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Nata

LumCAT: 2-1566-M	
Luminaire: BJB 47.319.2021	
Report No: 20170510001-1	Voltage(V): 218.3000
Test No: 20170510001	Current(A): 0.1030
LampCAT: CITIZEN CLU036	Power (W): 20.4000
Lamp flux(lm): 2279.0	PF: 0.9060
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2099.92
Efficiency(%): 92.14%
Lumens(lm)/Power(W): 102.94
Central intensity(cd): 6598.785
Maximum intensity(cd): 6598.785
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=19.5
[C90/270]Total=19.5
Field angle(10%Imax): [C0/180]Total=68.8
[C90/270]Total=68.8
Maximum s/h(1/2): C0_180=0.33 C90_270=0.33
Maximum s/h(1/4): C0_180=0.47 C90_270=0.47
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): - -
CIE Type : Direct lighting
Output flux ratio in π solid angle : - -

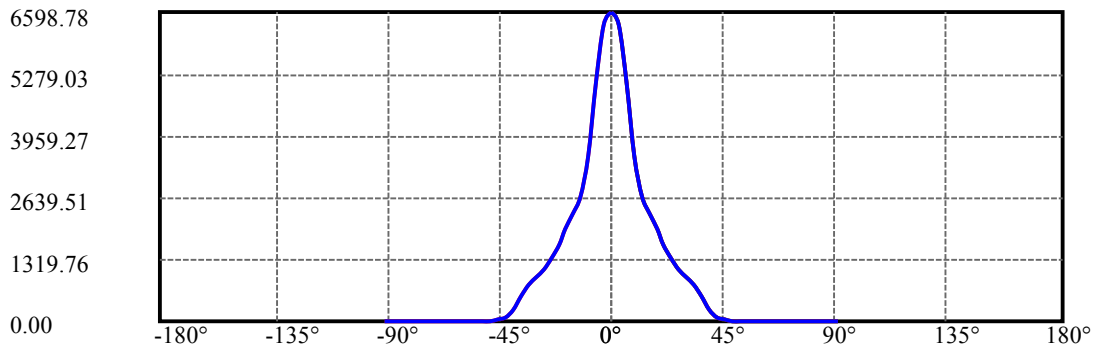
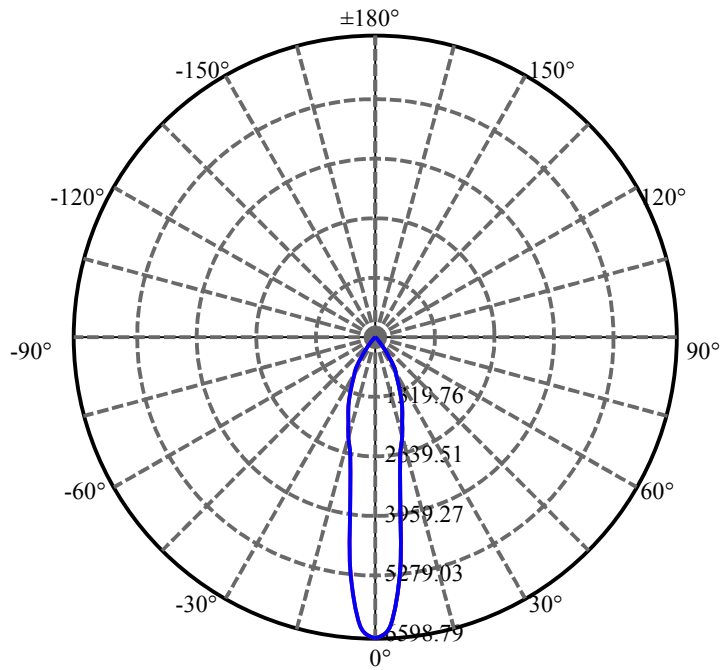
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6598.785	14.208	14.208	.623%	.677%
3.0	6330.178	108.980	123.187	4.782%	5.866%
6.0	5102.696	175.454	298.641	7.699%	14.222%
9.0	3518.792	181.074	479.715	7.945%	22.844%
12.0	2645.942	180.962	660.677	7.940%	31.462%
15.0	2279.748	194.094	854.771	8.517%	40.705%
18.0	1952.713	198.495	1053.266	8.710%	50.157%
21.0	1624.508	191.505	1244.771	8.403%	59.277%
24.0	1343.514	179.756	1424.527	7.888%	67.837%
27.0	1116.289	166.706	1591.234	7.315%	75.776%
30.0	959.193	157.763	1748.997	6.922%	83.289%
33.0	783.184	140.314	1889.311	6.157%	89.971%
36.0	514.757	99.529	1988.84	4.367%	94.710%
39.0	253.961	52.574	2041.413	2.307%	97.214%
42.0	65.111	14.332	2055.745	.629%	97.896%
45.0	22.511	5.236	2060.981	.230%	98.146%
48.0	15.333	3.748	2064.729	.164%	98.324%
51.0	11.121	2.843	2067.573	.125%	98.460%
54.0	9.607	2.557	2070.129	.112%	98.581%
57.0	9.105	2.512	2072.641	.110%	98.701%
60.0	8.802	2.508	2075.149	.110%	98.820%
63.0	8.589	2.517	2077.666	.110%	98.940%
66.0	8.458	2.542	2080.208	.112%	99.061%
69.0	8.341	2.562	2082.769	.112%	99.183%
72.0	8.286	2.592	2085.362	.114%	99.307%
75.0	8.217	2.611	2087.973	.115%	99.431%
78.0	8.197	2.637	2090.61	.116%	99.557%
81.0	8.162	2.652	2093.262	.116%	99.683%
84.0	8.155	2.668	2095.93	.117%	99.810%
87.0	8.100	2.661	2098.591	.117%	99.937%
90.0	8.093	1.331	2099.922	.058%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1749.00	76.74%	83.29%
0-40	2041.41	89.57%	97.21%
0-60	2075.15	91.06%	98.82%
0-90	2098.59	92.08%	99.94%
0-120	2098.59	92.08%	99.94%
0-180	2099.92	92.14%	100.00%
60-90	25.95	1.14%	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%
0-28.69	1679.94	73.71%	80.00%

