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NATA

LumCAT: 2-1676-M	
Luminaire: 92.70.131.00	
Report No: NATA0100	Voltage(V): 34.3600
Test No: GC2019123012	Current(A): 0.6000
LampCAT: LUMINUS CXM-14-AC40	Power (W): 20.6000
Lamp flux(lm): 2608.0	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): 2351.58
Efficiency(%): 90.17%
Lumens(lm)/Power(W): 114.15
Central intensity(cd): 5240.109
Maximum intensity(cd): 5240.109
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=34.8
 [C90/270]Total=34.8
Field angle(10%Imax): [C0/180]Total=70.9
 [C90/270]Total=70.9
Maximum s/h(1/2): C0_180=0.58 C90_270=0.58
Maximum s/h(1/4): C0_180=0.58 C90_270=0.58
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.17%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.547%

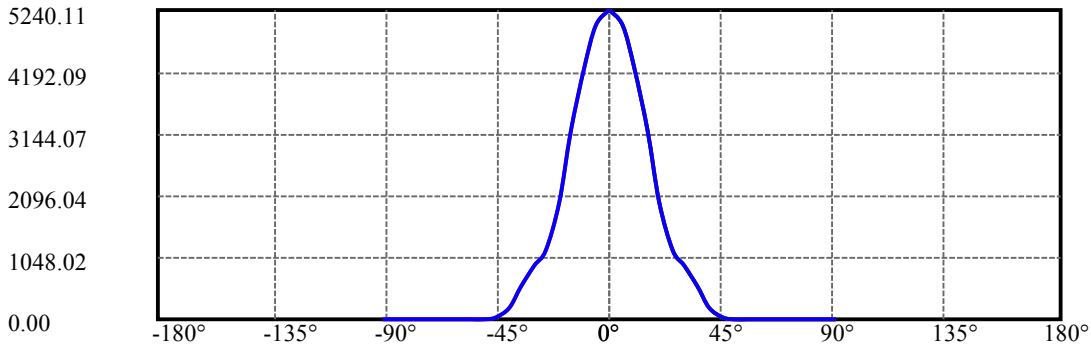
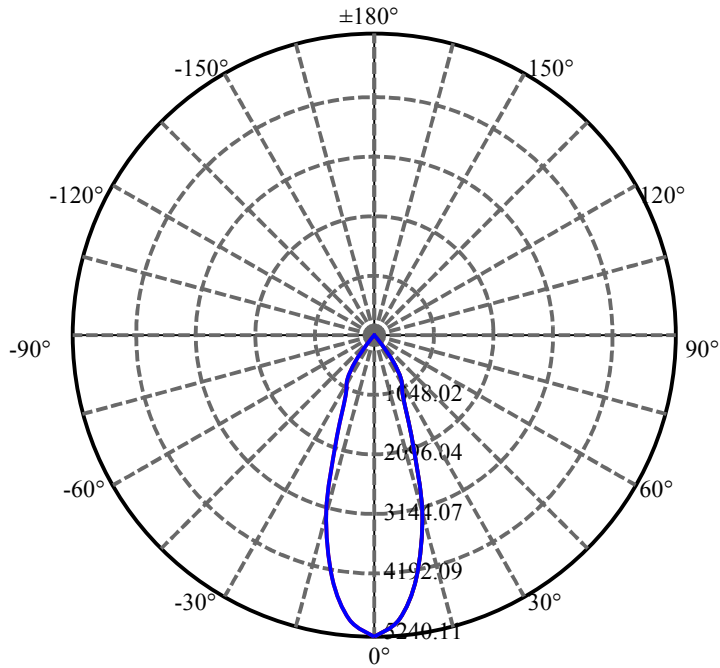
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5240.109	0.000	0	.000%	.000%
5.0	4971.867	122.081	122.081	4.681%	5.191%
10.0	4277.672	330.885	452.966	12.687%	19.262%
15.0	3193.594	443.190	896.157	16.993%	38.109%
20.0	1988.648	427.090	1323.246	16.376%	56.271%
25.0	1176.574	331.973	1655.22	12.729%	70.388%
30.0	903.319	263.212	1918.432	10.092%	81.581%
35.0	557.859	215.169	2133.601	8.250%	90.731%
40.0	196.755	125.902	2259.503	4.828%	96.085%
45.0	19.645	40.068	2299.571	1.536%	97.788%
50.0	13.451	6.688	2306.258	.256%	98.073%
55.0	12.291	5.597	2311.856	.215%	98.311%
60.0	11.686	5.542	2317.398	.213%	98.547%
65.0	11.271	5.581	2322.979	.214%	98.784%
70.0	11.004	5.640	2328.619	.216%	99.024%
75.0	10.793	5.697	2334.316	.218%	99.266%
80.0	10.645	5.736	2340.052	.220%	99.510%
85.0	10.554	5.760	2345.813	.221%	99.755%
90.0	10.498	5.764	2351.577	.221%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1918.43	73.56%	81.58%
0-40	2259.50	86.64%	96.08%
0-60	2317.40	88.86%	98.55%
0-90	2345.81	89.95%	99.75%
0-120	2345.81	89.95%	99.75%
0-180	2351.58	90.17%	100.00%
60-90	33.96	1.30%	1.44%
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%
0-29.29	1881.26	72.13%	80.00%

