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NATA

LumCAT: 2-1538-A	
Luminaire: 92.76.323.00	
Report No: NATA0100	Voltage(V): 35.3000
Test No: GC2018111210	Current(A): 0.7000
LampCAT: Philips SLM 1208 G7	Power (W): 24.7100
Lamp flux(lm): 3443.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 3081.07
Efficiency(%): 89.49%
Lumens(lm)/Power(W): 125.37
Central intensity(cd): 3314.531
Maximum intensity(cd): 3314.531
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=62.7
 [C90/270]Total=62.7
Field angle(10%Imax): [C0/180]Total=84.4
 [C90/270]Total=84.4
Maximum s/h(1/2): C0_180=0.95 C90_270=0.95
Maximum s/h(1/4): C0_180=0.93 C90_270=0.93
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.98%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.159%

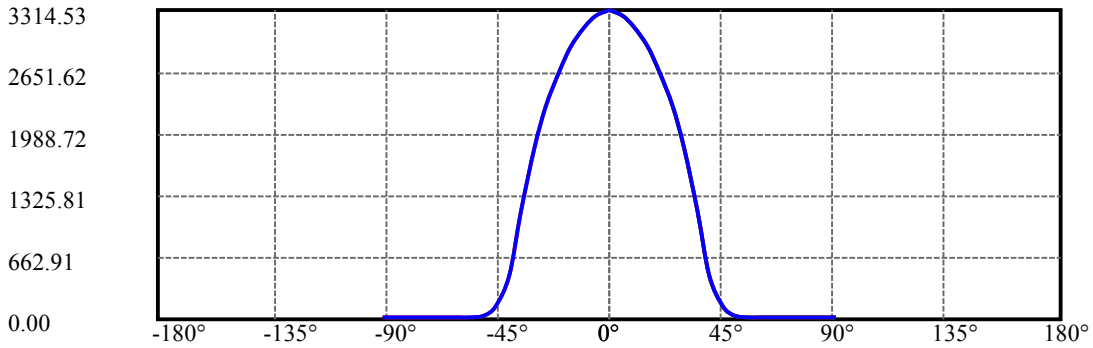
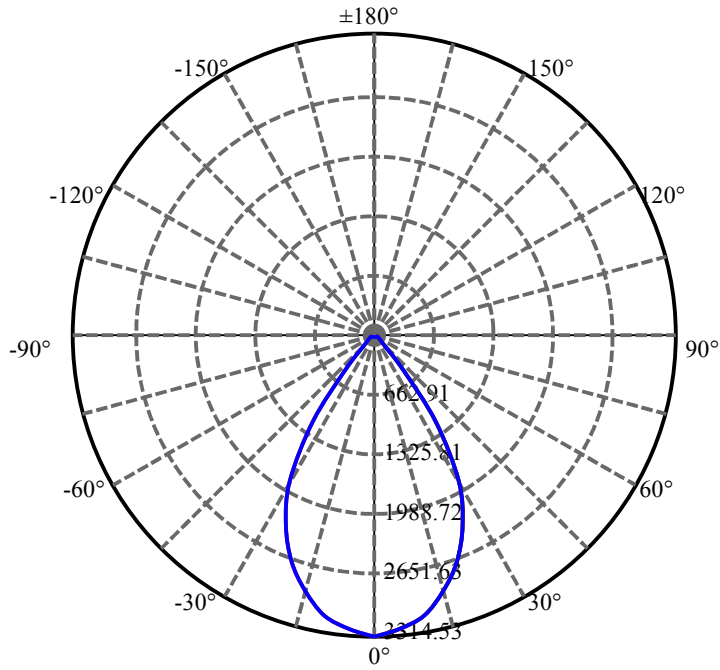
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3314.531	19.822	19.822	.576%	.643%
5.0	3247.102	155.125	174.946	4.506%	5.678%
10.0	3126.727	297.611	472.558	8.644%	15.337%
15.0	2914.172	413.429	885.987	12.008%	28.756%
20.0	2651.414	497.071	1383.058	14.437%	44.889%
25.0	2294.789	531.594	1914.652	15.440%	62.142%
30.0	1841.766	504.770	2419.423	14.661%	78.525%
35.0	1161.028	365.026	2784.448	10.602%	90.373%
40.0	483.033	170.190	2954.638	4.943%	95.897%
45.0	134.698	52.208	3006.846	1.516%	97.591%
50.0	41.906	17.596	3024.442	.511%	98.162%
55.0	20.306	9.118	3033.56	.265%	98.458%
60.0	15.518	7.366	3040.926	.214%	98.697%
65.0	15.110	7.506	3048.433	.218%	98.941%
70.0	14.027	7.225	3055.658	.210%	99.175%
75.0	13.711	7.259	3062.917	.211%	99.411%
80.0	13.795	7.447	3070.364	.216%	99.653%
85.0	13.254	7.237	3077.602	.210%	99.887%
90.0	12.649	3.467	3081.068	.101%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2419.42	70.27%	78.53%
0-40	2954.64	85.82%	95.90%
0-60	3040.93	88.32%	98.70%
0-90	3077.60	89.39%	99.89%
0-120	3077.60	89.39%	99.89%
0-180	3081.07	89.49%	100.00%
60-90	44.04	1.28%	1.43%
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%
0-30.62	2464.86	71.59%	80.00%