ZONAL LUMEN SUMMARY

0-10	479.71
10-20	573.55
20-30	695.73
30-40	292.42
40-50	23.32
50-60	10.42
60-70	7.62
70-80	7.84
80-90	7.98
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:

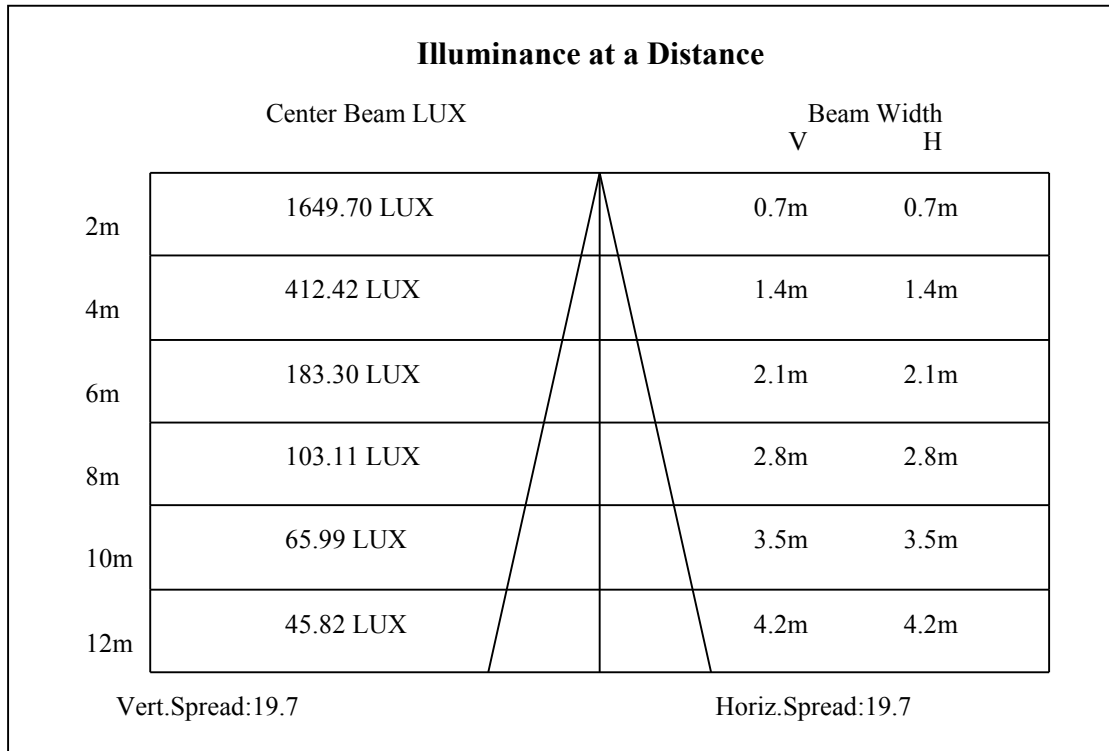
C90/C270:

