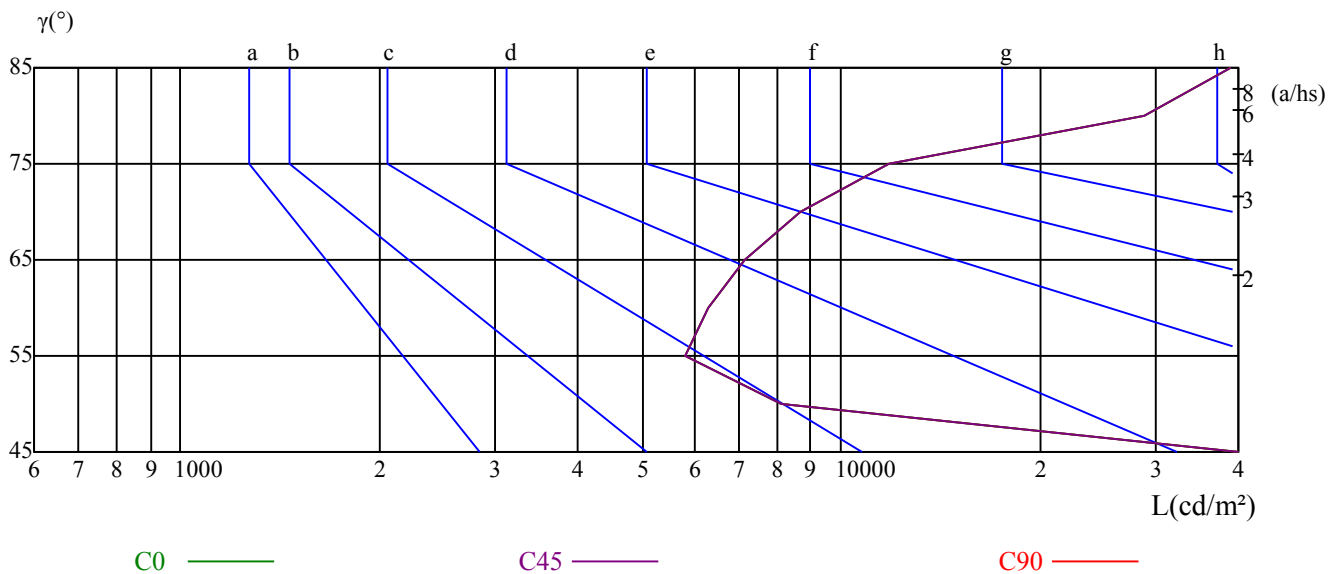
γ	45	50	55	60	65	70	75	80	85
C0	42508	8109	5806	6298	7163	8665	11835	28871	38988
C45	42508	8109	5806	6298	7163	8665	11835	28871	38988
C90	42508	8109	5806	6298	7163	8665	11835	28871	38988

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7163	7163	7163	11835	11835	11835	38988	38988	38988

