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NATA

LumCAT: 3-1938-M
Luminaire: BJB47.319.2344
Report No: NATA0100
Test No: 20170617005
LampCAT: Philips Certaflux SLM 1208 L14
Lamp flux(lm): 2401.0
Number of Lamps: 1
Length(mm): 78
Phm Type: C

Voltage(V): 34.4000
Current(A): 0.5000
Power (W): 17.2000
PF: 0.0000
Ballast type: DC
Width(mm): 78
Height(mm): 0

Photometric Results

Lumens(lm): 2242.56
Efficiency(%): 93.40%
Lumens(lm)/Power(W): 133.53
Central intensity(cd): 9404.940
Maximum intensity(cd): 9404.940
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=17.1
 [C90/270]Total=17.1
Field angle(10%Imax): [C0/180]Total=60.2
 [C90/270]Total=60.2
Maximum s/h(1/2): C0_180=0.29 C90_270=0.29
Maximum s/h(1/4): C0_180=0.37 C90_270=0.37
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.65%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.522%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2017/6/17
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

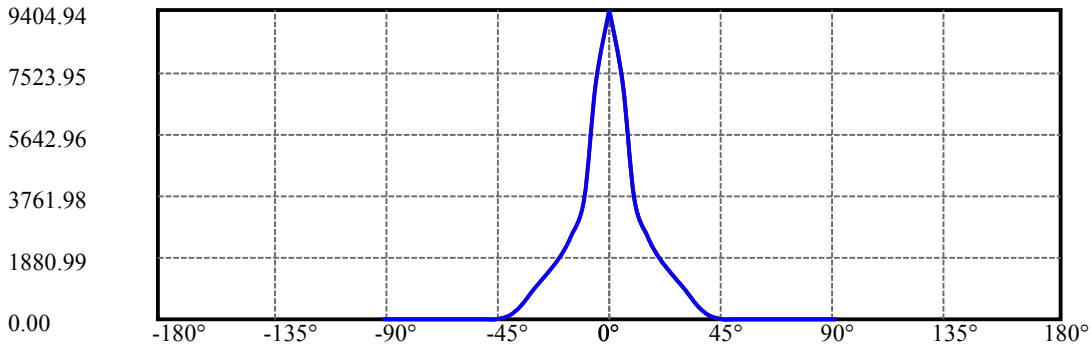
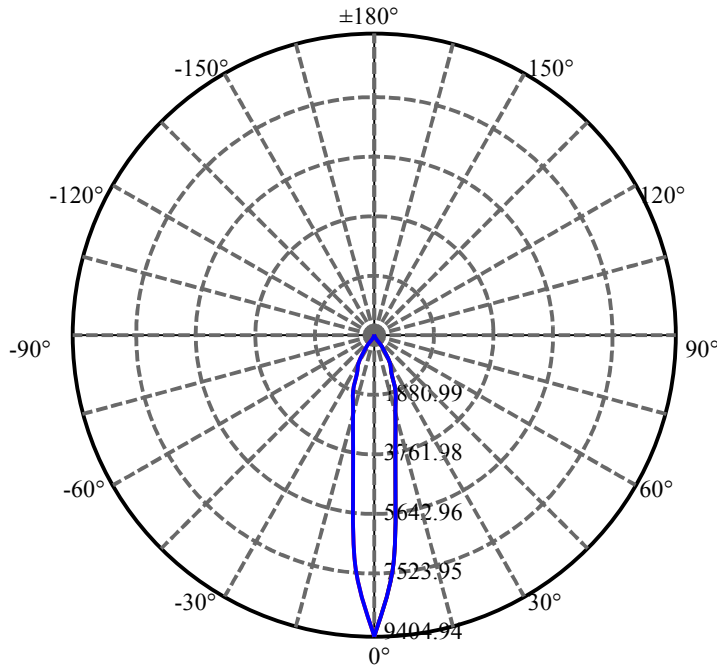
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9404.941	56.243	56.243	2.343%	2.508%
5.0	7160.773	342.094	398.337	14.248%	17.763%
10.0	3706.328	352.780	751.117	14.693%	33.494%
15.0	2488.549	353.046	1104.163	14.704%	49.237%
20.0	1868.683	350.330	1454.493	14.591%	64.858%
25.0	1321.477	306.124	1760.617	12.750%	78.509%
30.0	949.978	260.359	2020.976	10.844%	90.119%
35.0	422.482	132.828	2153.804	5.532%	96.042%
40.0	118.901	41.893	2195.697	1.745%	97.910%
45.0	18.162	7.039	2202.736	.293%	98.224%
50.0	11.830	4.967	2207.704	.207%	98.446%
55.0	10.234	4.595	2212.299	.191%	98.650%
60.0	9.477	4.499	2216.797	.187%	98.851%
65.0	9.098	4.520	2221.317	.188%	99.053%
70.0	8.919	4.594	2225.911	.191%	99.257%
75.0	8.837	4.679	2230.59	.195%	99.466%
80.0	8.816	4.759	2235.349	.198%	99.678%
85.0	8.823	4.818	2240.167	.201%	99.893%
90.0	8.747	2.397	2242.564	.100%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2020.98	84.17%	90.12%
0-40	2195.70	91.45%	97.91%
0-60	2216.80	92.33%	98.85%
0-90	2240.17	93.30%	99.89%
0-120	2240.17	93.30%	99.89%
0-180	2242.56	93.40%	100.00%
60-90	27.87	1.16%	1.24%
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%
0-25.64	1794.05	74.72%	80.00%