ZONAL LUMEN SUMMARY

0-10	472.56
10-20	910.50
20-30	1036.36
30-40	535.22
40-50	69.80
50-60	16.48
60-70	14.73
70-80	14.71
80-90	7.24
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: —————

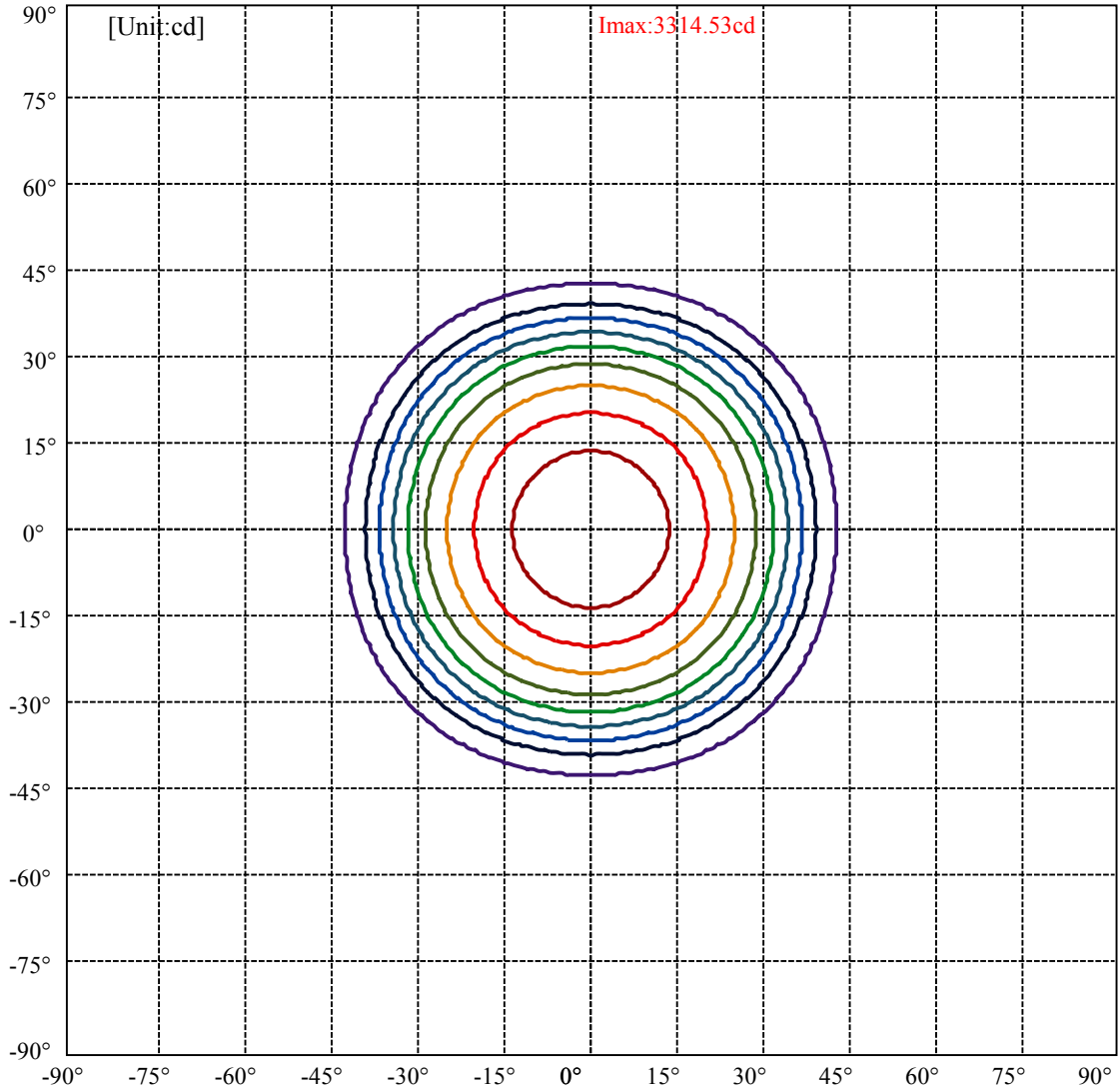
C90/C270: —————

Field angle(10%Imax):C0/180Left:42.2 Right:42.2