ZONAL LUMEN SUMMARY

0-10	452.97
10-20	870.28
20-30	595.19
30-40	341.07
40-50	46.76
50-60	11.14
60-70	11.22
70-80	11.43
80-90	5.76
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: —————

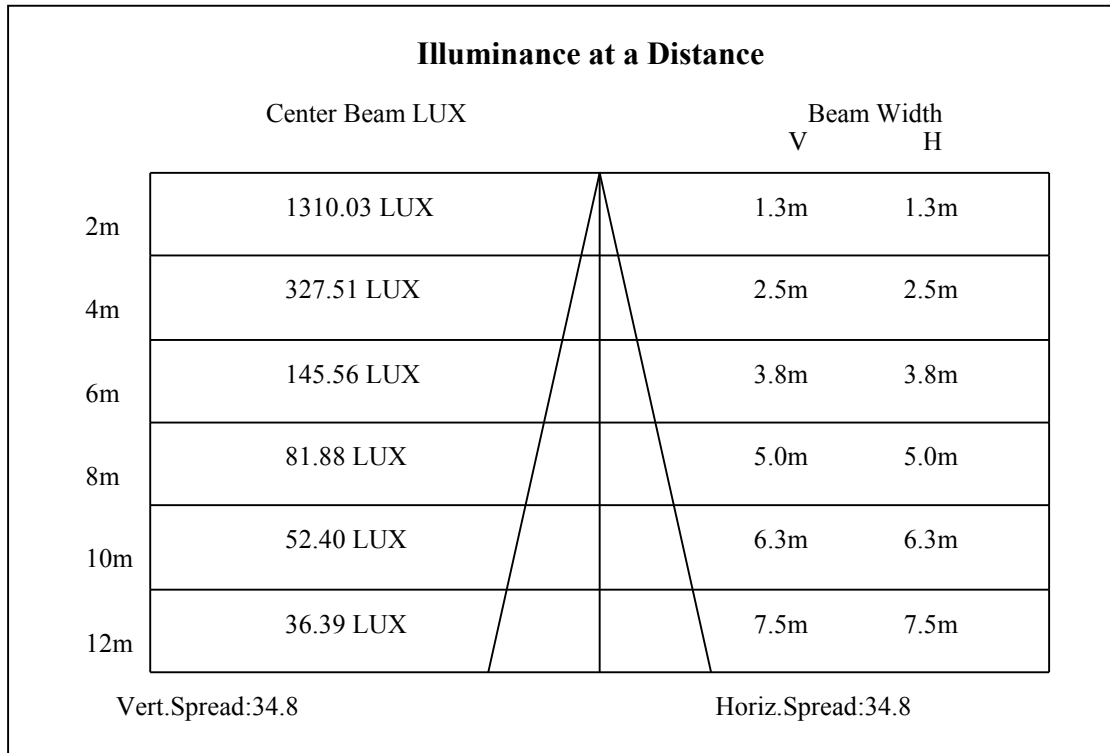
C90/C270: —————

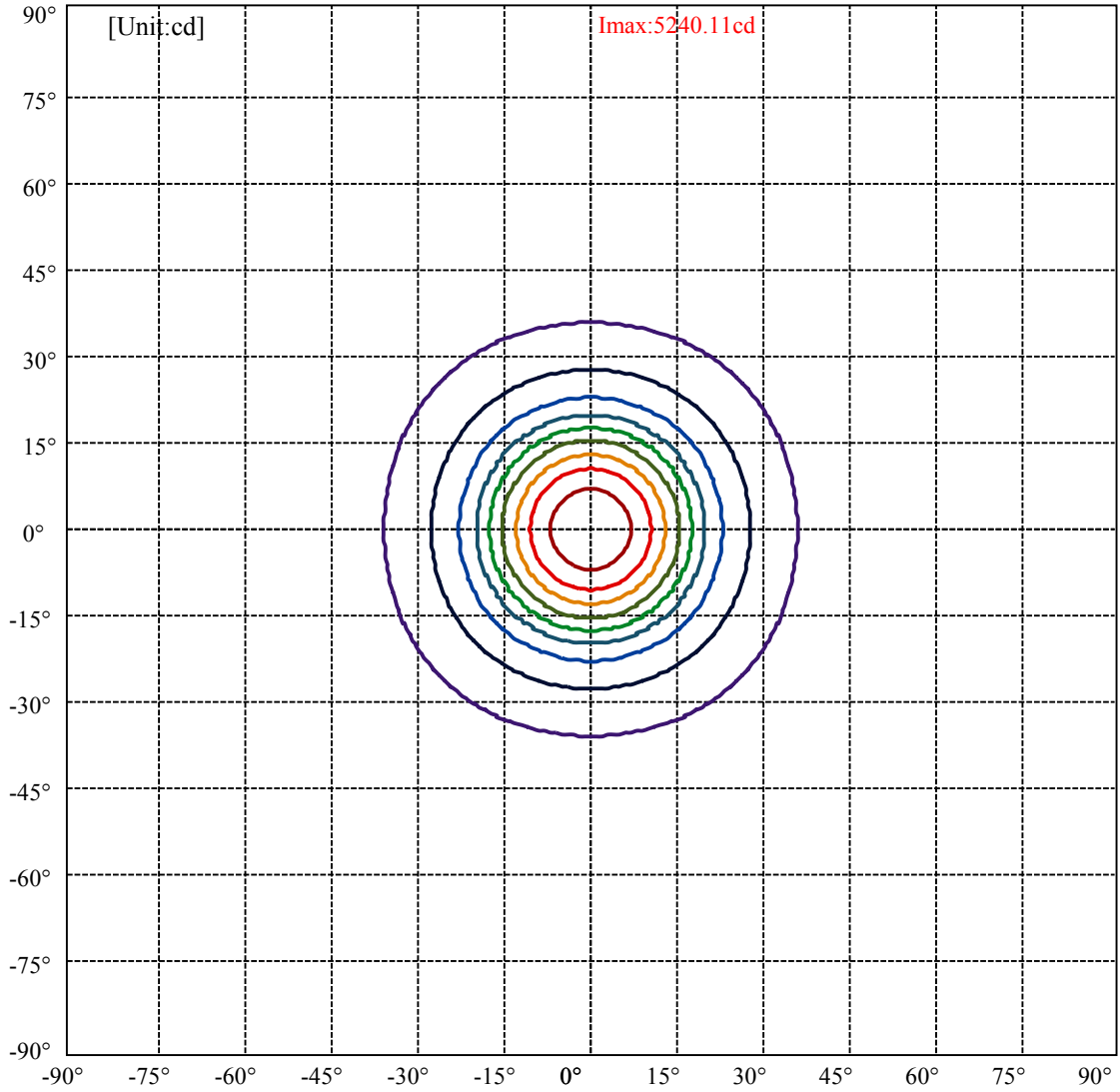
Field angle(10%Imax):C0/180Left:35.5 Right:35.5