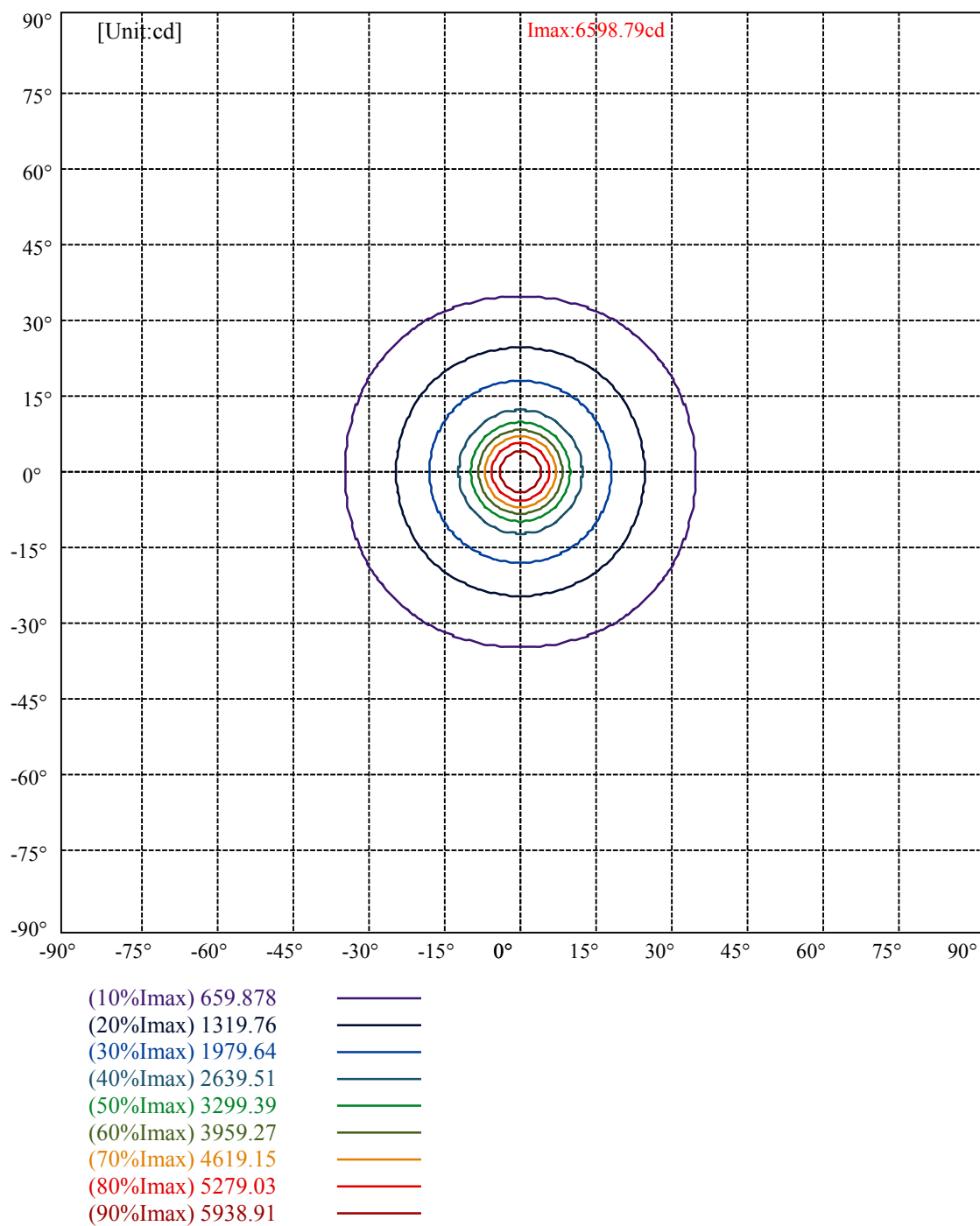
Field angle(10%Imax):C0/180Left:34.4 Right:34.4