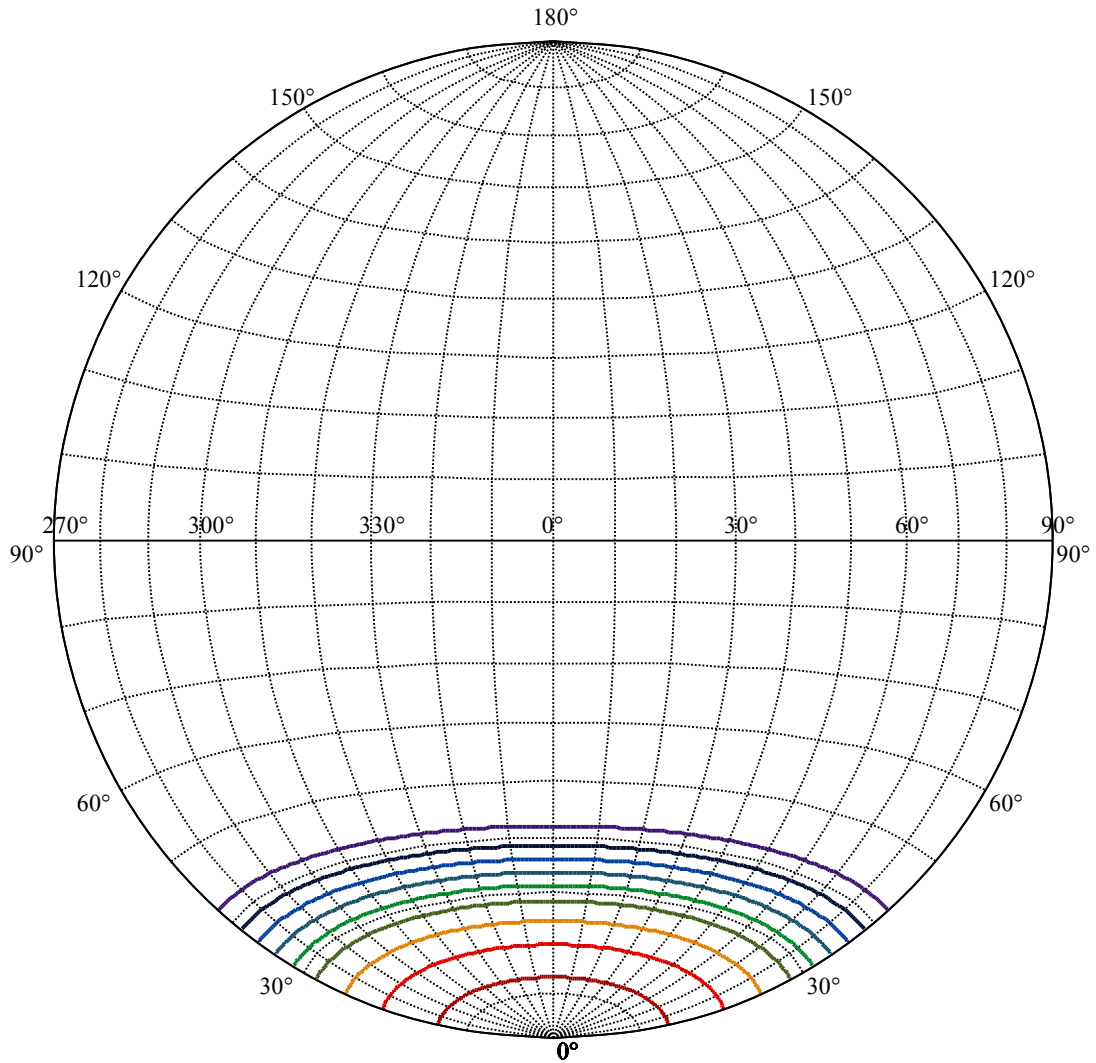
:C90/270Left:42.2 Right:42.2

Beam Angle(50%Imax):C0/180Left:31.4 Right:31.4

:C90/270Left:31.4 Right:31.4



(10%Imax) 331.453	—
(20%Imax) 662.906	—
(30%Imax) 994.359	—
(40%Imax) 1325.81	—
(50%Imax) 1657.27	—
(60%Imax) 1988.72	—
(70%Imax) 2320.17	—
(80%Imax) 2651.62	—
(90%Imax) 2983.08	—