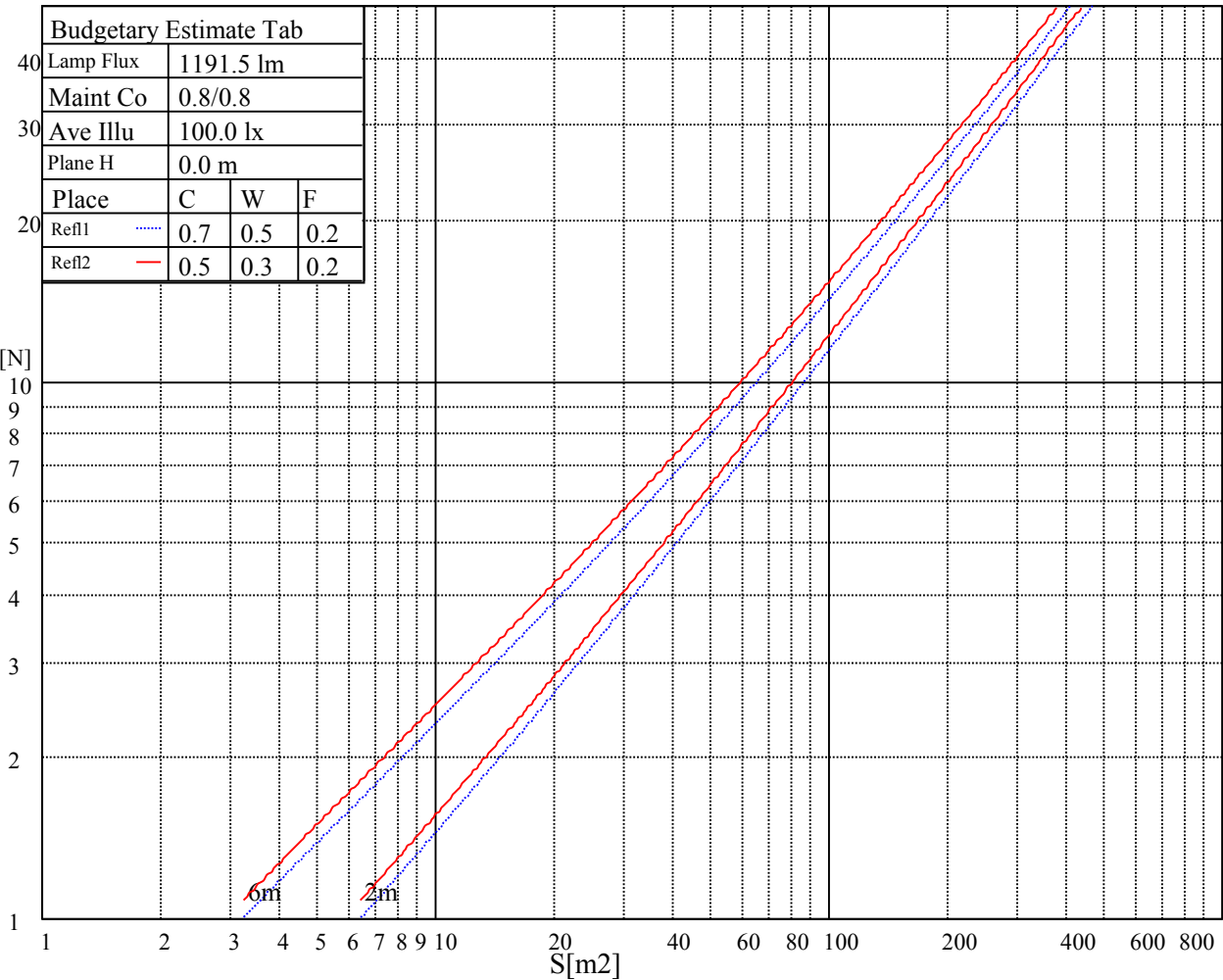
Glare Table

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

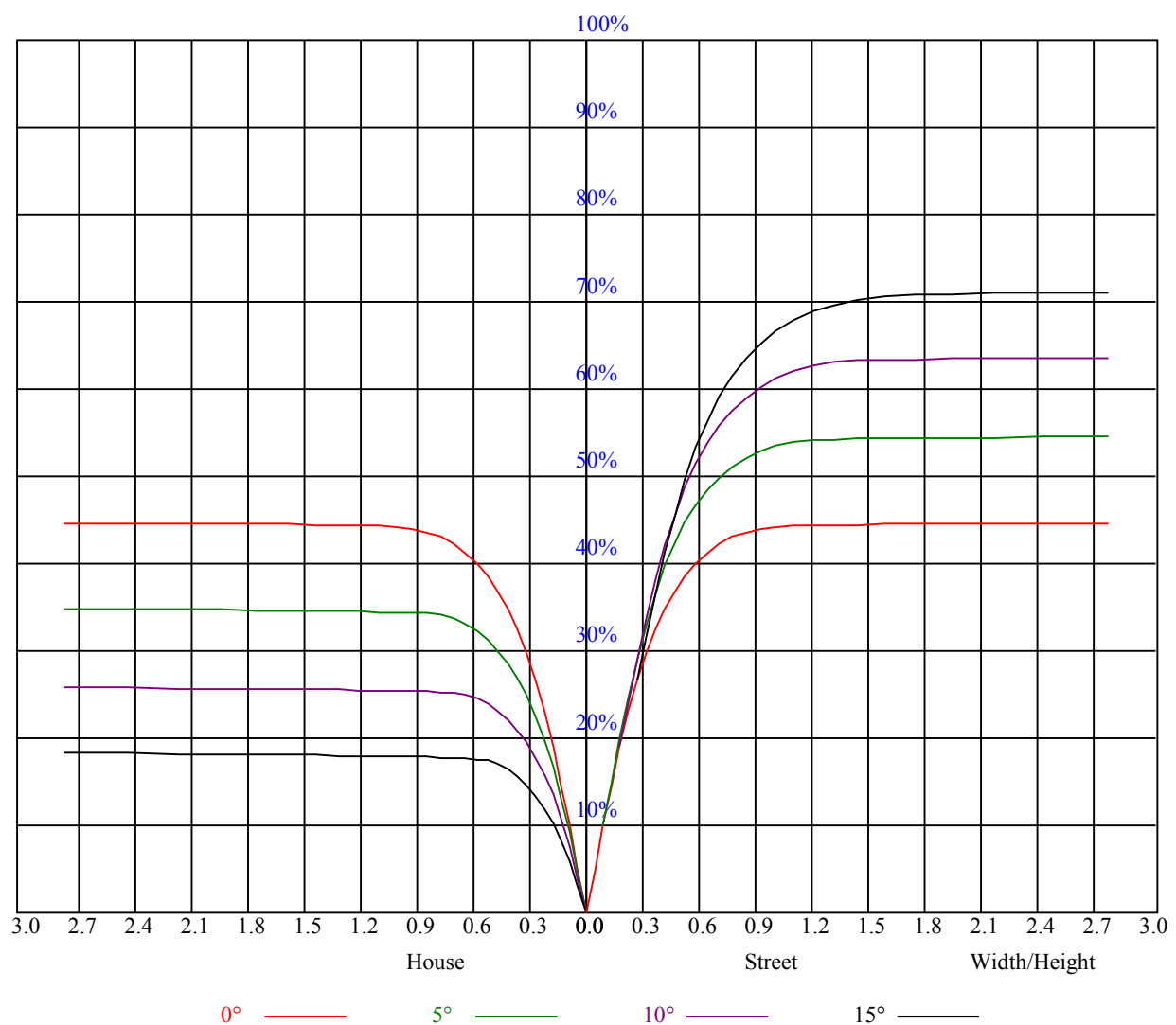
Luminance Limiting Curve



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	6.62	7.58	6.99	7.89	8.20	6.69	7.64	7.05	7.95	8.27
	3H	9.80	10.64	10.18	10.97	11.34	9.82	10.66	10.21	11.00	11.37
	4H	11.67	12.45	12.07	12.80	13.19	11.58	12.36	11.99	12.72	13.11
	6H	15.71	16.42	16.13	16.80	17.20	14.91	15.62	15.33	16.00	16.39
	8H	17.37	18.04	17.81	18.43	18.84	16.29	16.95	16.72	17.35	17.76
	12H	19.23	19.86	19.66	20.25	20.68	17.81	18.45	18.24	18.83	19.26
4H	2H	7.51	8.29	7.92	8.64	9.03	7.56	8.33	7.96	8.69	9.08
	3H	10.97	11.60	11.38	12.01	12.42	10.98	11.61	11.39	12.02	12.43
	4H	13.09	13.66	13.53	14.08	14.53	12.99	13.56	13.43	13.99	14.44
	6H	16.82	17.31	17.29	17.76	18.24	16.18	16.67	16.66	17.12	17.60
	8H	18.72	19.18	19.20	19.63	20.11	17.76	18.21	18.23	18.66	19.14
	12H	20.51	20.90	21.00	21.39	21.87	19.21	19.60	19.70	20.09	20.56
8H	4H	14.21	14.67	14.69	15.12	15.60	14.14	14.59	14.61	15.04	15.52
	6H	18.21	18.57	18.72	19.08	19.56	17.67	18.03	18.18	18.53	19.02
	8H	20.08	20.40	20.62	20.93	21.42	19.25	19.57	19.79	20.10	20.59
	12H	21.82	22.09	22.34	22.59	23.17	20.68	20.96	21.21	21.46	22.04