ZONAL LUMEN SUMMARY

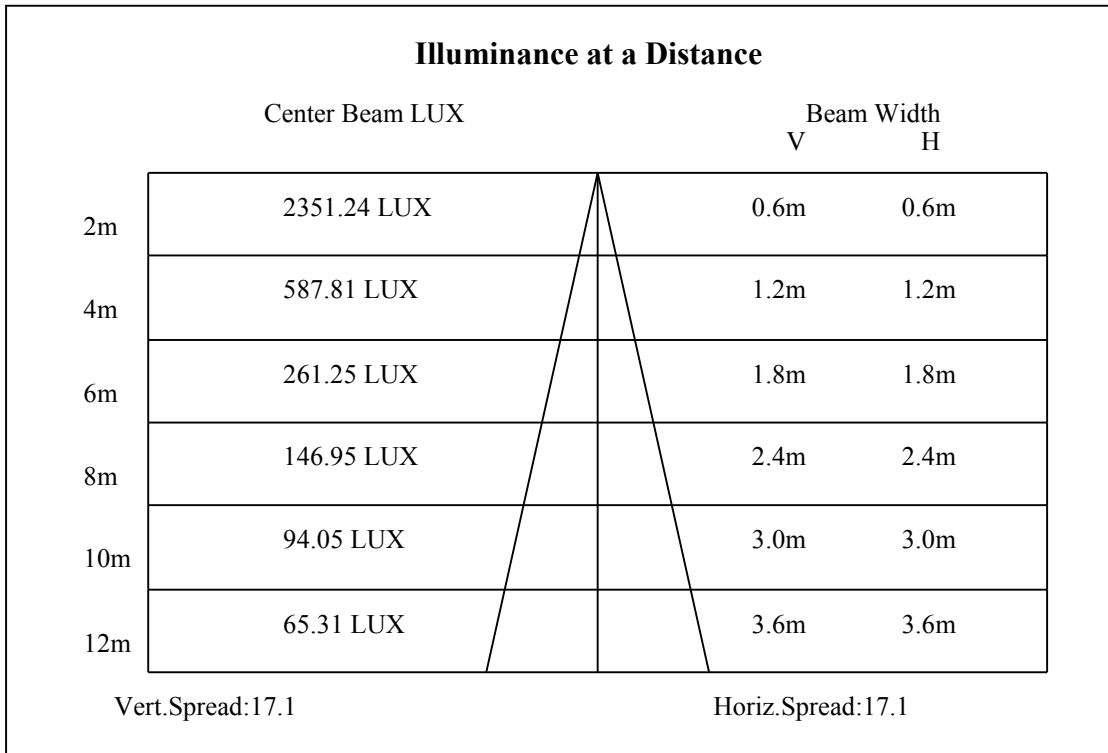
0-10	751.12
10-20	703.38
20-30	566.48
30-40	174.72
40-50	12.01
50-60	9.09
60-70	9.11
70-80	9.44
80-90	4.82
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