:C90/270Left:35.5 Right:35.5

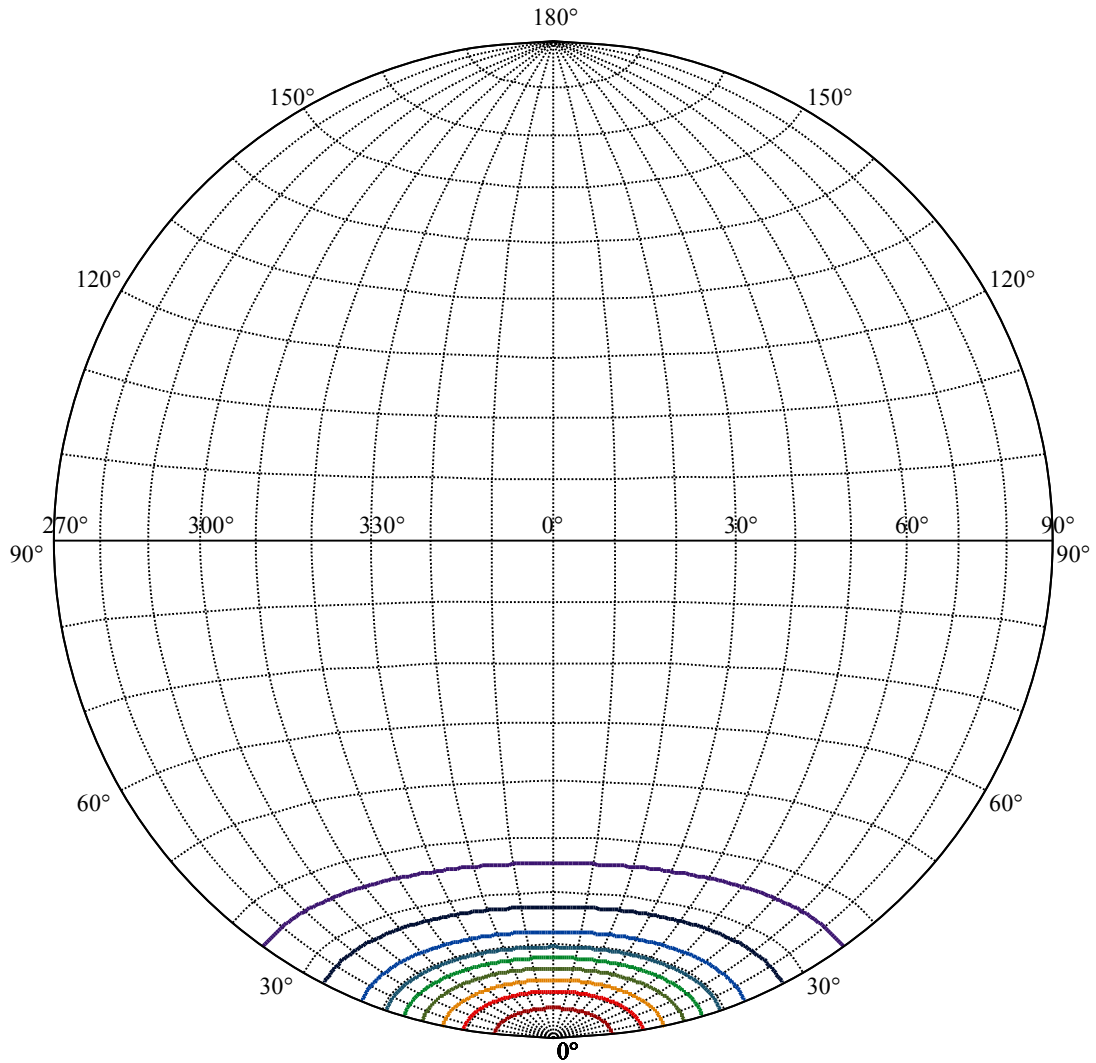
Beam Angle(50%Imax):C0/180Left:17.4 Right:17.4

:C90/270Left:17.4 Right:17.4





(10%Imax) 524.011	—
(20%Imax) 1048.02	—
(30%Imax) 1572.03	—
(40%Imax) 2096.04	—
(50%Imax) 2620.05	—
(60%Imax) 3144.07	—
(70%Imax) 3668.08	—
(80%Imax) 4192.09	—
(90%Imax) 4716.1	—