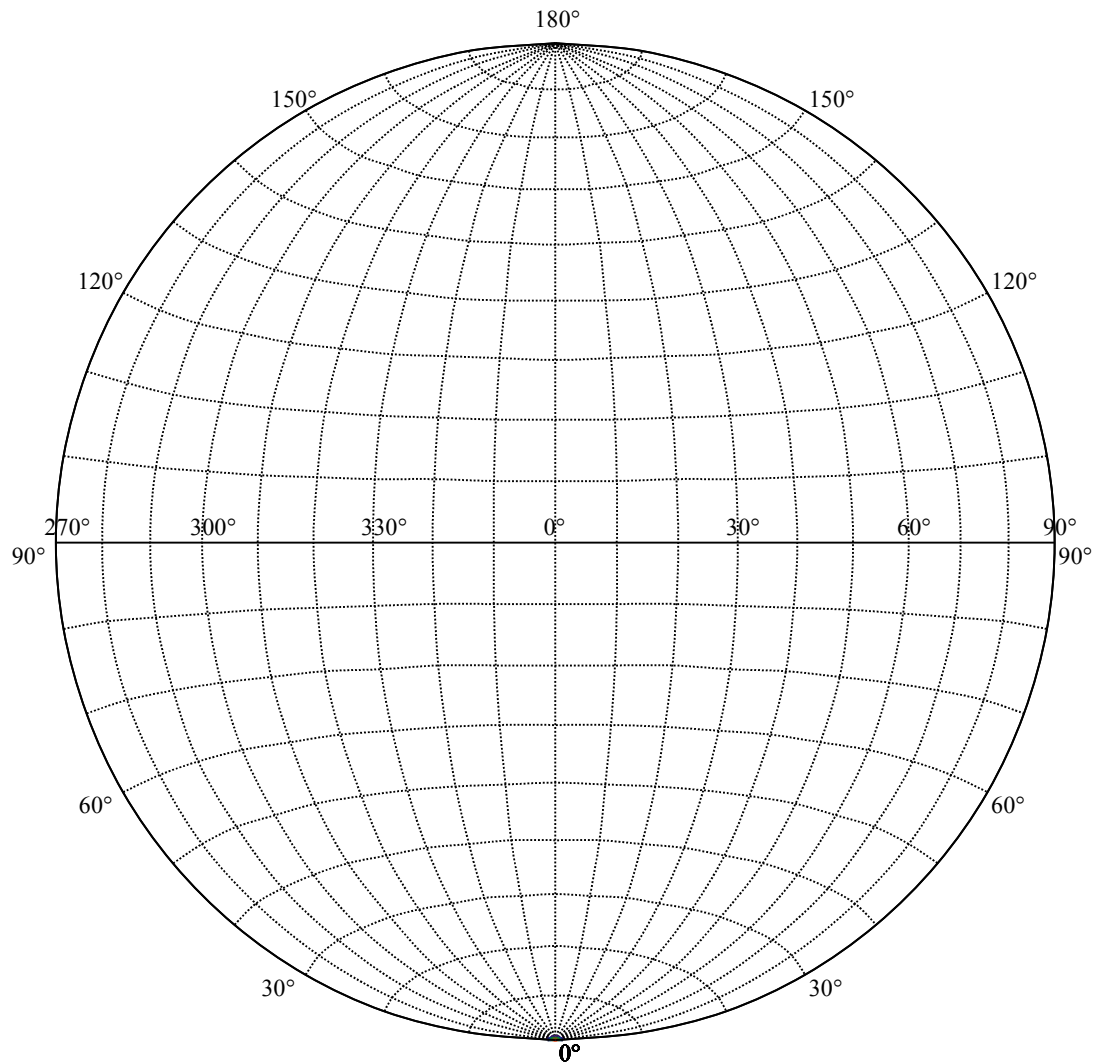
:C90/270Left:34.4 Right:34.4

Beam