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Nata

LumCAT: 3-1940-M

Luminaire:

Report No: NATA0100

Voltage(V): 34.1600

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.5000

Lamp flux(lm): 2559.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2333.75

Efficiency(%): 91.20%

Lumens(lm)/Power(W): 113.84

Central intensity(cd): 5216.343

Maximum intensity(cd): 5216.343

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.1

[C90/270]Total=36.1

Field angle(10%Imax): [C0/180]Total=67.3

[C90/270]Total=67.3

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

Maximum s/h(1/4): C0_180=0.61 C90_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.20%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.502%

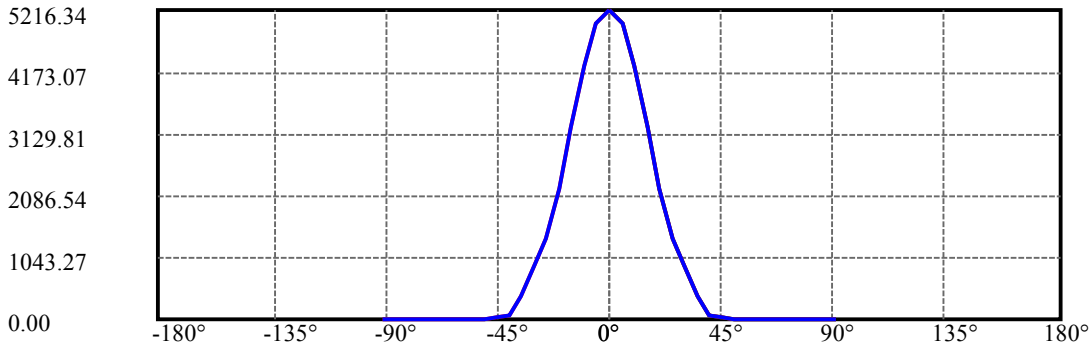
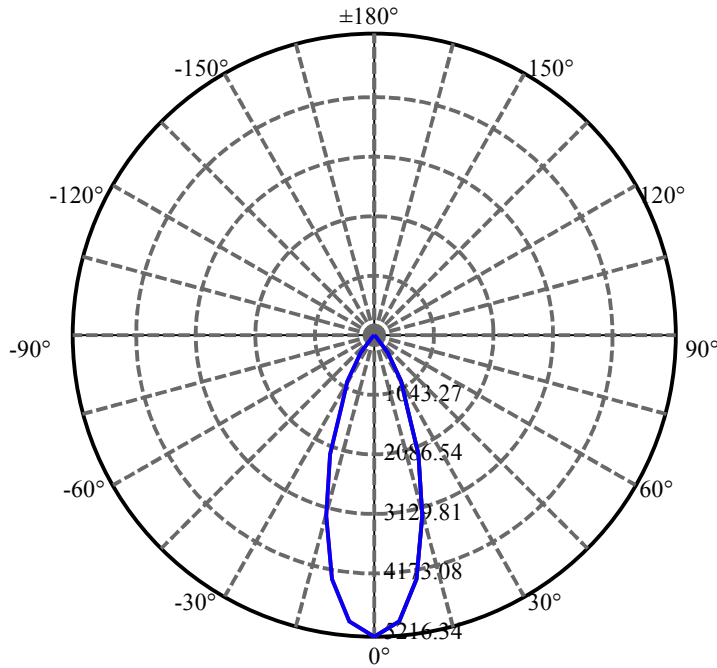
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5216.344	0.000	0	.000%	.000%
5.0	4976.508	121.853	121.853	4.762%	5.221%
10.0	4267.828	330.699	452.552	12.923%	19.392%
15.0	3248.789	445.881	898.432	17.424%	38.497%
20.0	2199.234	448.994	1347.426	17.546%	57.737%
25.0	1346.421	371.874	1719.3	14.532%	73.671%
30.0	906.694	285.134	2004.433	11.142%	85.889%
35.0	377.213	189.064	2193.498	7.388%	93.990%
40.0	54.780	72.075	2265.572	2.817%	97.079%
45.0	19.758	13.801	2279.374	.539%	97.670%
50.0	15.342	7.092	2286.466	.277%	97.974%
55.0	13.577	6.288	2292.754	.246%	98.244%
60.0	12.516	6.031	2298.786	.236%	98.502%
65.0	11.827	5.918	2304.703	.231%	98.756%
70.0	11.348	5.868	2310.571	.229%	99.007%
75.0	10.997	5.841	2316.412	.228%	99.257%
80.0	10.730	5.813	2322.225	.227%	99.506%
85.0	10.540	5.779	2328.005	.226%	99.754%
90.0	10.427	5.741	2333.746	.224%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2004.43	78.33%	85.89%
0-40	2265.57	88.53%	97.08%
0-60	2298.79	89.83%	98.50%
0-90	2328.00	90.97%	99.75%
0-120	2328.00	90.97%	99.75%
0-180	2333.75	91.20%	100.00%
60-90	35.25	1.38%	1.51%
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%
0-27.59	1867.00	72.96%	80.00%