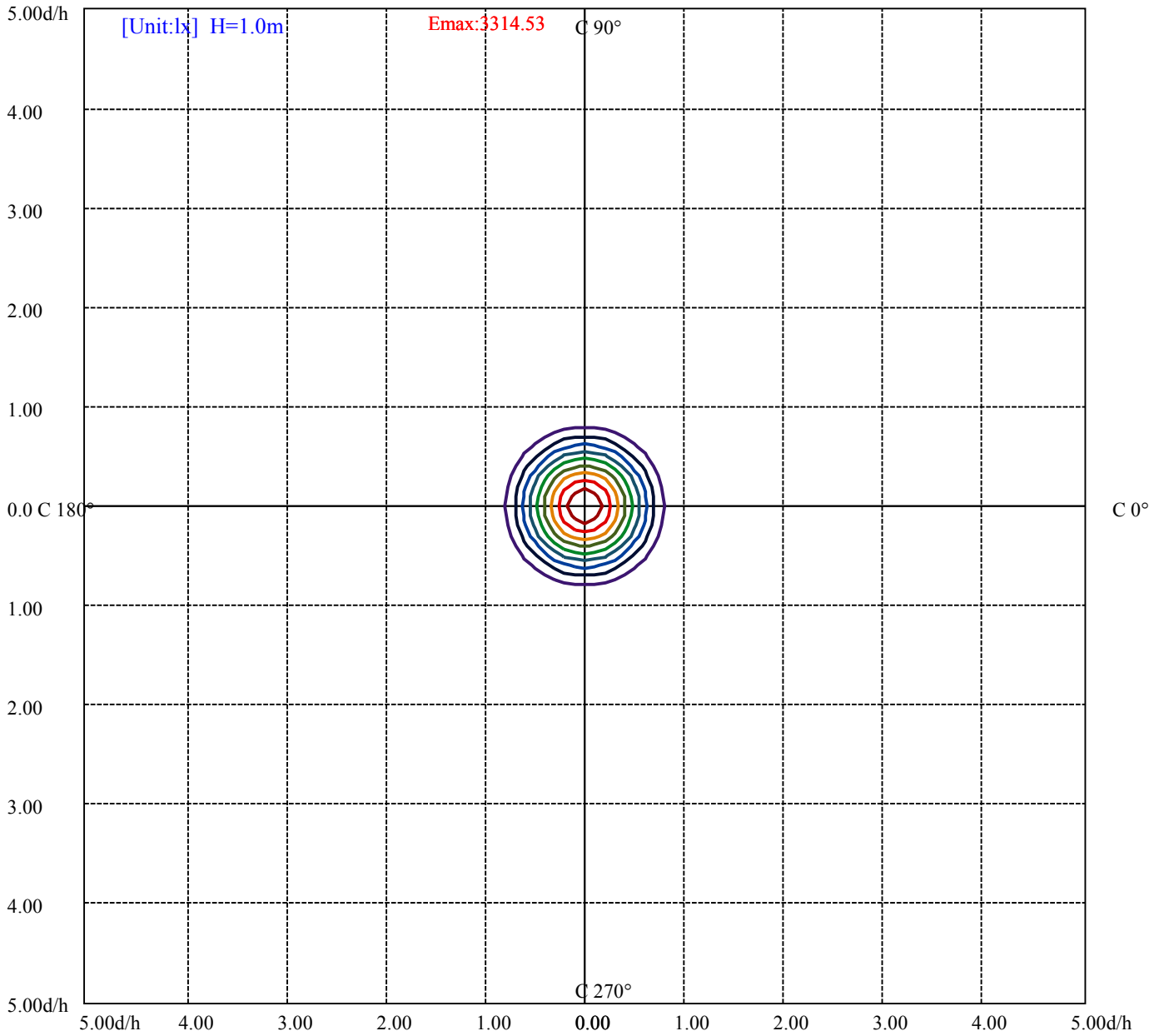
House

[Unit:cd]