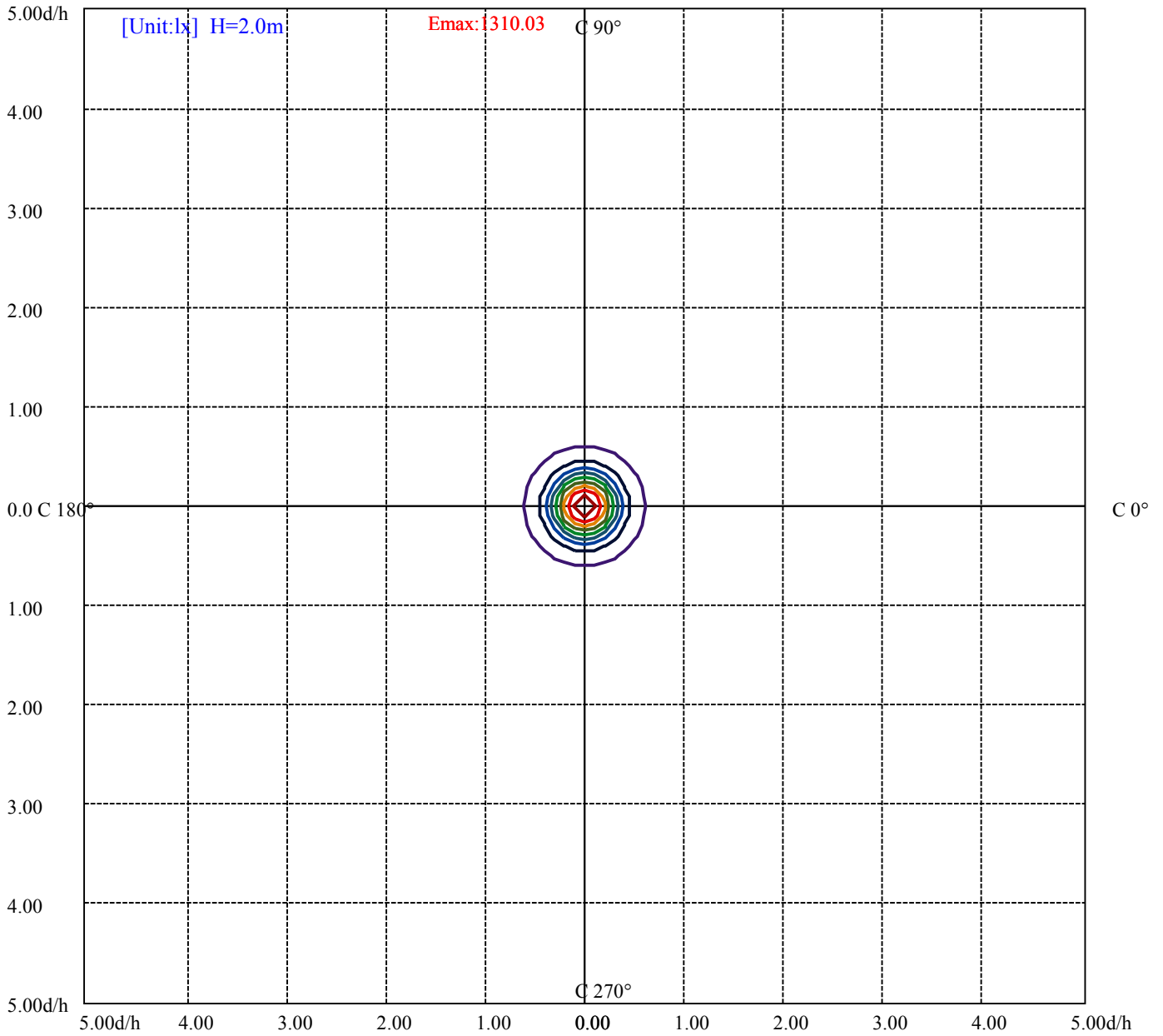
House