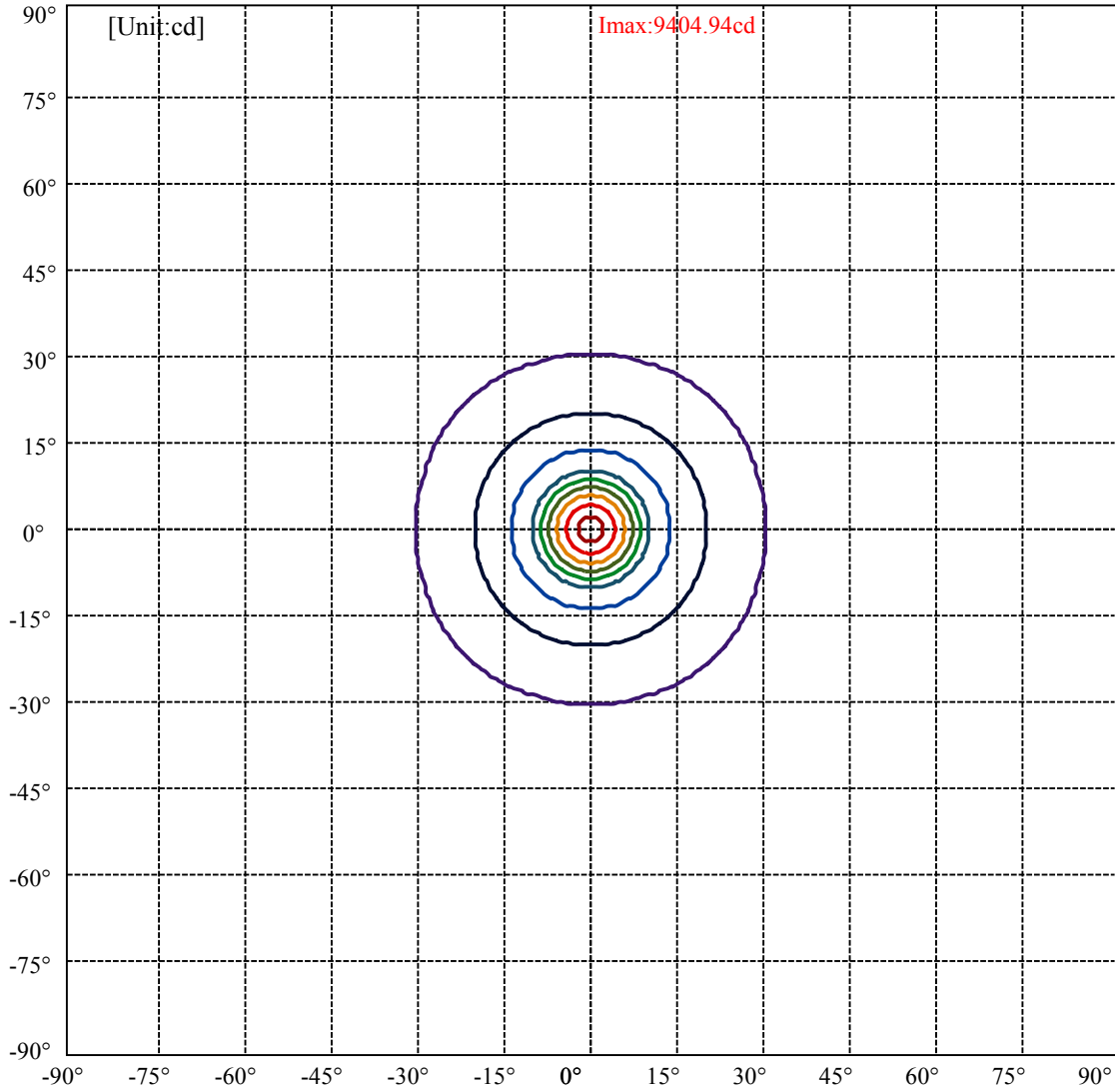


C0(Max): ———
C0/C180: ———
C90/C270: ———

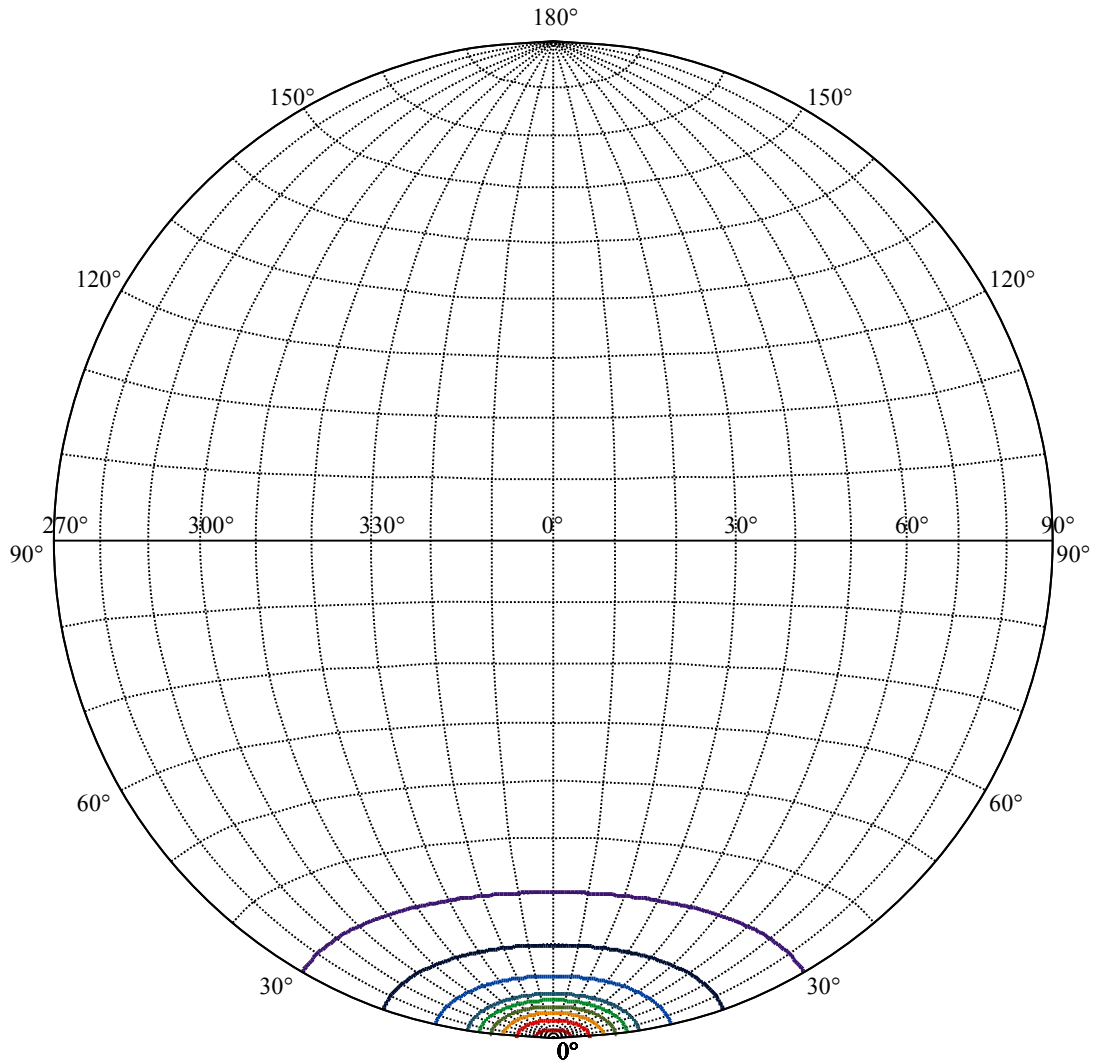
Field angle(10%Imax):C0/180Left:30.1 Right:30.1
:C90/270Left:30.1 Right:30.1

