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Nata

LumCAT: 4-2129-E	
Luminaire: 92.76.323.00	
Report No: NATA0100	Voltage(V): 218.0000
Test No: GC2019111519	Current(A): 0.0810
LampCAT: LUMENS EDC-57-20W	Power (W): 17.6000
Lamp flux(lm): 1515.0	PF: 0.9940
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1337.66
Efficiency(%): 88.29%
Lumens(lm)/Power(W): 76.00
Central intensity(cd): 2623.922
Maximum intensity(cd): 2623.922
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=72.2
 [C90/270]Total=72.2
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
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(%): 88.29%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.555%

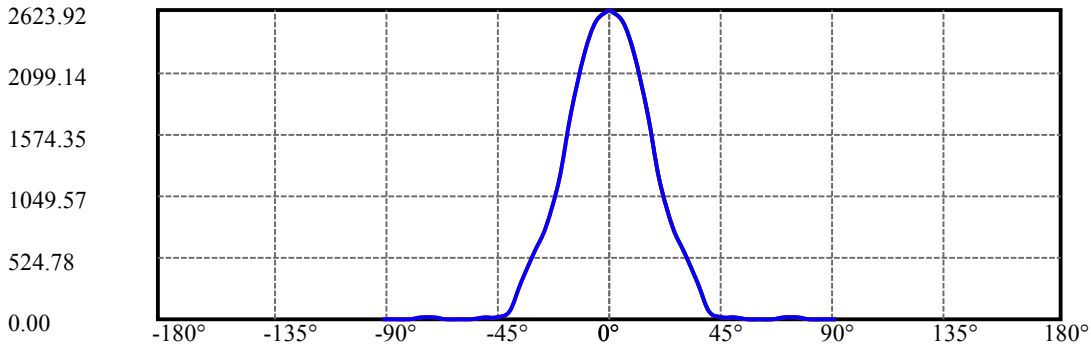
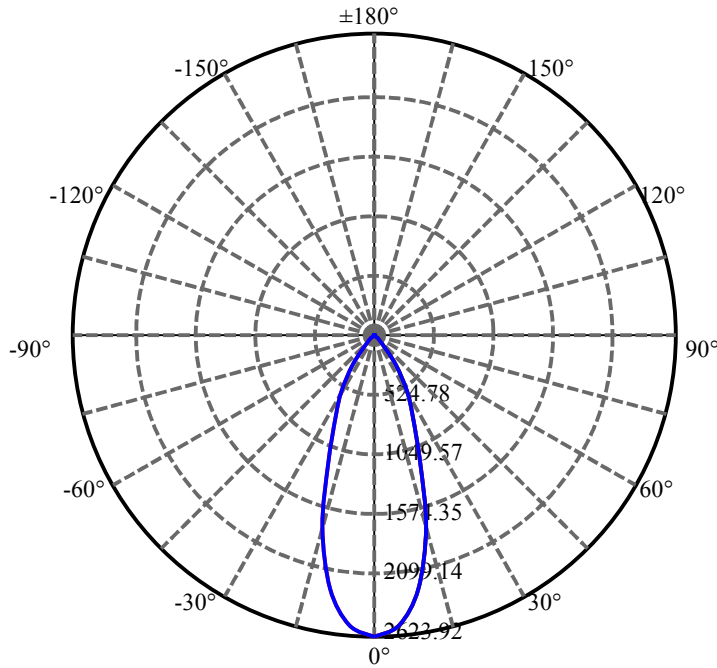
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2623.922	0.000	0	.000%	.000%
5.0	2533.992	61.661	61.661	4.070%	4.610%
10.0	2247.609	171.053	232.714	11.291%	17.397%
15.0	1736.016	236.306	469.02	15.598%	35.063%
20.0	1184.217	240.668	709.688	15.886%	53.055%
25.0	776.271	205.619	915.308	13.572%	68.426%
30.0	563.224	169.514	1084.822	11.189%	81.099%
35.0	314.895	129.309	1214.131	8.535%	90.766%
40.0	71.290	64.432	1278.563	4.253%	95.582%
45.0	12.080	15.437	1293.999	1.019%	96.736%
50.0	8.198	4.097	1298.097	.270%	97.043%
55.0	7.580	3.431	1301.528	.226%	97.299%
60.0	7.256	3.429	1304.957	.226%	97.555%
65.0	7.073	3.484	1308.44	.230%	97.816%
70.0	14.140	5.371	1313.812	.355%	98.217%
75.0	20.173	8.969	1322.781	.592%	98.888%
80.0	7.720	7.463	1330.244	.493%	99.446%
85.0	6.743	3.930	1334.174	.259%	99.740%
90.0	5.977	3.483	1337.657	.230%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1084.82	71.61%	81.10%
0-40	1278.56	84.39%	95.58%
0-60	1304.96	86.14%	97.56%
0-90	1334.17	88.06%	99.74%
0-120	1334.17	88.06%	99.74%
0-180	1337.66	88.29%	100.00%
60-90	32.65	2.15%	2.44%
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%
0-29.57	1070.13	70.64%	80.00%