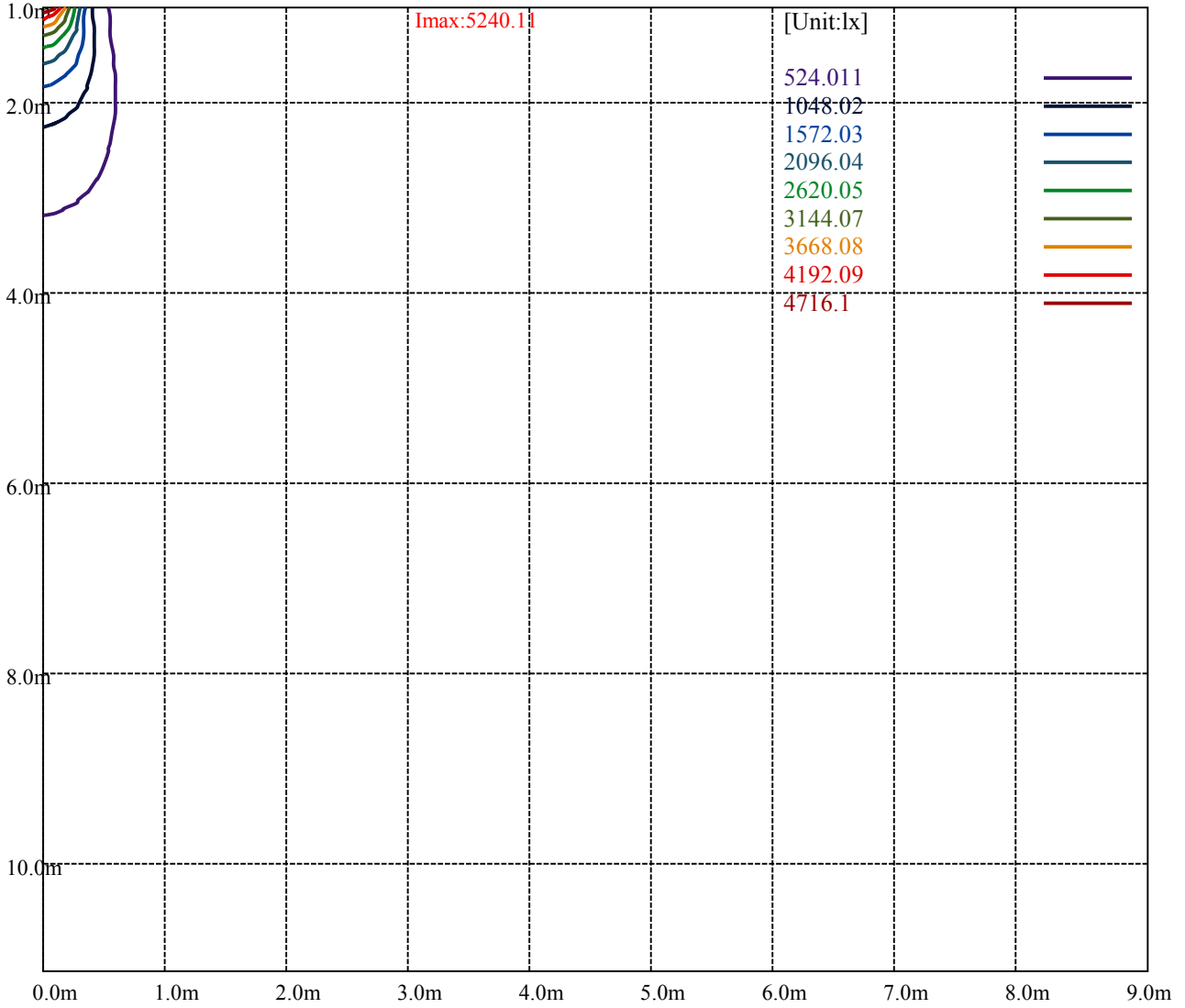
[Unit:cd]