Beam Angle(50%Imax):C0/180Left:8.6 Right:8.6
:C90/270Left:8.6 Right:8.6





(10%Imax) 940.494	—
(20%Imax) 1880.99	—
(30%Imax) 2821.48	—
(40%Imax) 3761.98	—
(50%Imax) 4702.47	—
(60%Imax) 5642.96	—
(70%Imax) 6583.46	—
(80%Imax) 7523.95	—
(90%Imax) 8464.45	—



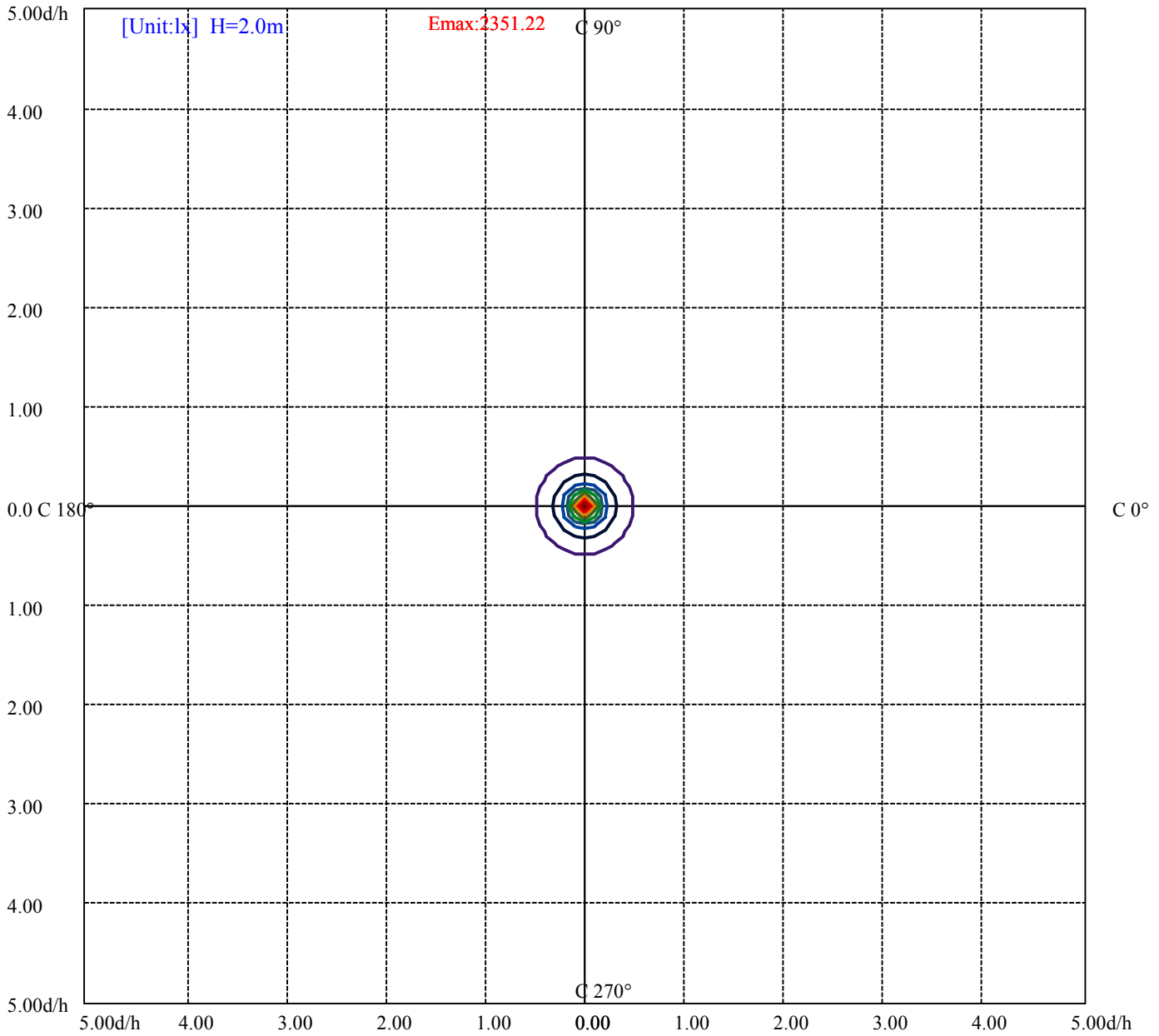
House

[Unit:cd]