ZONAL LUMEN SUMMARY

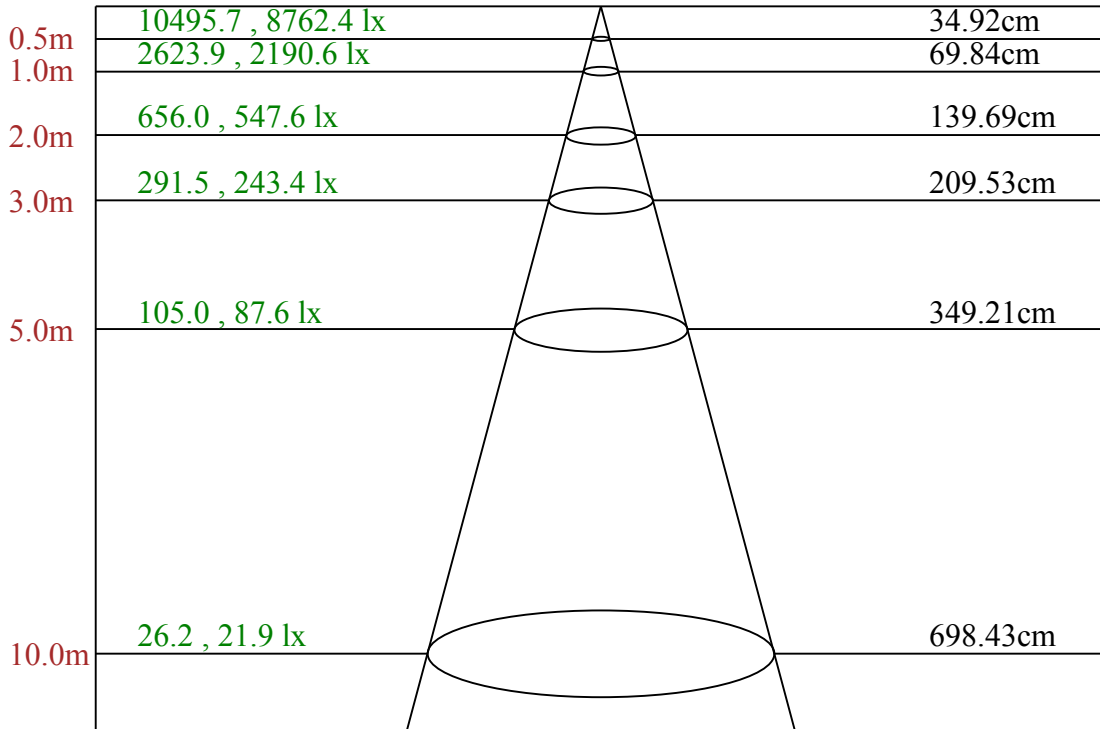
0-10	232.71
10-20	476.97
20-30	375.13
30-40	193.74
40-50	19.53
50-60	6.86
60-70	8.85
70-80	16.43
80-90	3.93
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