Road

Imax:5240.11

(10%Imax)	524.011	—
(20%Imax)	1048.02	—
(30%Imax)	1572.03	—
(40%Imax)	2096.04	—
(50%Imax)	2620.05	—
(60%Imax)	3144.07	—
(70%Imax)	3668.08	—
(80%Imax)	4192.09	—
(90%Imax)	4716.1	—





Luminance Table

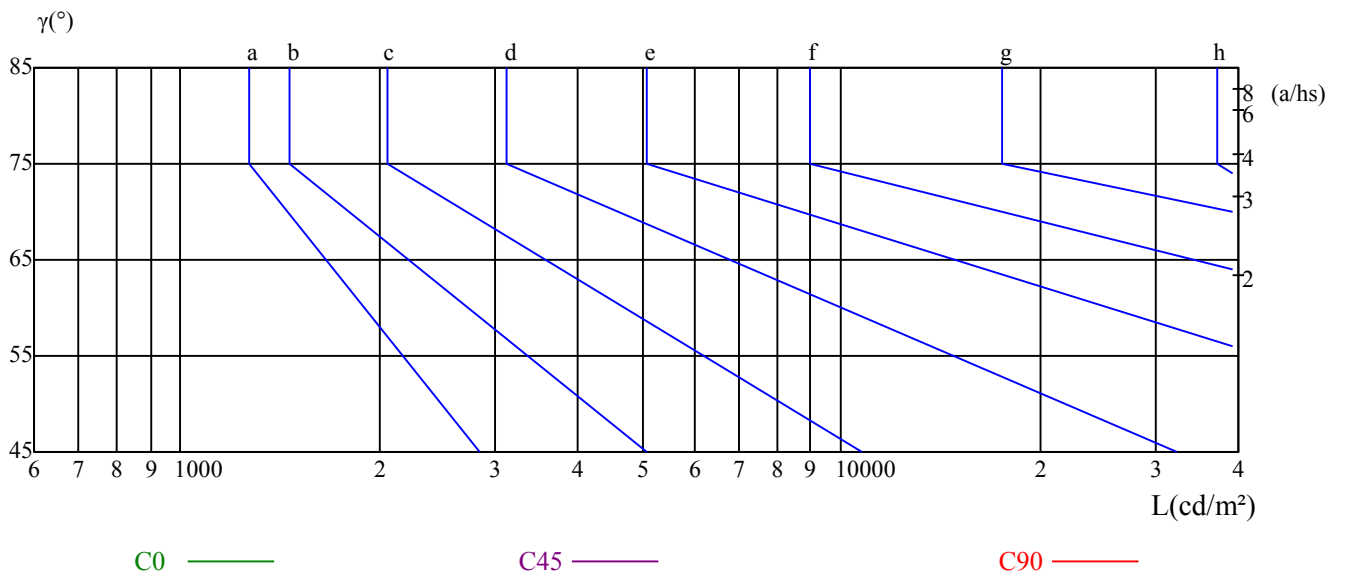
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