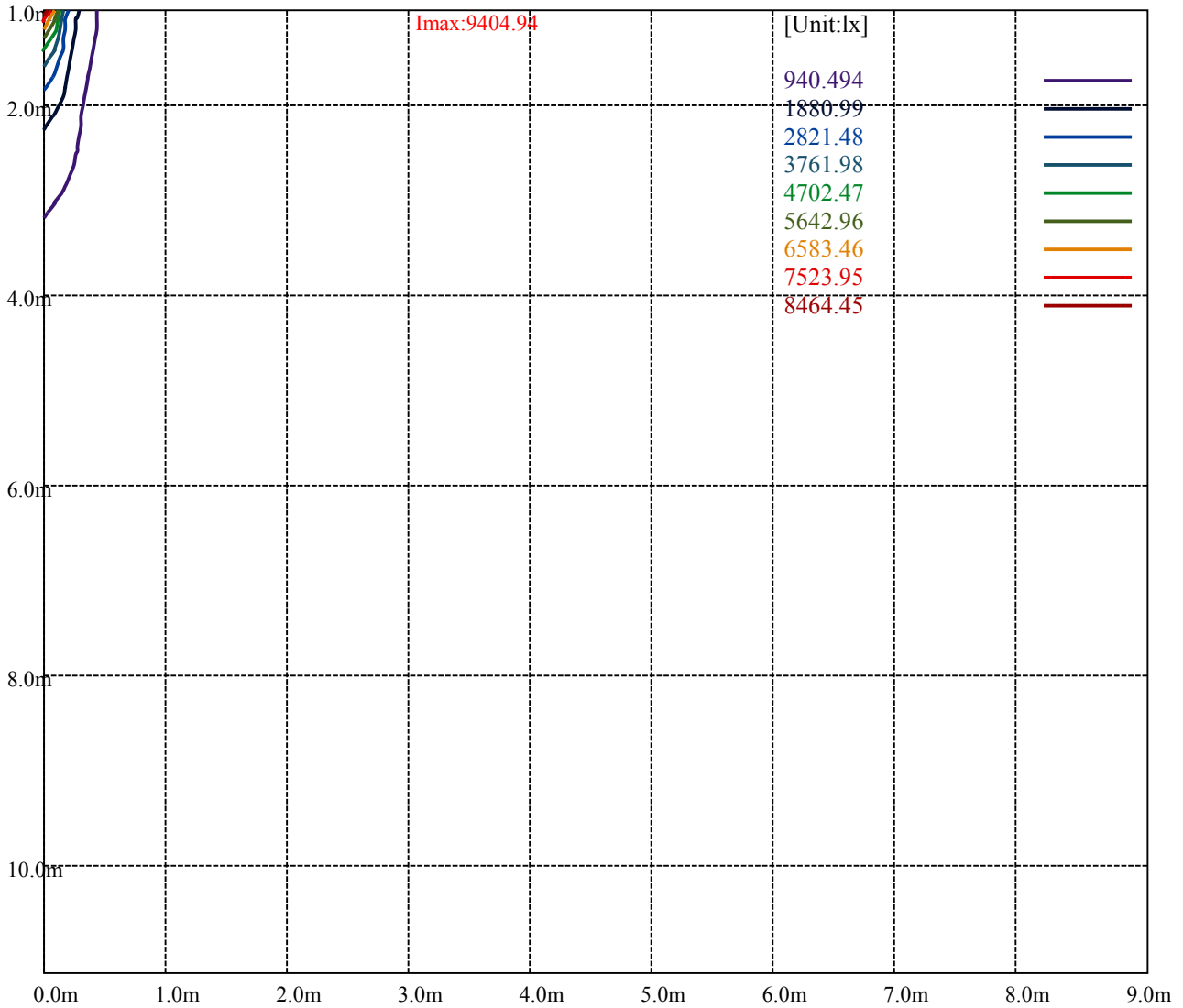
Road

Imax:9404.94

(10%Imax) 940.494	—
(20%Imax) 1880.99	—
(30%Imax) 2821.48	—
(40%Imax) 3761.98	—
(50%Imax) 4702.47	—
(60%Imax) 5642.96	—
(70%Imax) 6583.46	—
(80%Imax) 7523.95	—
(90%Imax) 8464.45	—



(10%Emax) 235.1217	—
(20%Emax) 470.2425	—
(30%Emax) 705.365	—
(40%Emax) 940.4875	—
(50%Emax) 1175.61	—
(60%Emax) 1410.73	—
(70%Emax) 1645.853	—
(80%Emax) 1880.975	—
(90%Emax) 2116.097	—