ZONAL LUMEN SUMMARY

0-10	452.55
10-20	894.87
20-30	657.01
30-40	261.14
40-50	20.89
50-60	12.32
60-70	11.79
70-80	11.65
80-90	5.78
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: ———

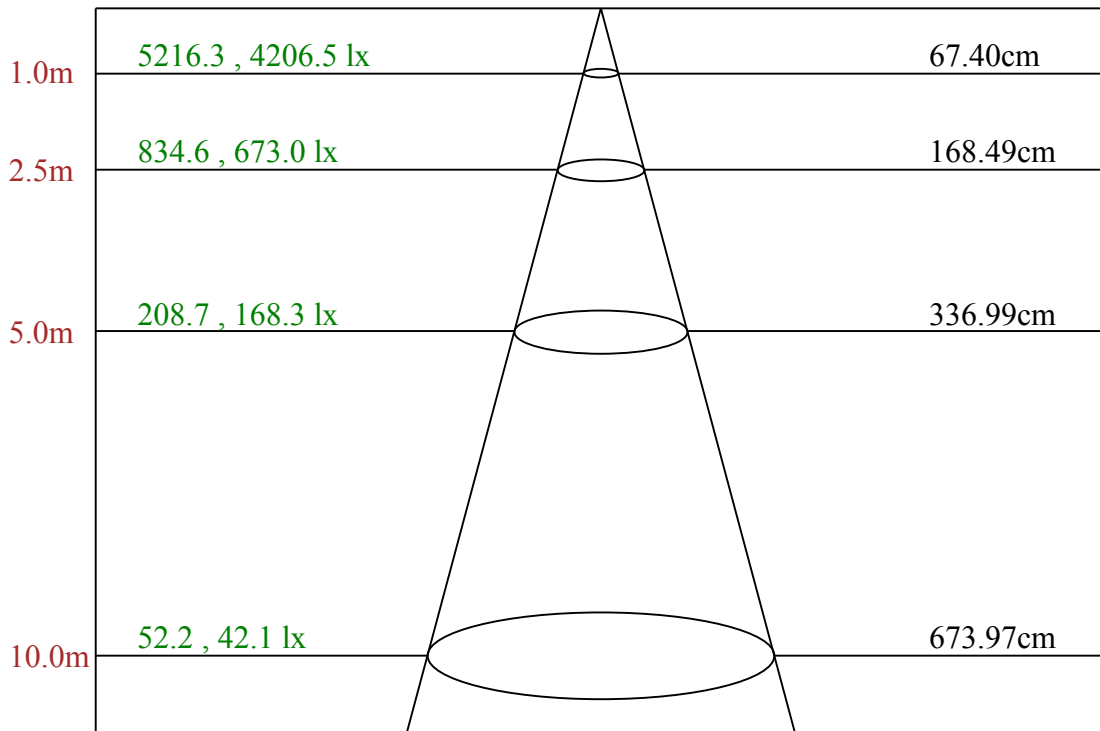
C90/C270: ———

Field angle(10%Imax):C0/180Left:33.6 Right:33.6

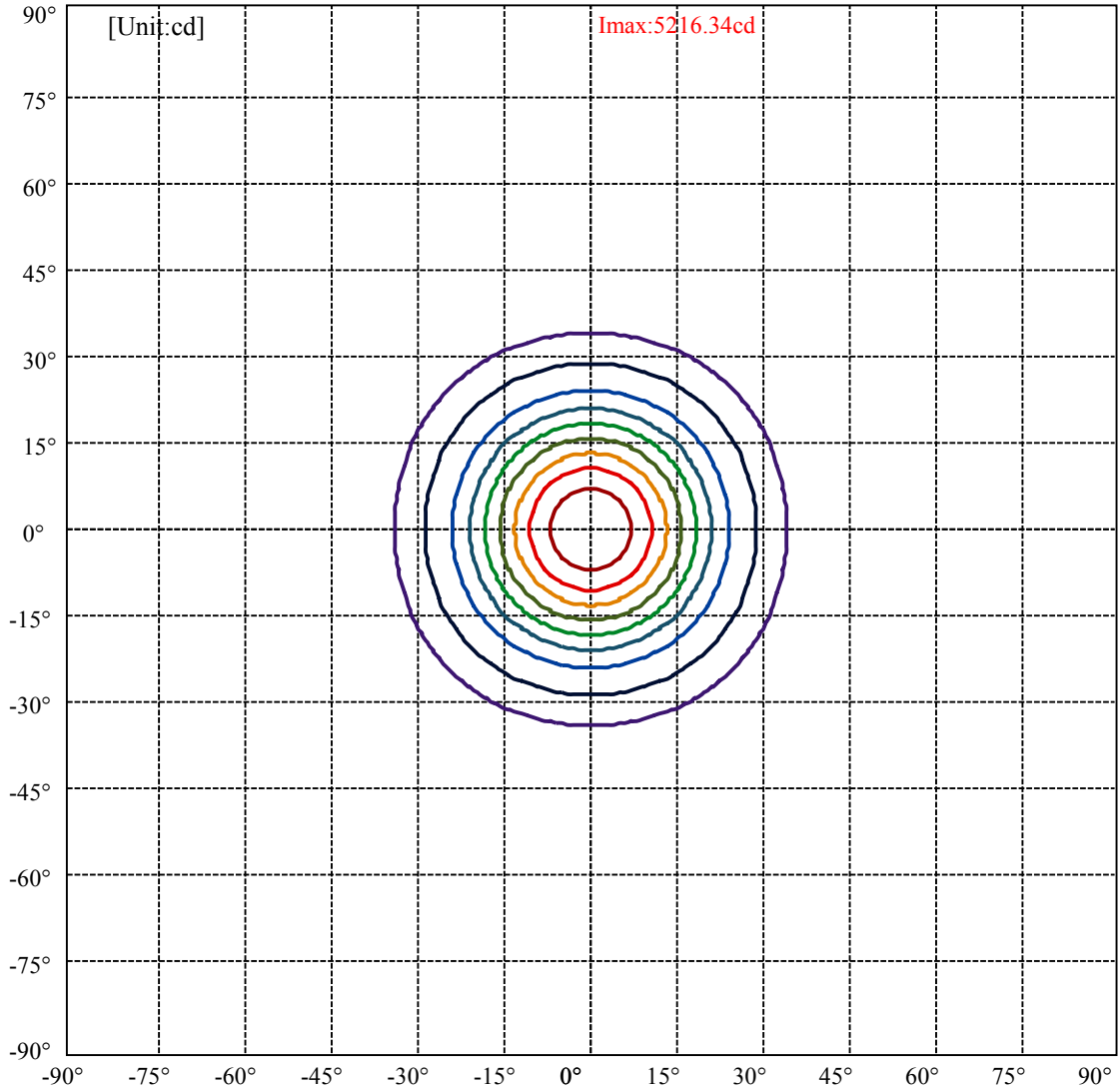
:C90/270Left:33.6 Right:33.6