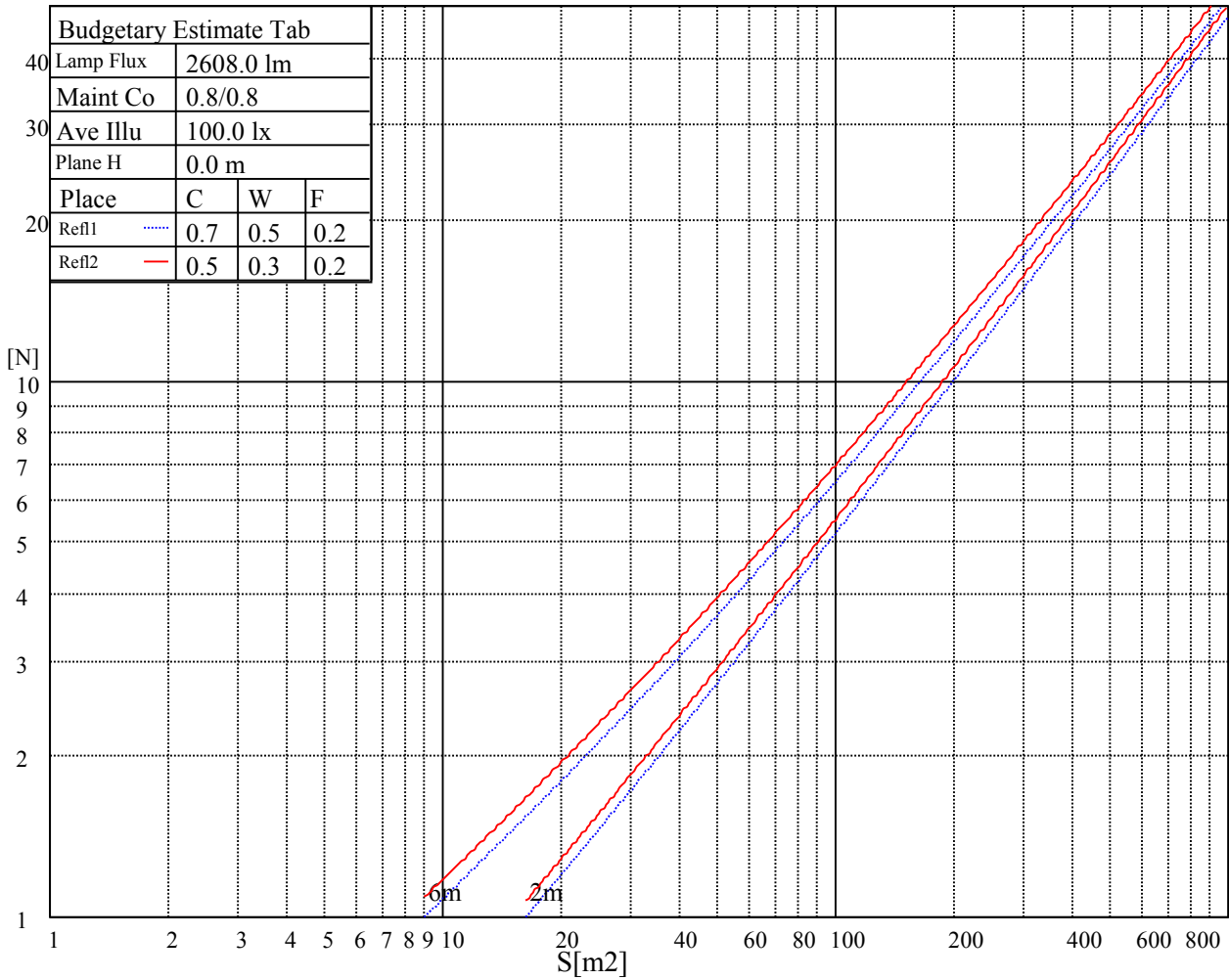
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