Luminance Table

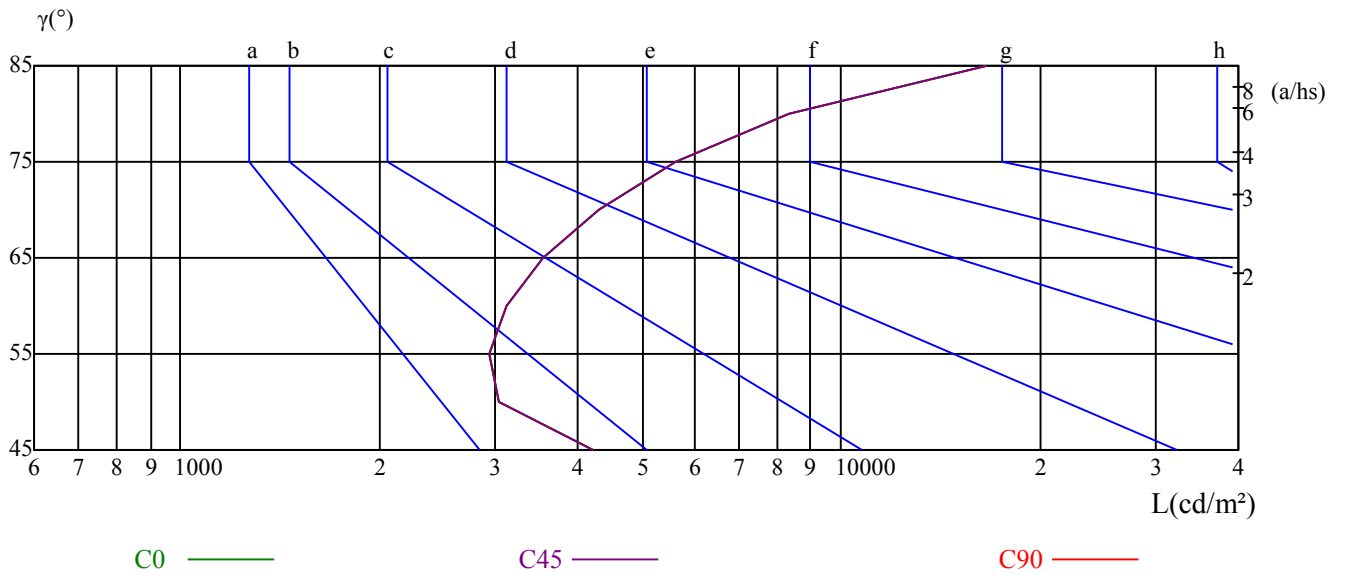
γ	45	50	55	60	65	70	75	80	85
C0	4222	3025	2933	3115	3538	4286	5612	8345	16639
C45	4222	3025	2933	3115	3538	4286	5612	8345	16639
C90	4222	3025	2933	3115	3538	4286	5612	8345	16639

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3538	3538	3538	5612	5612	5612	16639	16639	16639