Beam Angle(50%Imax):C0/180Left:18.1 Right:18.1

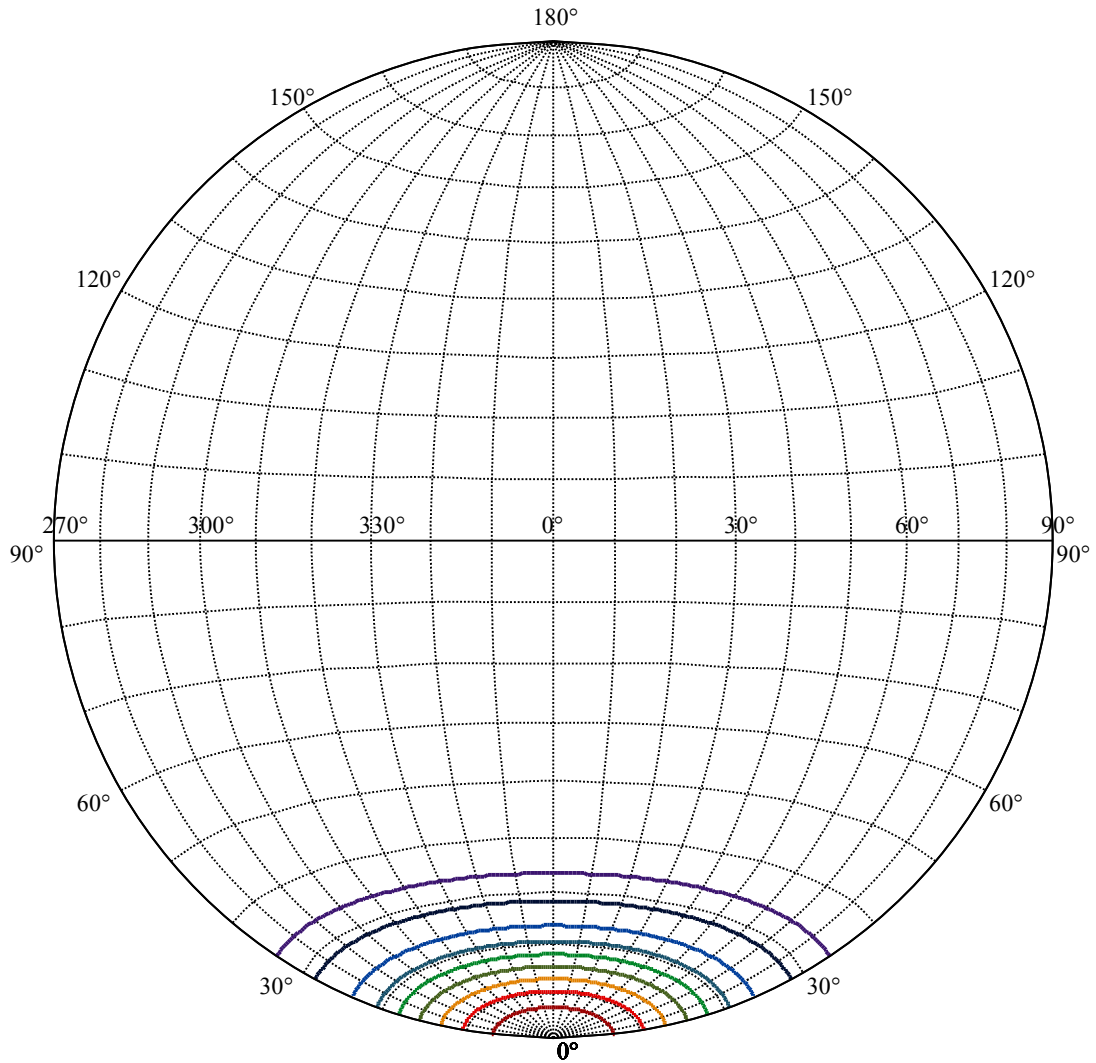
:C90/270Left:18.1 Right:18.1



Max , Ave Beam angle of C0 plane 37.25



(10%Imax) 521.634	—
(20%Imax) 1043.27	—
(30%Imax) 1564.9	—
(40%Imax) 2086.54	—
(50%Imax) 2608.17	—
(60%Imax) 3129.81	—
(70%Imax) 3651.44	—
(80%Imax) 4173.07	—
(90%Imax) 4694.71	—