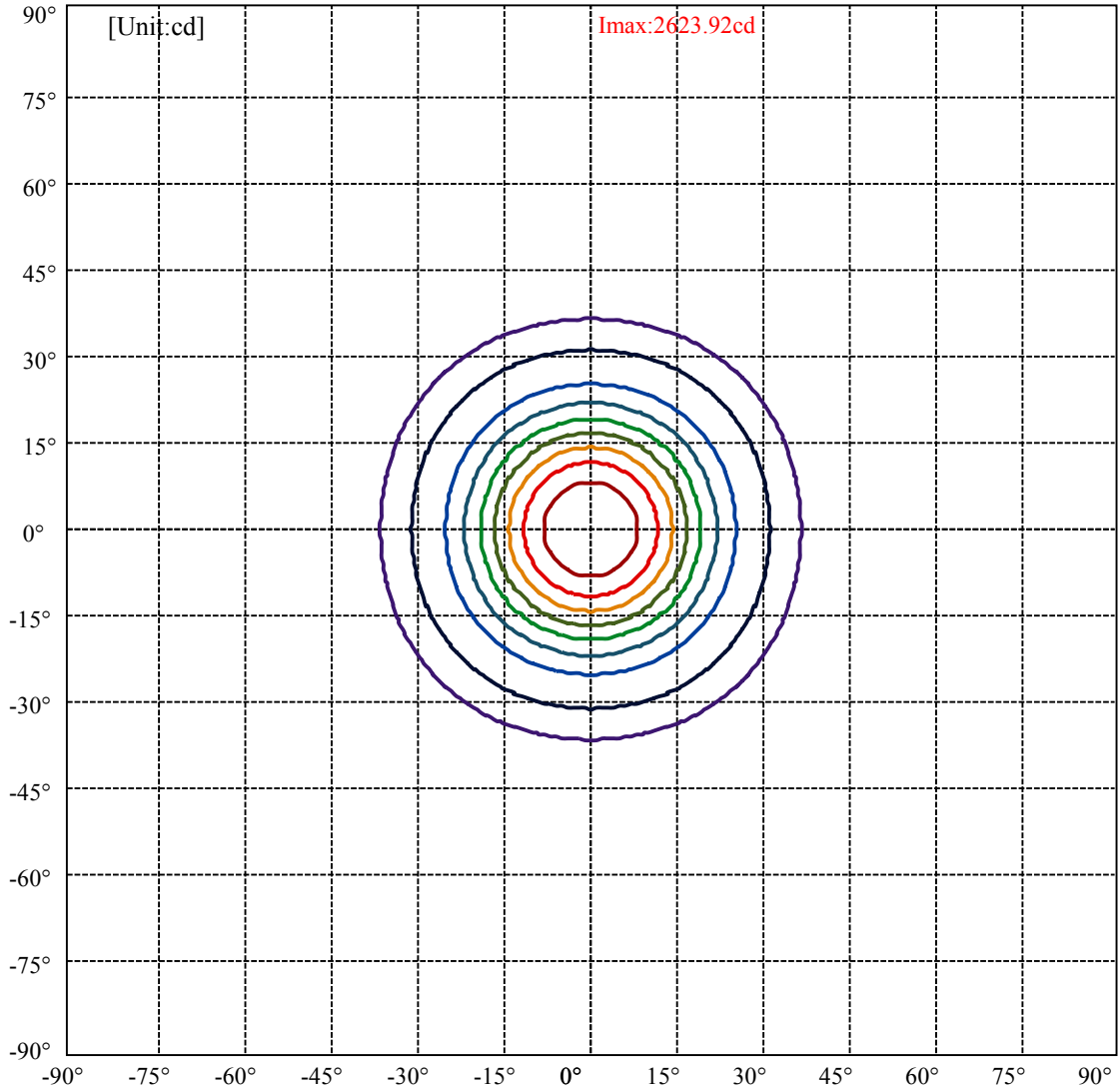
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:36.1 Right:36.1
:C90/270Left:36.1 Right:36.1