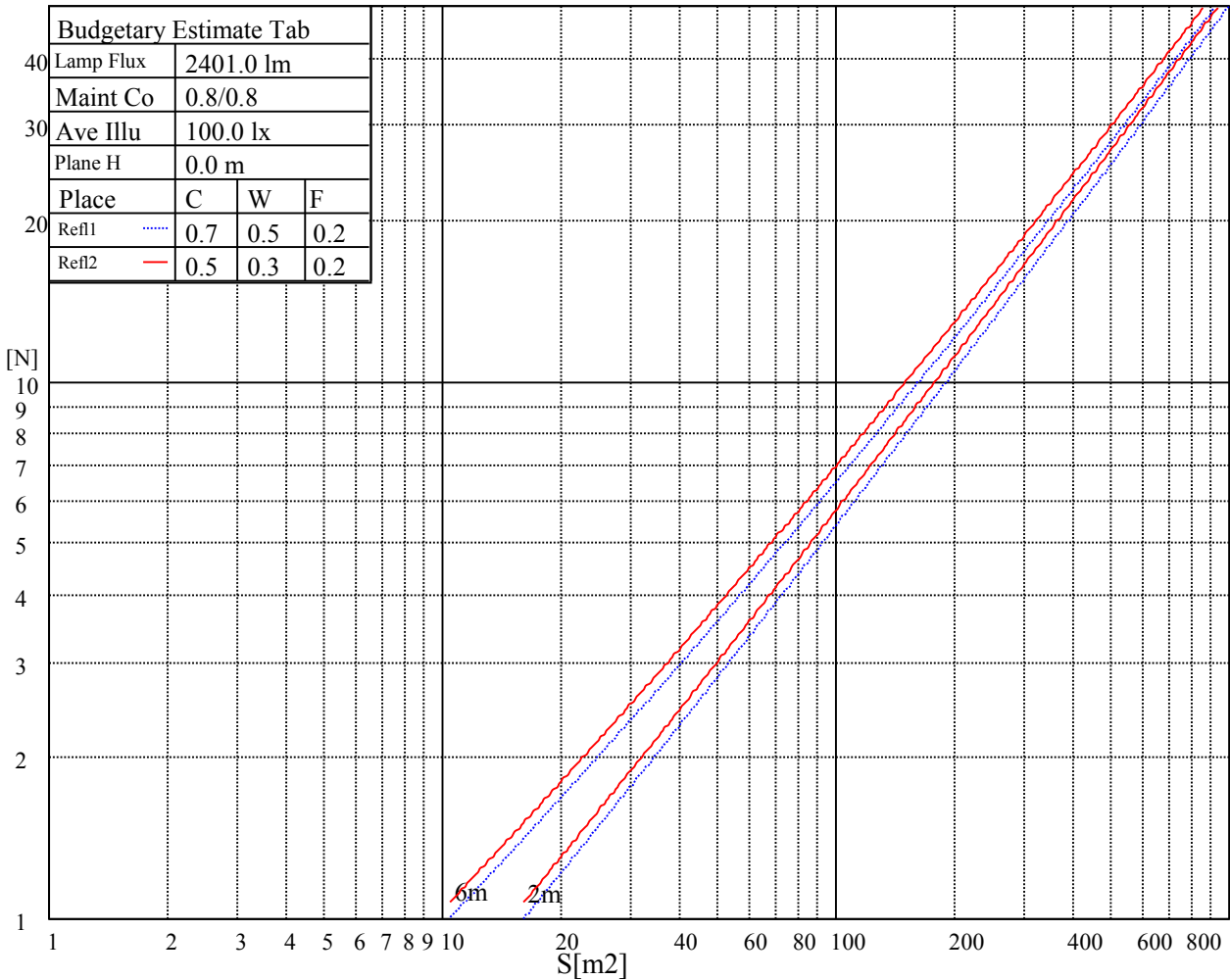
Glare Table

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

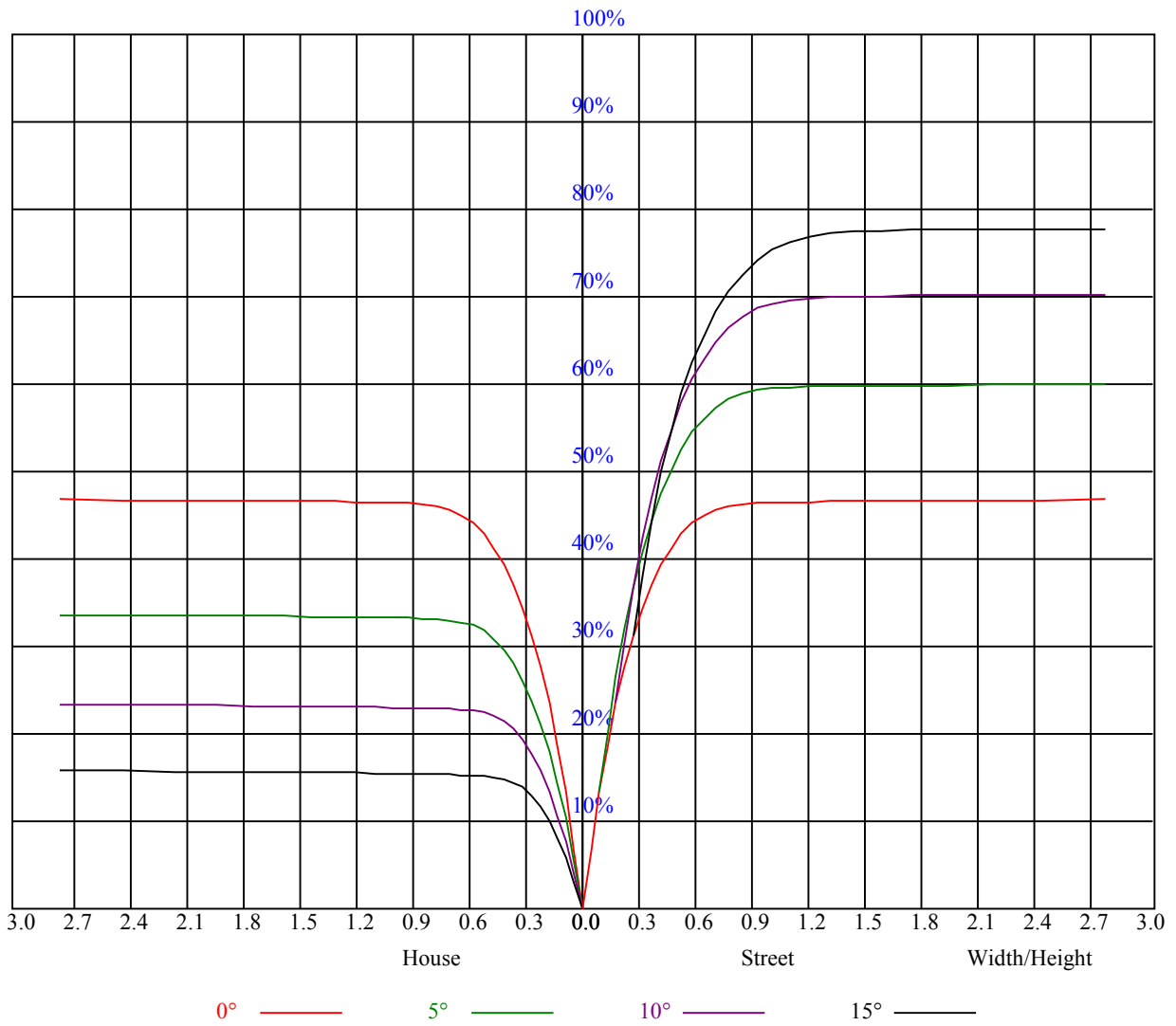
Luminance Limiting Curve



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	1.55	2.46	1.91	2.77	3.09	1.52	2.43	1.89	2.74	3.06
	3H	4.64	5.44	5.02	5.78	6.15	4.64	5.45	5.03	5.78	6.15
	4H	6.41	7.15	6.82	7.51	7.90	6.37	7.11	6.78	7.47	7.86
	6H	8.39	9.07	8.81	9.44	9.84	8.35	9.03	8.77	9.41	9.80
	8H	9.48	10.12	9.92	10.51	10.92	9.46	10.10	9.90	10.49	10.90
	12H	11.26	11.87	11.69	12.25	12.68	11.27	11.88	11.70	12.26	12.69
4H	2H	2.40	3.14	2.80	3.49	3.88	2.38	3.12	2.79	3.48	3.87
	3H	5.76	6.37	6.18	6.78	7.19	5.77	6.38	6.18	6.79	7.19
	4H	7.71	8.25	8.15	8.68	9.13	7.67	8.21	8.11	8.64	9.09
	6H	9.86	10.32	10.33	10.77	11.25	9.83	10.30	10.30	10.75	11.23
	8H	11.05	11.48	11.53	11.94	12.41	11.04	11.47	11.52	11.93	12.40
	12H	12.73	13.10	13.22	13.59	14.07	12.74	13.11	13.23	13.60	14.08
8H	4H	8.43	8.86	8.91	9.31	9.79	8.40	8.83	8.88	9.29	9.76
	6H	10.85	11.19	11.37	11.70	12.19	10.84	11.18	11.35	11.68	12.17
	8H	12.24	12.54	12.77	13.06	13.56	12.23	12.54	12.77	13.06	13.56
	12H	14.05	14.31	14.57	14.81	15.39	14.07	14.33	14.59	14.82	15.41
12H	4H	8.64	9.01	9.13	9.50	9.98	8.61	8.98	9.11	9.47	9.95
	6H	11.37	11.48	11.71	11.95	12.50	11.36	11.46	11.70	11.93	12.48
	8H	12.69	12.95	13.22	13.45	14.03	12.69	12.95	13.21	13.45	14.03
Variation with the observer position at spacings:											
S = 1.0H	5.7/-7.6					5.7/-7.6					
S = 1.5H	7.9/-5.7					7.9/-5.7					
S = 2.0H	9.3/-4.3					9.3/-4.3					
Standard tables:	BK3					BK3					
Uncorrected UGR	0.4					0.4					



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	1.14	1.14	1.14	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.04	1.01	0.99	1.02	1.00	0.97	0.98	0.96	0.94	0.95	0.93	0.91	0.91	0.90	0.89	0.87
2	0.99	0.95	0.91	0.97	0.93	0.90	0.94	0.91	0.88	0.91	0.89	0.86	0.88	0.86	0.85	0.83
3	0.94	0.89	0.86	0.92	0.88	0.85	0.90	0.86	0.84	0.88	0.85	0.82	0.85	0.83	0.81	0.80