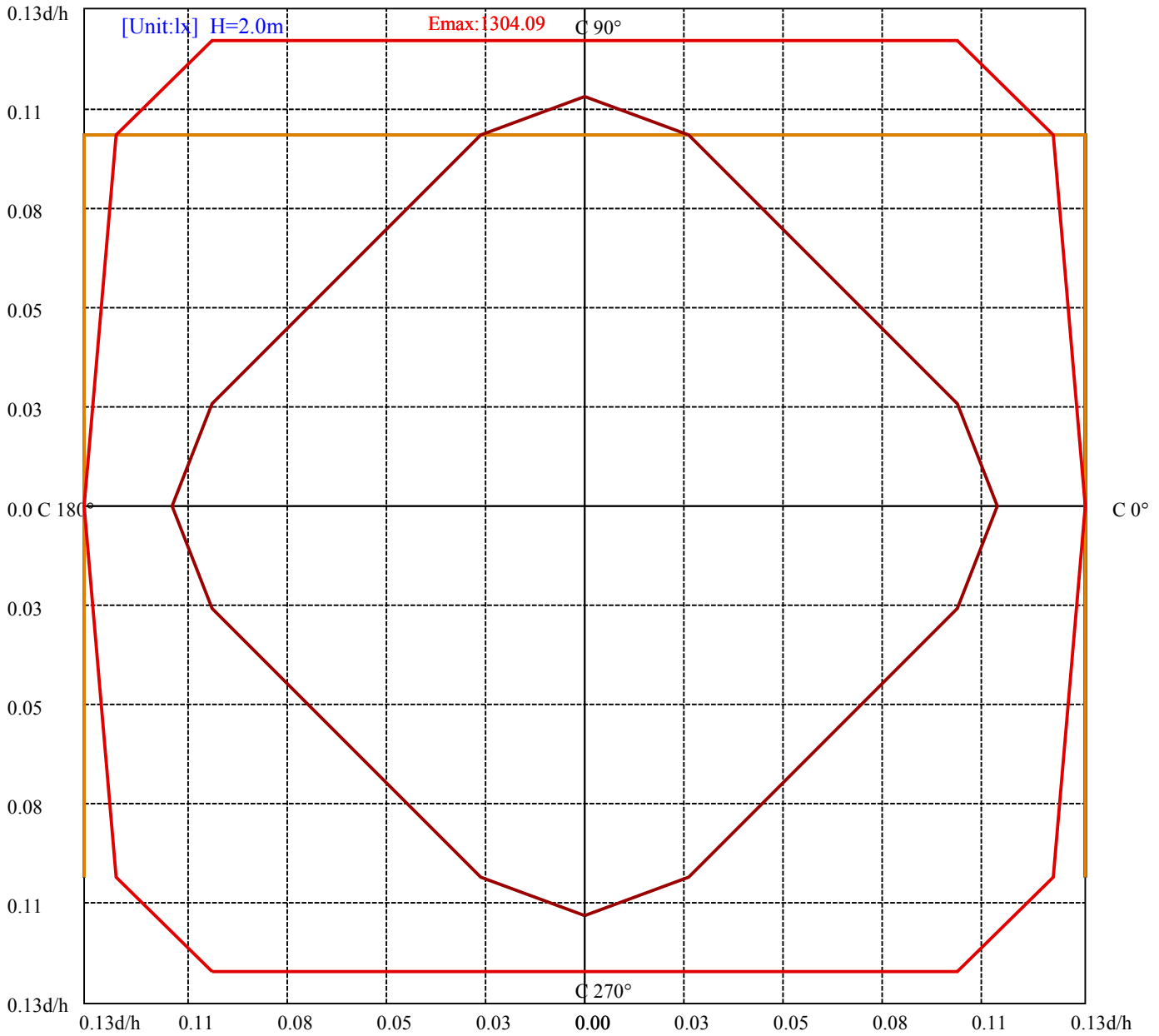
House

[Unit:cd]