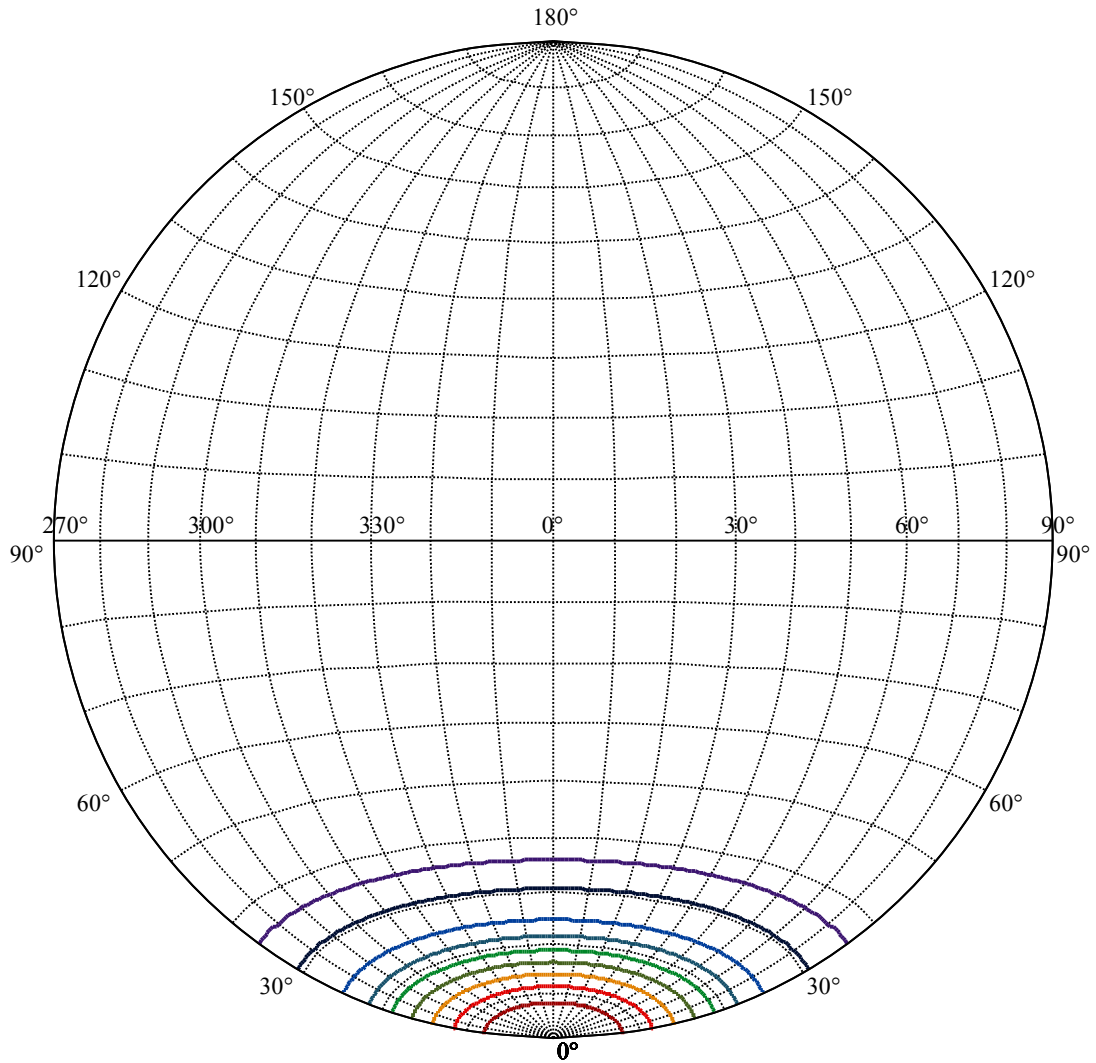
Beam Angle(50%Imax):C0/180Left:18.8 Right:18.8
:C90/270Left:18.8 Right:18.8