4	0.89	0.85	0.81	0.88	0.84	0.80	0.86	0.82	0.80	0.84	0.81	0.79	0.83	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	0.75	0.80	0.77	0.75	0.73
6	0.82	0.77	0.74	0.81	0.77	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.79	0.74	0.70	0.78	0.74	0.70	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.68
8	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.73	0.69	0.67	0.66
9	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.65	0.64
10	0.71	0.66	0.63	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.62



NATA 3-1938-M

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	9437.22	8813.98	4544.91	2777.04	2082.23	1518.46	1105.53	648.01	290.70
45.0	9430.06	8821.14	4549.31	2778.15	2115.82	1500.29	1123.15	697.56	294.55
90.0	9549.53	8674.14	4177.68	2694.46	2032.13	1523.41	1088.30	577.82	97.28
135.0	9253.88	8895.46	4554.27	2790.26	2118.02	1519.56	1111.04	608.37	160.82
180.0	9437.22	5493.53	2952.12	2256.21	1652.79	1096.78	797.88	205.09	26.81
225.0	9328.21	5468.20	2885.51	2144.45	1630.77	1096.72	794.85	218.08	26.92
270.0	9549.53	5904.80	3056.18	2298.60	1712.25	1235.47	844.57	279.69	28.90
315.0	9253.88	5214.94	2930.65	2169.22	1605.44	1081.14	734.51	145.24	25.22
360.0	9437.22	8813.98	4544.91	2777.04	2082.23	1518.46	1105.53	648.01	290.70

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	22.19	12.50	10.41	9.52	9.08	8.92	8.81	8.86	9.03
45.0	22.02	12.88	10.57	9.74	9.14	9.03	8.86	8.86	8.81
90.0	22.19	12.55	10.68	9.69	9.19	8.97	8.92	8.81	8.81
135.0	22.08	12.88	10.68	9.74	9.14	9.03	8.81	8.81	8.75
180.0	14.70	11.07	9.97	9.36	9.14	8.86	8.81	8.75	8.70
225.0	14.20	10.90	9.80	9.25	9.03	8.86	8.81	8.81	8.75
270.0	14.70	11.23	10.08	9.36	9.08	8.86	8.92	8.81	8.75
315.0	13.21	10.63	9.69	9.14	8.97	8.81	8.75	8.81	8.97
360.0	22.19	12.50	10.41	9.52	9.08	8.92	8.81	8.86	9.03

C/γ(°)	90.0
0.0	8.97
45.0	8.75
90.0	8.75
135.0	8.70
180.0	8.64
225.0	8.75
270.0	8.70
315.0	8.70
360.0	8.97