Angle(50%Imax):C0/180Left:9.8 Right:9.8

:C90/270Left:9.8 Right:9.8







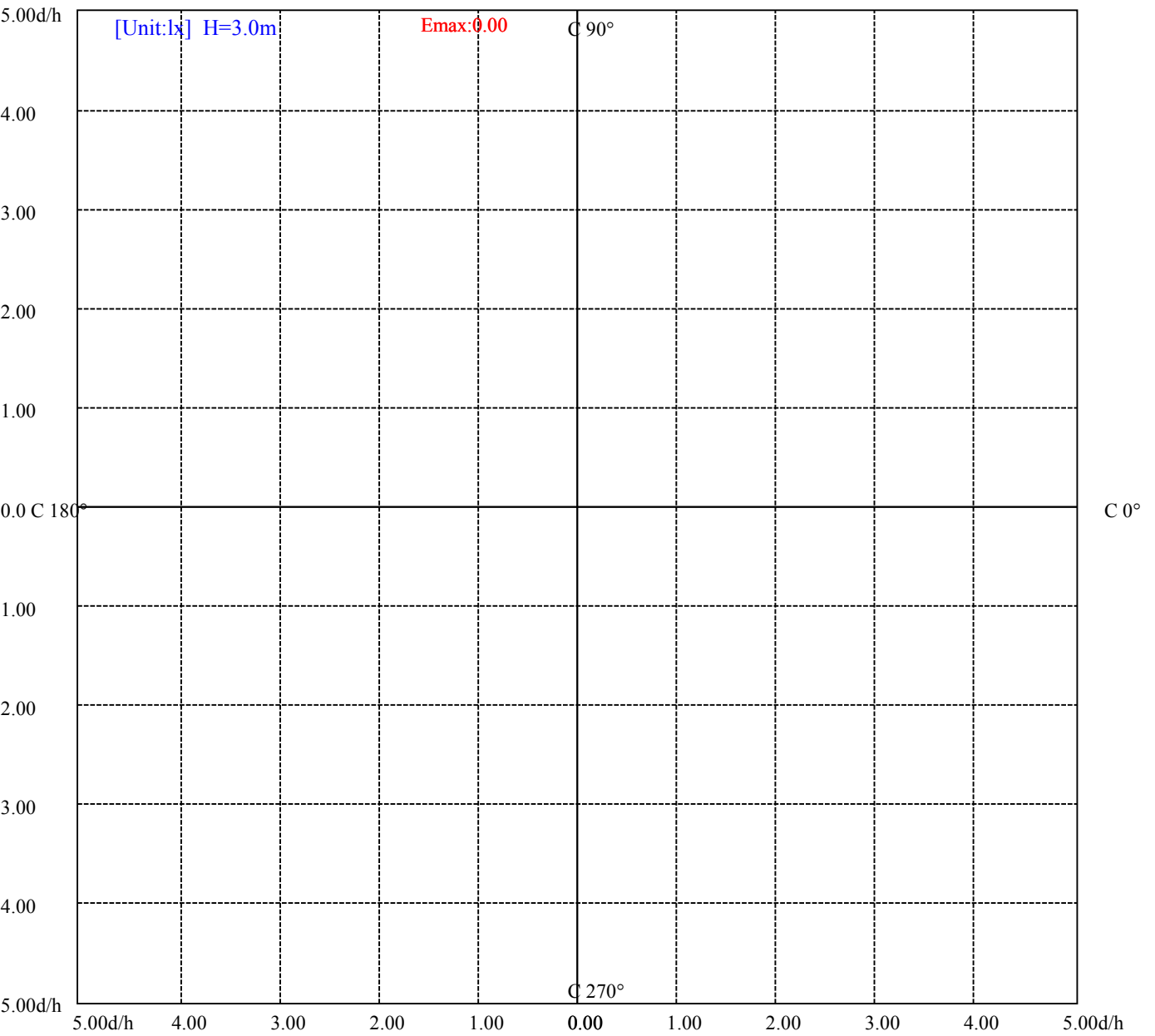
House

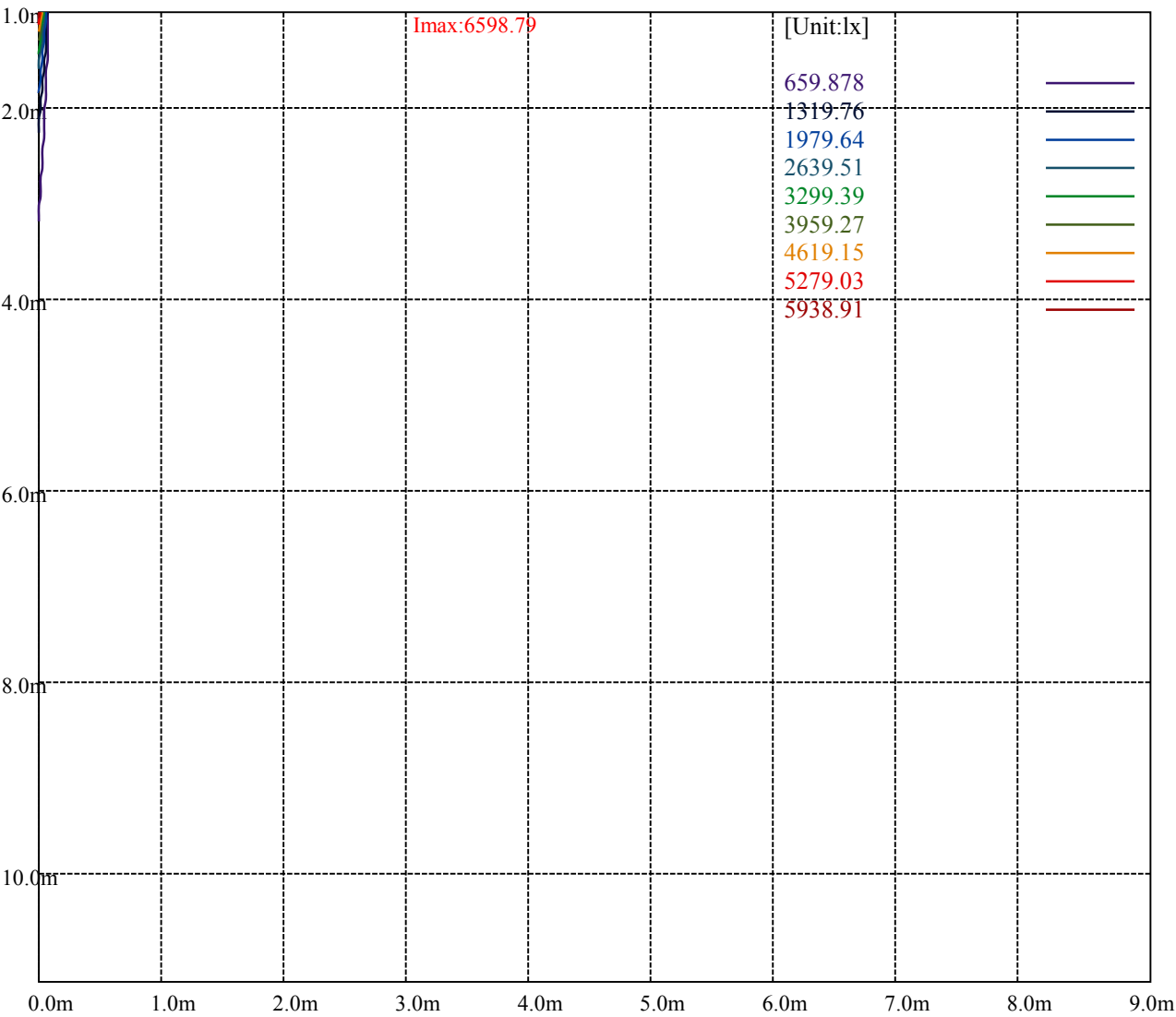
[Unit:cd]