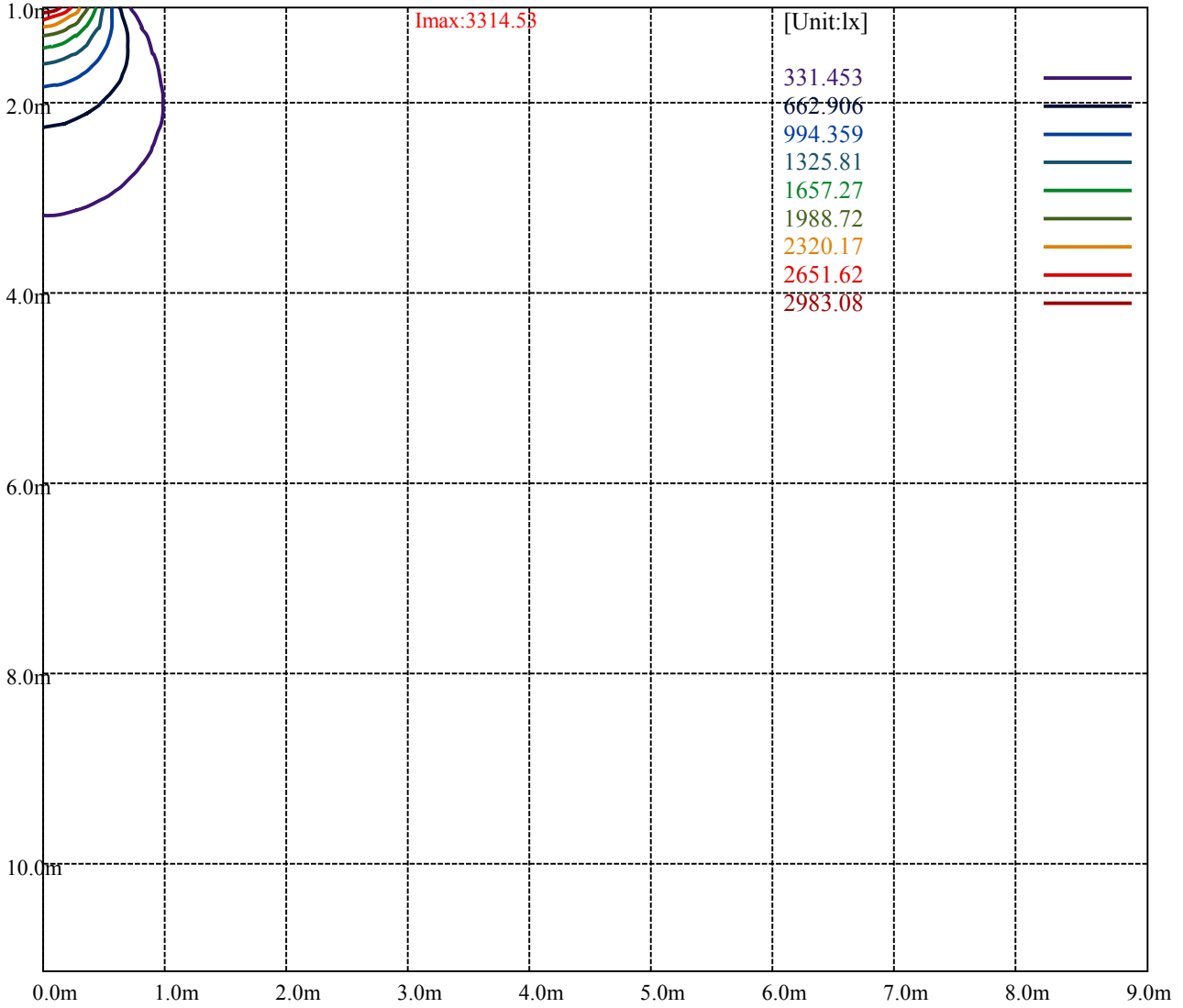
Road

Imax:3314.53

(10%Imax) 331.453	—
(20%Imax) 662.906	—
(30%Imax) 994.359	—
(40%Imax) 1325.81	—
(50%Imax) 1657.27	—
(60%Imax) 1988.72	—
(70%Imax) 2320.17	—
(80%Imax) 2651.62	—
(90%Imax) 2983.08	—



- (10%Emax) 331.453
- (20%Emax) 662.906
- (30%Emax) 994.359
- (40%Emax) 1325.81
- (50%Emax) 1657.26
- (60%Emax) 1988.72
- (70%Emax) 2320.17
- (80%Emax) 2651.62
- (90%Emax) 2983.08