Max , Ave Beam angle of C0 plane 38.50



(10%Imax) 262.392	—
(20%Imax) 524.784	—
(30%Imax) 787.177	—
(40%Imax) 1049.57	—
(50%Imax) 1311.96	—
(60%Imax) 1574.35	—
(70%Imax) 1836.75	—
(80%Imax) 2099.14	—
(90%Imax) 2361.53	—



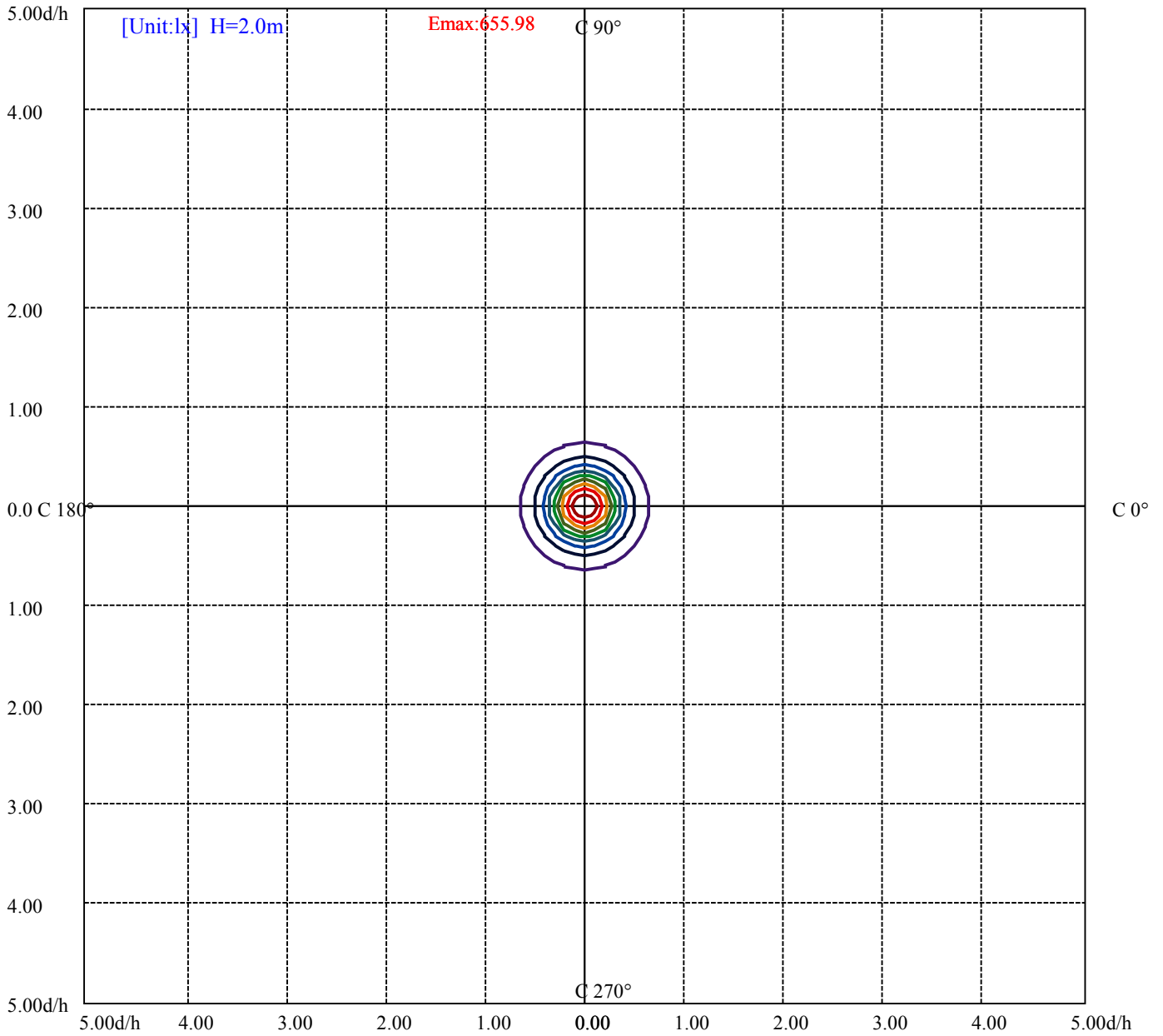
House

[Unit:cd]