12H	4H	14.69	15.08	15.18	15.57	16.05	14.69	15.09	15.19	15.57	16.05
	6H	18.84	18.93	19.14	19.40	19.95	18.39	18.48	18.69	18.95	19.50
	8H	20.52	20.79	21.04	21.29	21.87	19.79	20.06	20.31	20.56	21.14
Variation with the observer position at spacings:											
S = 1.0H		3.8/-9.5					3.8/-9.5				
S = 1.5H		5.9/-6.9					5.9/-6.9				
S = 2.0H		7.3/-4.5					7.3/-4.5				
Standard tables:		BK2					BK2				
Uncorrected UGR		5.2					5.2				



RHOC	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	0.92	0.92	0.92	0.91
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.84
2	0.94	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.81	0.79
3	0.88	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.78	0.76	0.75
4	0.84	0.79	0.75	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.72	0.71
5	0.79	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.64
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.59
9	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.56
10	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.54



Nata 1733-A

Intensity data(cd)										Appendix Page: 15 Total:15	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1957.81	1994.69	1790.43	1416.60	1096.72	671.69	440.45	371.63	281.89		
45.0	1969.37	1963.31	1703.45	1280.06	927.70	563.78	404.11	344.65	237.24		
90.0	1979.28	1863.66	1540.48	1079.05	762.26	489.40	385.17	299.34	150.36		
135.0	1977.63	1821.27	1574.61	1218.95	825.85	538.45	405.77	304.46	167.76		
180.0	1957.81	1769.51	1496.98	1091.93	766.00	490.88	391.62	272.36	127.35		
225.0	1969.37	1868.61	1587.83	1091.27	883.49	552.00	417.27	334.96	180.20		
270.0	1979.28	1958.91	1767.31	1401.74	1025.15	650.77	450.91	369.98	278.03		
315.0	1977.63	1962.76	1717.76	1351.08	981.99	599.29	424.82	356.21	222.59		
360.0	1957.81	1994.69	1790.43	1416.60	1096.72	671.69	440.45	371.63	281.89		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	108.79	11.84	5.18	4.73	4.57	4.46	4.40	4.40	4.62		
45.0	39.92	6.83	4.90	4.68	4.51	4.46	4.46	6.11	5.62		
90.0	12.61	7.32	4.90	4.73	4.57	4.57	4.79	6.94	5.56		
135.0	17.62	7.21	5.12	4.90	4.68	4.57	5.67	10.63	4.68		
180.0	8.20	6.11	5.12	4.96	4.73	4.57	4.51	9.63	4.35		
225.0	28.08	7.54	5.01	4.73	4.57	4.46	4.46	4.57	4.51		
270.0	74.88	7.60	5.23	4.84	4.62	4.51	4.51	10.57	6.94		
315.0	75.65	8.97	5.07	4.73	4.57	4.46	4.46	8.15	5.07		
360.0	108.79	11.84	5.18	4.73	4.57	4.46	4.40	4.40	4.62		
C/γ(°)	90.0										
0.0	4.29										
45.0	4.29										
90.0	4.29										
135.0	4.29										
180.0	4.29										
225.0	4.24										
270.0	4.29										
315.0	4.29										
360.0	4.29										