Luminance Table

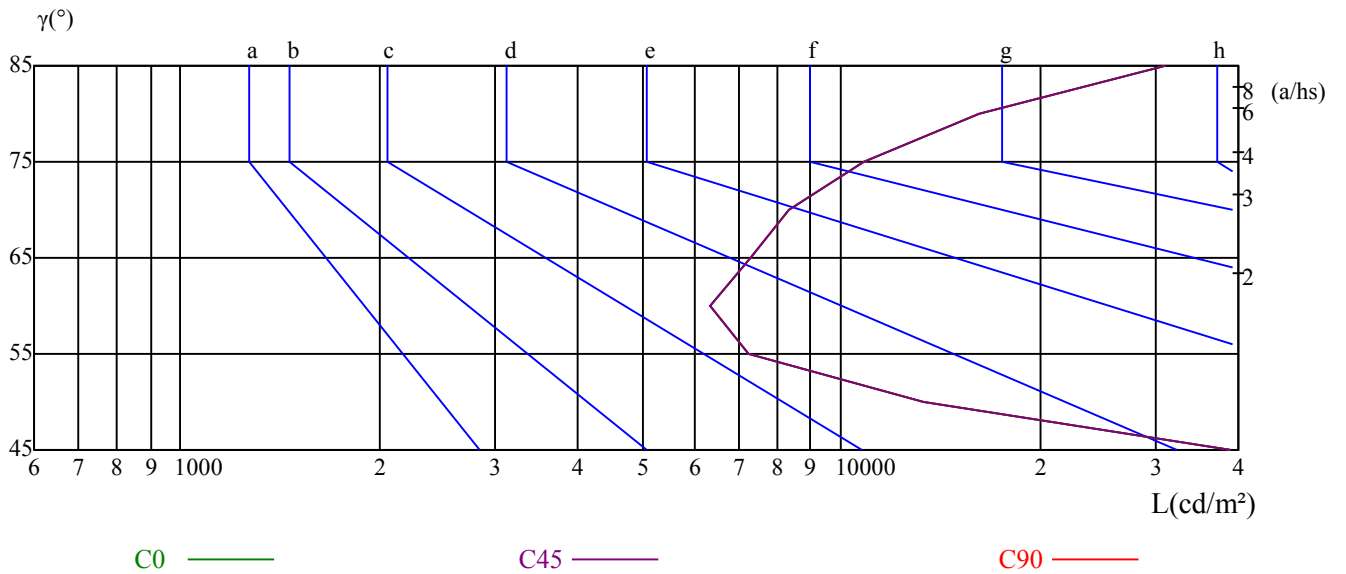
γ	45	50	55	60	65	70	75	80	85
C0	38876	13305	7225	6334	7297	8370	10811	16213	31035
C45	38876	13305	7225	6334	7297	8370	10811	16213	31035
C90	38876	13305	7225	6334	7297	8370	10811	16213	31035