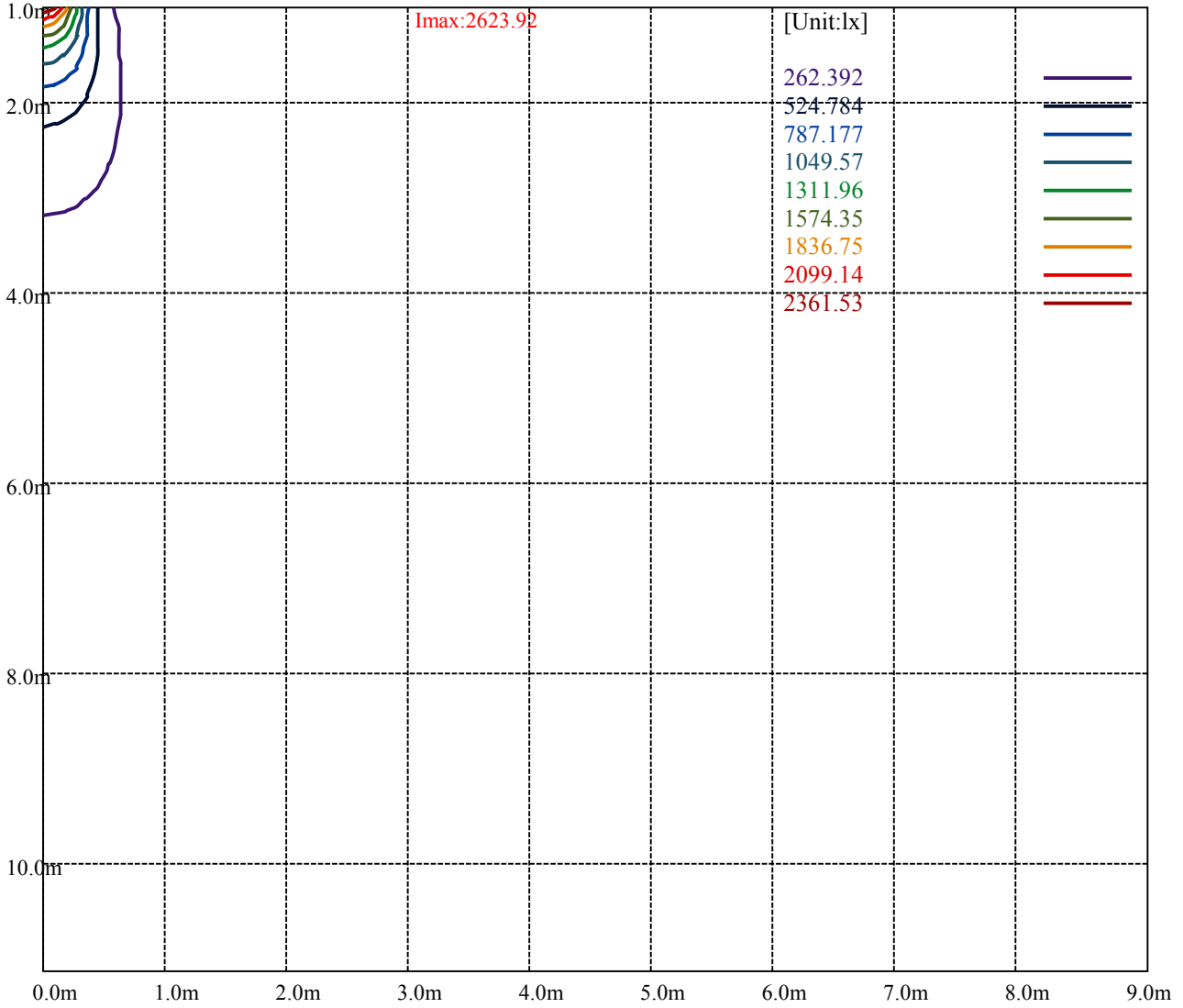
Road

Imax:2623.92

(10%Imax)	262.392	—
(20%Imax)	524.784	—
(30%Imax)	787.177	—
(40%Imax)	1049.57	—
(50%Imax)	1311.96	—
(60%Imax)	1574.35	—
(70%Imax)	1836.75	—
(80%Imax)	2099.14	—
(90%Imax)	2361.53	—



(10%Emax) 65.598	—
(20%Emax) 131.196	—
(30%Emax) 196.794	—
(40%Emax) 262.3925	—
(50%Emax) 327.99	—
(60%Emax) 393.5875	—
(70%Emax) 459.185	—
(80%Emax) 524.785	—
(90%Emax) 590.3825	—



Luminance Table

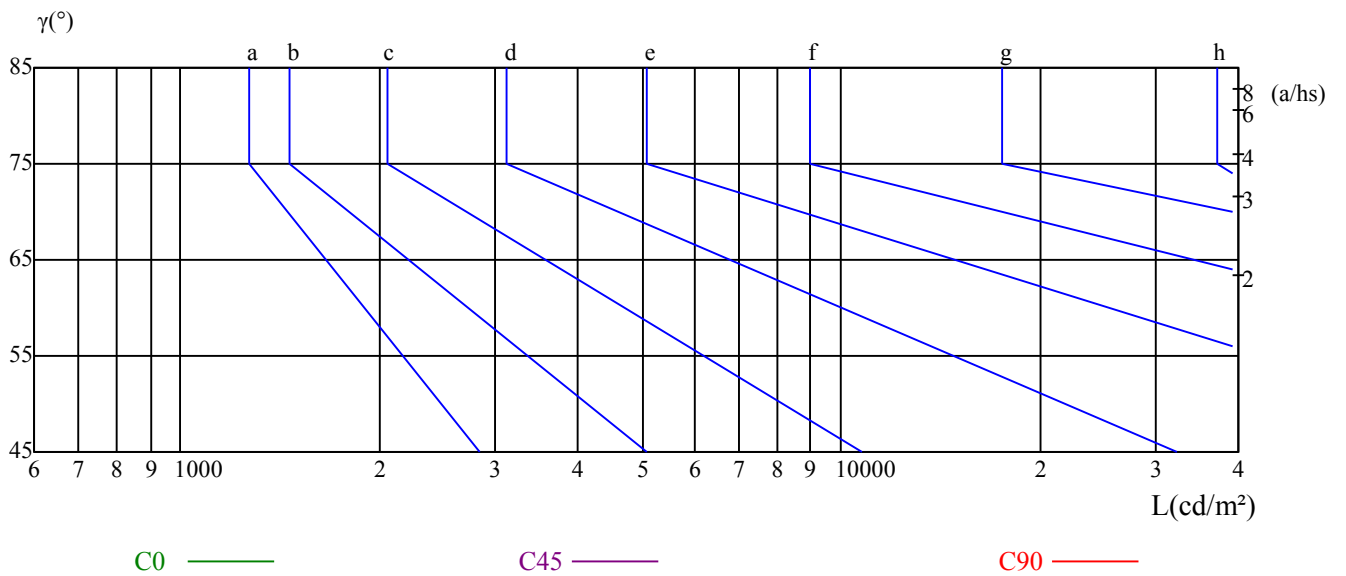
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