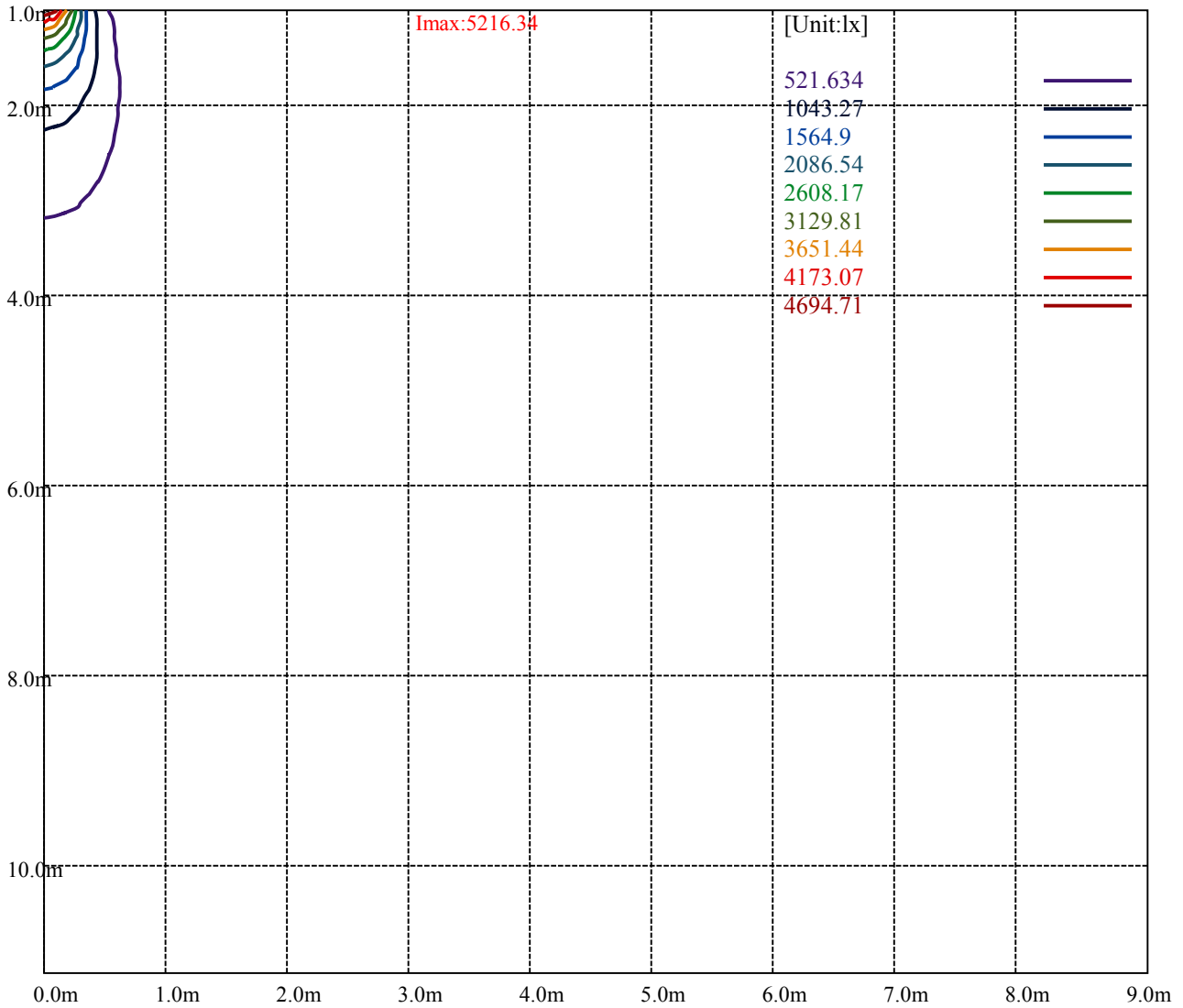
Road

Imax:5216.34

(10%Imax)	521.634	—
(20%Imax)	1043.27	—
(30%Imax)	1564.9	—
(40%Imax)	2086.54	—
(50%Imax)	2608.17	—
(60%Imax)	3129.81	—
(70%Imax)	3651.44	—
(80%Imax)	4173.07	—
(90%Imax)	4694.71	—



(10%Emax) 130.4085	—