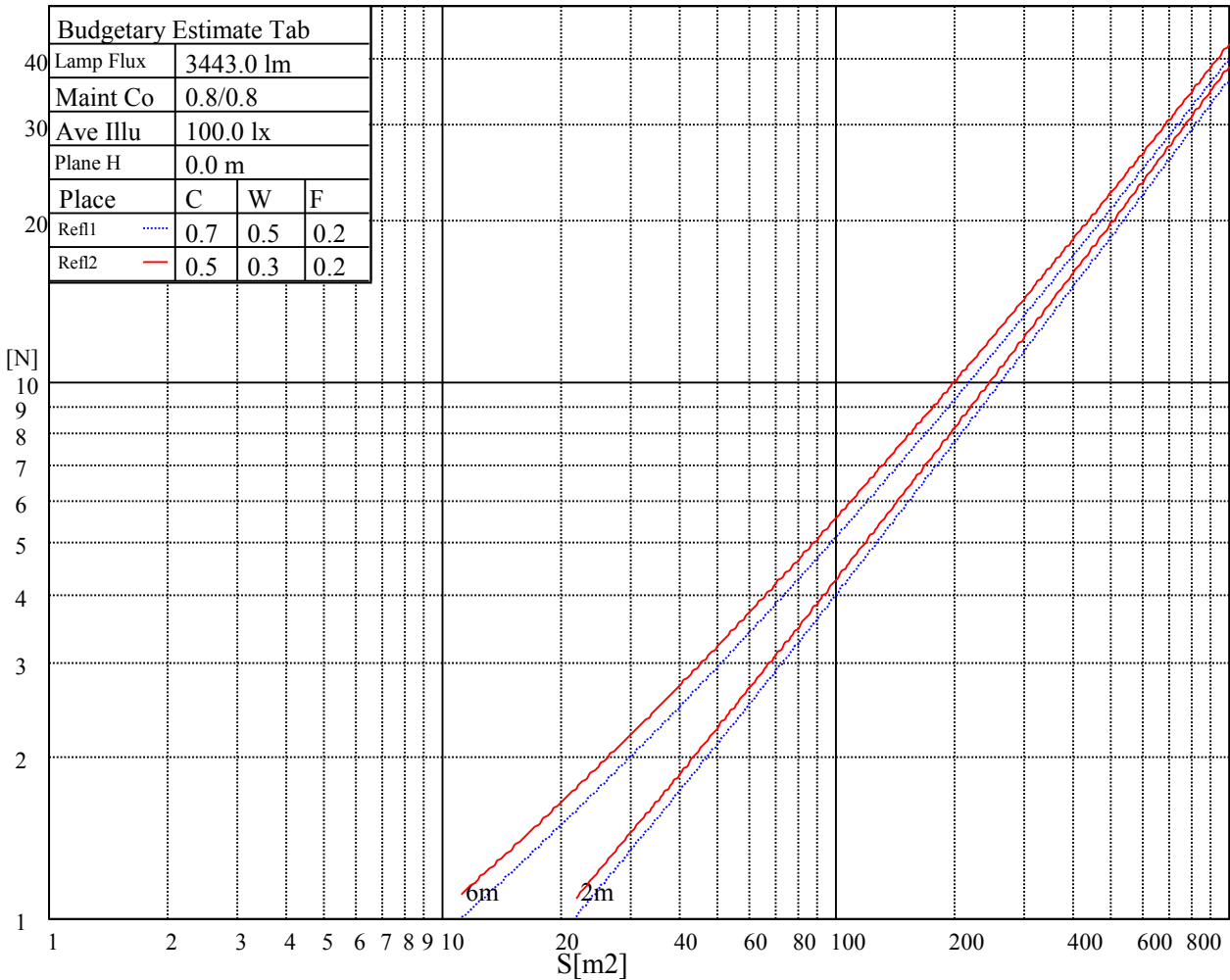
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7297	7297	7297	10811	10811	10811	31035	31035	31035