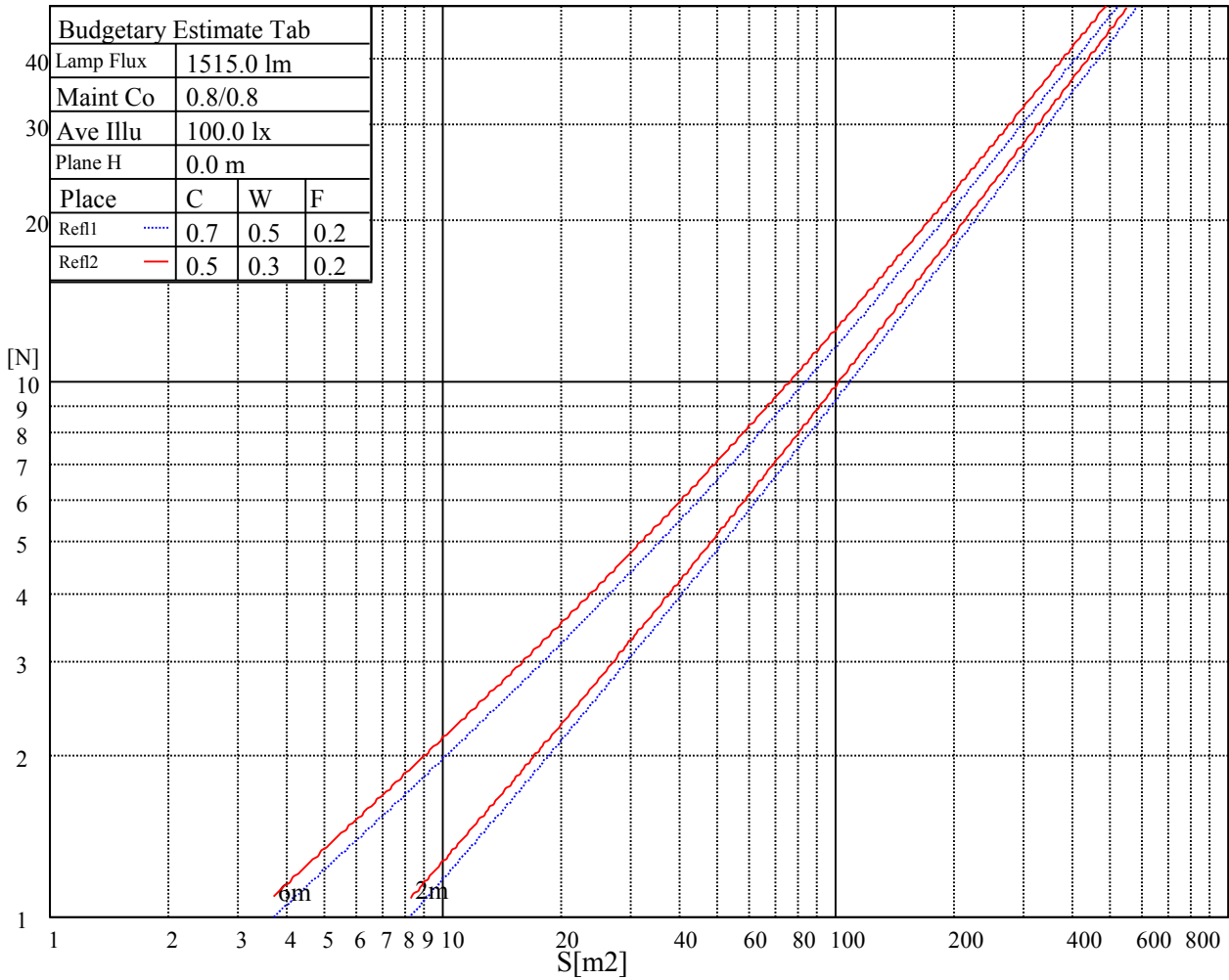
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