(20%Emax) 260.8175	—
(30%Emax) 391.225	—
(40%Emax) 521.6325	—
(50%Emax) 652.0425	—
(60%Emax) 782.45	—
(70%Emax) 912.86	—
(80%Emax) 1043.267	—
(90%Emax) 1173.675	—



Luminance Table

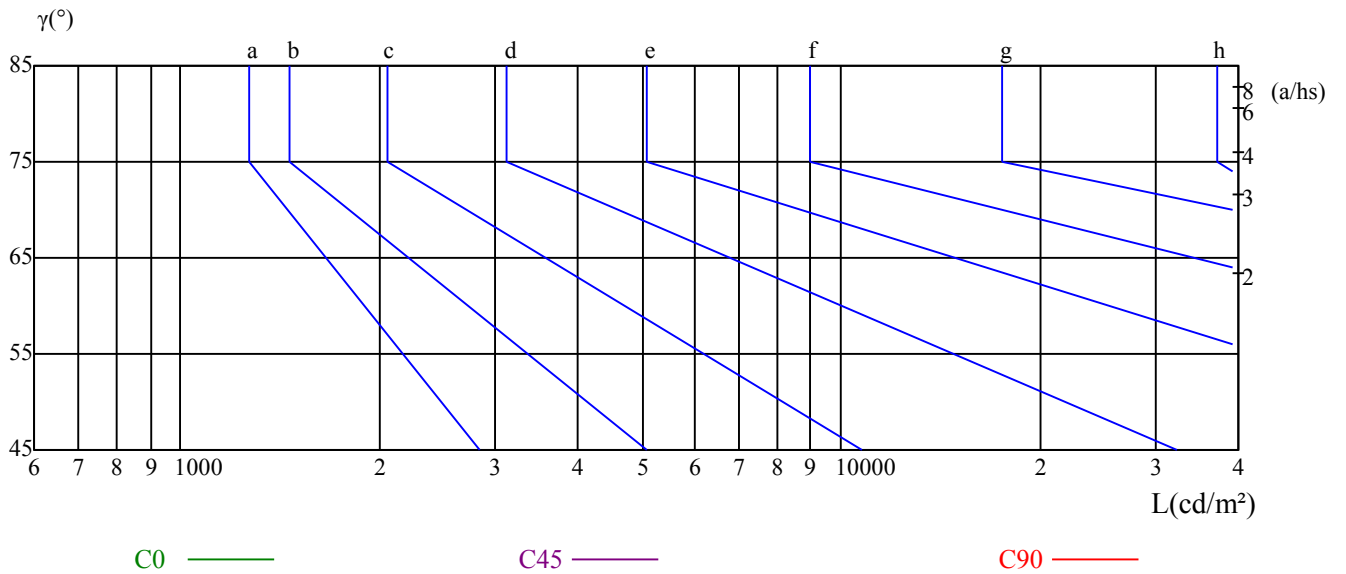
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