Glare Table

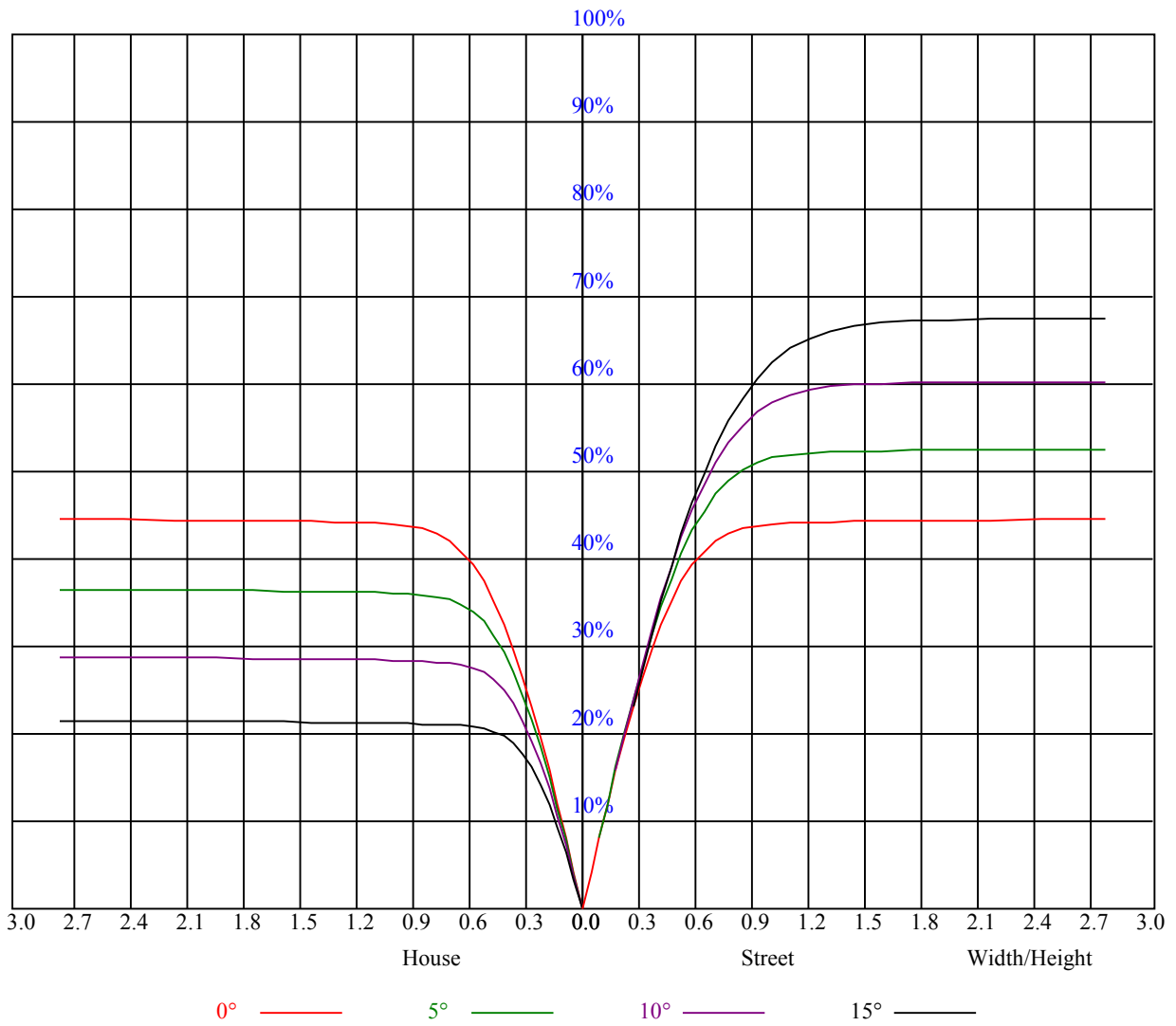
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.07	1.07	1.07	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.83
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.85	0.83	0.86	0.83	0.81	0.83	0.81	0.80	0.78
3	0.87	0.83	0.79	0.86	0.82	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.73
4	0.82	0.77	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.73	0.70	0.69
5	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.65
6	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.61
7	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.58
8	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.55
9	0.62	0.57	0.54	0.62	0.57	0.54	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.52
10	0.59	0.54	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.50	0.57	0.53	0.50	0.49



NATA 2-1538-A

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	3303.56	3279.94	3163.50	2987.44	2737.69	2450.25	2071.69	1509.19	734.63
45.0	3321.56	3245.06	3133.13	2903.06	2639.25	2284.31	1852.31	1199.81	464.06
90.0	3316.50	3240.56	3097.13	2867.63	2580.19	2174.06	1734.75	996.19	307.46
135.0	3316.50	3250.13	3128.63	2914.88	2655.56	2240.44	1756.13	1137.38	375.75
180.0	3303.56	3223.69	3081.38	2855.81	2534.06	2118.94	1632.94	832.11	254.48
225.0	3321.56	3242.81	3138.19	2922.19	2662.31	2301.75	1824.19	1093.89	480.99
270.0	3316.50	3249.56	3150.00	2951.44	2714.63	2421.00	1963.13	1401.75	676.13
315.0	3316.50	3245.06	3121.88	2910.94	2687.63	2367.56	1899.00	1117.91	570.77
360.0	3303.56	3279.94	3163.50	2987.44	2737.69	2450.25	2071.69	1509.19	734.63

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	286.31	68.46	24.41	16.71	14.46	13.73	13.33	13.05	12.83
45.0	115.20	37.41	19.74	15.30	14.12	13.73	13.22	12.99	12.83
90.0	84.99	32.18	19.07	15.13	19.86	13.78	13.22	13.11	13.05
135.0	91.29	36.56	19.86	15.53	16.26	16.48	16.76	18.73	15.36
180.0	66.60	25.76	17.55	14.74	14.01	13.73	13.44	13.16	13.05
225.0	113.18	39.26	19.86	15.30	13.95	13.50	13.16	12.99	12.83
270.0	184.28	48.04	21.49	15.86	14.06	13.67	13.33	13.33	13.22
315.0	135.73	47.59	20.48	15.58	14.18	13.61	13.22	12.99	12.88
360.0	286.31	68.46	24.41	16.71	14.46	13.73	13.33	13.05	12.83

C/γ(°)	90.0
0.0	12.66
45.0	12.66
90.0	12.66
135.0	12.66
180.0	12.66
225.0	12.60
270.0	12.66
315.0	12.66
360.0	12.66