Road

Imax:6598.79

(10%Imax)	659.878	—
(20%Imax)	1319.76	—
(30%Imax)	1979.64	—
(40%Imax)	2639.51	—
(50%Imax)	3299.39	—
(60%Imax)	3959.27	—
(70%Imax)	4619.15	—
(80%Imax)	5279.03	—
(90%Imax)	5938.91	—





Luminance Table

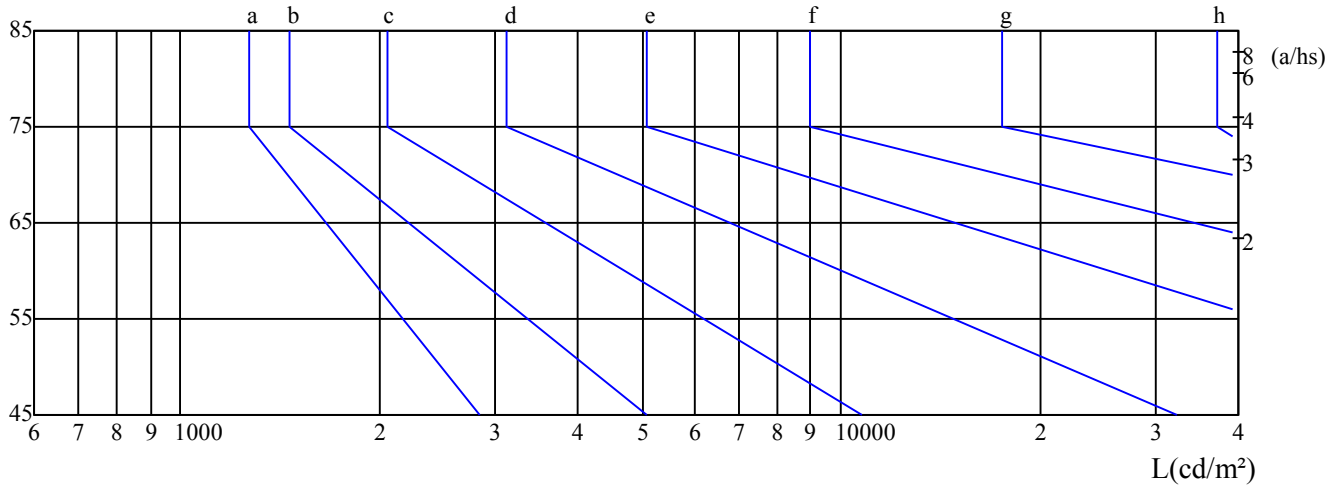
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	6479	6479	6479	0	0	0

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

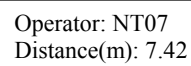
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