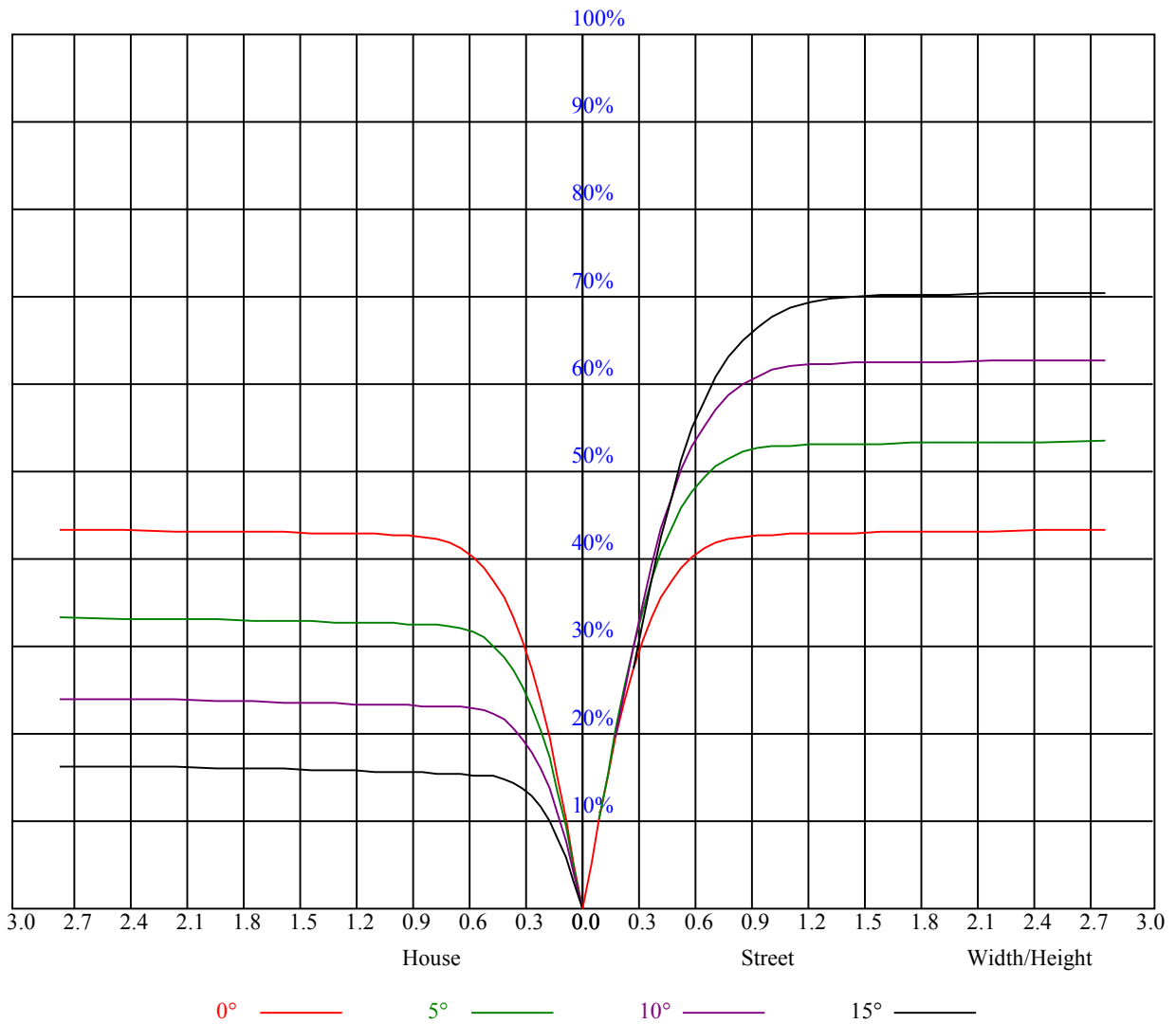
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.88	0.86	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.79	0.78
3	0.86	0.82	0.79	0.85	0.81	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	0.74	0.81	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.75	0.73	0.71	0.69
5	0.77	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
6	0.73	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.62
7	0.70	0.65	0.62	0.69	0.65	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.59
8	0.66	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.57
9	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	0.57	0.55	0.54
10	0.61	0.56	0.53	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52



Intensity data(cd)

C/ γ ($^{\circ}$)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2624.06	2603.25	2341.69	1926.00	1318.50	840.94	601.31	419.06	42.24
45.0	2619.56	2654.44	2513.25	2094.75	1563.19	982.13	674.44	489.38	295.88
90.0	2628.56	2621.25	2441.25	2036.25	1463.63	911.14	645.41	470.19	96.98
135.0	2623.50	2588.63	2373.75	1935.00	1366.88	854.44	610.88	443.25	64.52
180.0	2624.06	2454.75	2136.94	1584.00	980.72	686.42	504.06	184.73	21.99
225.0	2619.56	2406.38	1998.00	1259.44	866.53	614.19	470.19	69.19	13.84
270.0	2628.56	2466.00	2077.88	1488.38	939.94	652.50	499.50	285.75	16.65
315.0	2623.50	2477.25	2098.13	1564.31	974.36	668.42	500.01	157.61	18.23
360.0	2624.06	2603.25	2341.69	1926.00	1318.50	840.94	601.31	419.06	42.24
C/ γ ($^{\circ}$)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.33	8.27	7.54	7.14	6.86	6.64	12.99	7.88	6.30
45.0	18.73	8.66	7.82	7.37	7.09	6.92	6.75	6.64	6.47
90.0	15.36	8.38	7.54	7.09	6.86	6.64	6.41	6.41	6.13
135.0	14.06	8.49	7.71	7.26	6.98	6.81	19.18	6.75	6.36
180.0	9.00	8.16	7.65	7.37	7.31	10.07	18.39	8.21	6.92
225.0	8.78	7.93	7.59	7.37	7.31	32.57	33.69	8.94	7.59
270.0	8.72	7.88	7.48	7.31	7.31	31.84	40.22	8.89	7.43
315.0	8.66	7.82	7.31	7.14	6.86	11.64	23.74	8.04	6.75
360.0	13.33	8.27	7.54	7.14	6.86	6.64	12.99	7.88	6.30
C/ γ ($^{\circ}$)	90.0								
0.0	5.91								
45.0	6.19								
90.0	5.91								
135.0	5.85								
180.0	5.85								
225.0	6.19								
270.0	6.02								
315.0	5.91								
360.0	5.91								