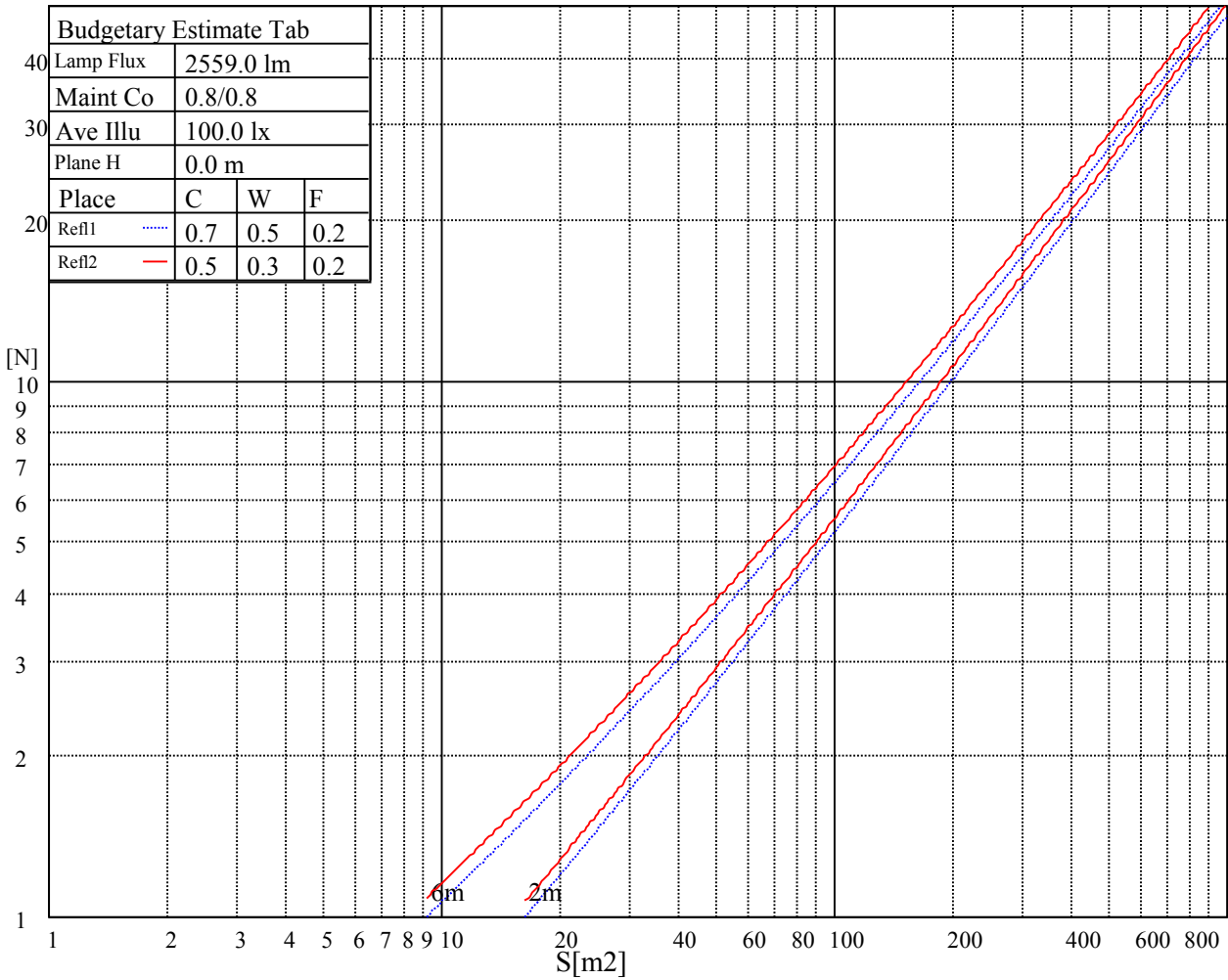
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