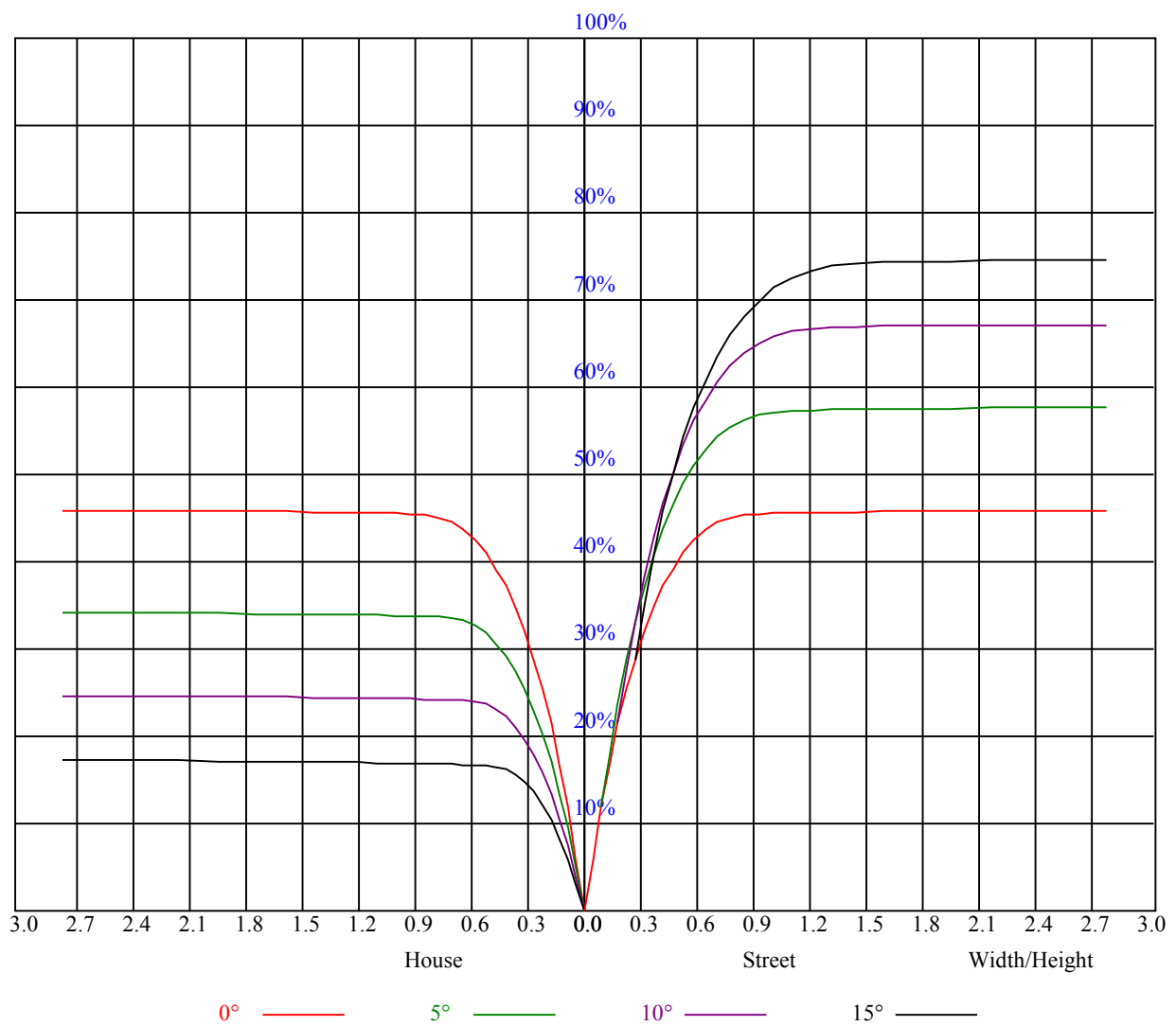
C0 ———

C45 ———

C90 ———



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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Nata 2-1566-M

Intensity data(cd)

Appendix Page: 14 Total:14

[illegible][illegible][illegible]

C/ γ (°)	0.0	0.0	0.0	0.0
0.0	6581.44	6581.44	6581.44	6581.44
45.0	6633.20	6633.20	6633.20	6633.20
90.0	6616.13	6616.13	6616.13	6616.13
135.0	6564.37	6564.37	6564.37	6564.37
180.0	6581.44	6581.44	6581.44	6581.44
225.0	6633.20	6633.20	6633.20	6633.20
270.0	6616.13	6616.13	6616.13	6616.13
315.0	6564.37	6564.37	6564.37	6564.37
360.0	6581.44	6581.44	6581.44	6581.44