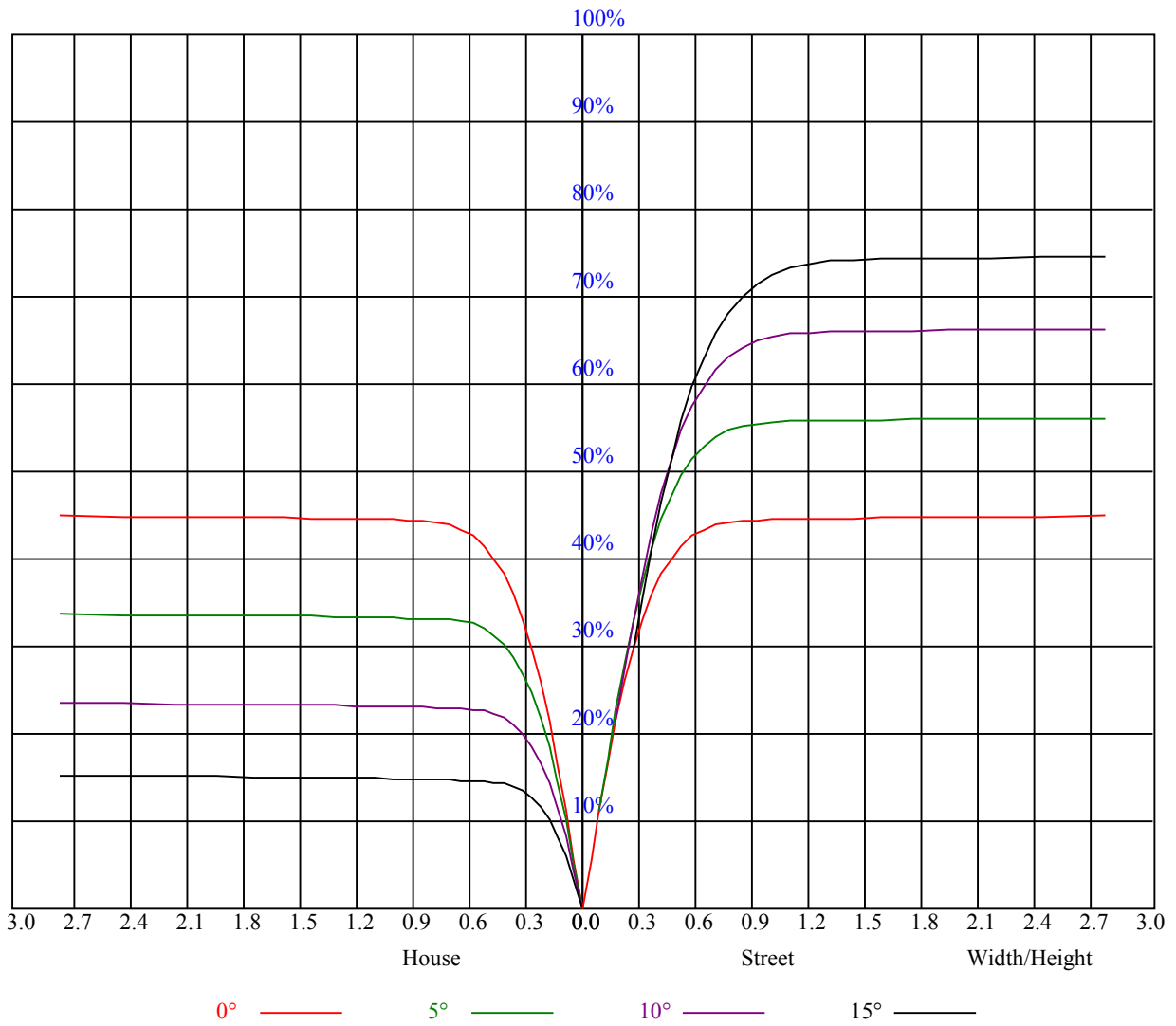
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	1.09	1.09	1.09	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.94	0.93	0.93	0.91	0.90	0.90	0.89	0.88	0.86
2	0.96	0.92	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.88	0.87	0.85	0.86	0.84	0.83	0.82
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.77
4	0.86	0.81	0.78	0.85	0.81	0.77	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.81	0.77	0.73	0.81	0.76	0.73	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.73	0.71	0.70
6	0.77	0.73	0.69	0.77	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
7	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.64
8	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.61
9	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
10	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.56



Nata 3-1940-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	5211.56	5103.00	4578.19	3648.38	2539.13	1666.69	1067.06	564.19	178.03
45.0	5207.06	5087.81	4458.38	3452.63	2439.56	1540.13	988.31	471.38	59.51
90.0	5212.13	4925.25	4167.56	3108.94	2117.81	1110.43	851.34	331.20	30.71
135.0	5234.63	4986.00	4313.25	3175.88	2096.44	1299.94	873.00	325.69	32.29
180.0	5211.56	4849.31	3899.25	2888.44	1864.69	1115.61	724.22	198.62	26.33
225.0	5207.06	4861.13	4066.31	3035.25	2004.75	1101.77	820.63	269.83	29.19
270.0	5212.13	5011.31	4341.94	3413.81	2292.19	1463.06	961.88	443.25	38.87
315.0	5234.63	4988.25	4317.75	3267.00	2239.31	1473.75	967.11	413.55	43.31
360.0	5211.56	5103.00	4578.19	3648.38	2539.13	1666.69	1067.06	564.19	178.03
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	23.29	15.98	14.06	12.77	12.04	11.48	11.14	10.86	10.63
45.0	21.54	15.81	13.95	12.77	11.98	11.48	11.03	10.74	10.52
90.0	19.13	15.30	13.67	12.54	11.81	11.31	10.91	10.63	10.52
135.0	19.07	15.36	13.56	12.54	11.81	11.31	10.97	10.69	10.52
180.0	16.99	14.46	12.99	12.15	11.59	11.19	10.91	10.69	10.58
225.0	17.04	14.57	13.05	12.15	11.59	11.19	10.91	10.69	10.46
270.0	20.42	15.58	13.61	12.49	11.87	11.42	11.03	10.80	10.52
315.0	20.59	15.69	13.73	12.71	11.93	11.42	11.08	10.74	10.58
360.0	23.29	15.98	14.06	12.77	12.04	11.48	11.14	10.86	10.63
C/ γ (°)	90.0								
0.0	10.52								
45.0	10.41								
90.0	10.41								
135.0	10.41								
180.0	10.46								
225.0	10.41								
270.0	10.41								
315.0	10.41								
360.0	10.52								