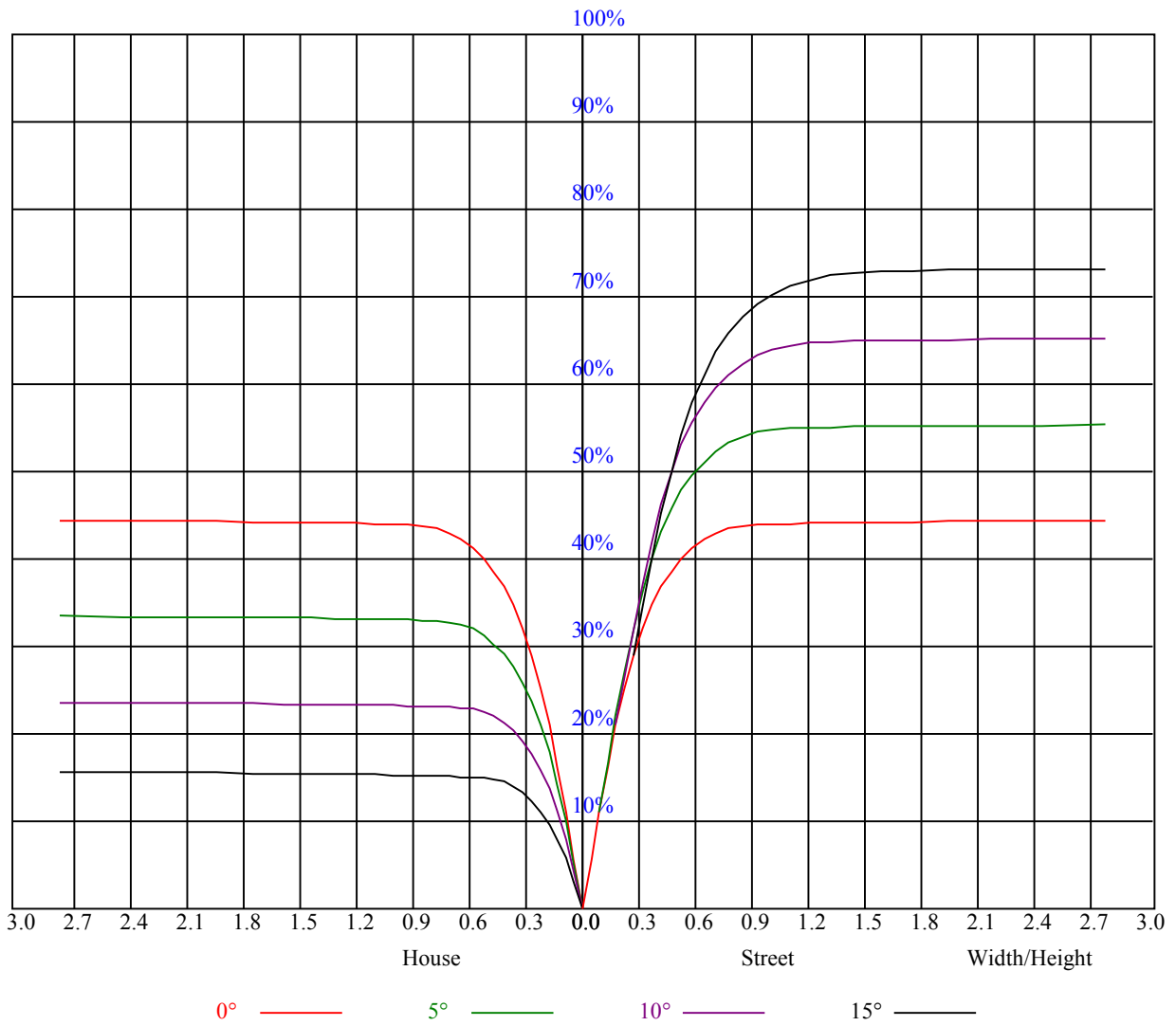
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.07	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	1.00	0.98	0.96	0.98	0.97	0.95	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.87	0.85
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.80
3	0.89	0.85	0.82	0.88	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.81	0.79	0.77	0.76
4	0.84	0.80	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.78	0.75	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.68
6	0.76	0.71	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.65
7	0.72	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.62
8	0.69	0.64	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.59
9	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.56
10	0.63	0.59	0.56	0.63	0.58	0.56	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.54



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	5233.50	5208.19	4702.50	3864.38	2578.50	1458.56	1013.06	749.81	367.88
45.0	5217.75	5166.00	4649.63	3739.50	2559.94	1416.94	997.31	707.06	327.38
90.0	5250.38	4985.44	4287.94	3182.63	1938.38	1115.44	883.74	559.01	161.21
135.0	5258.81	4926.38	4258.13	2991.94	1778.63	1085.06	855.00	506.25	114.81
180.0	5233.50	4689.00	3763.13	2505.38	1433.81	1003.50	787.05	366.69	38.87
225.0	5217.75	4752.00	3854.25	2577.94	1525.50	1044.39	826.88	389.70	46.52
270.0	5250.38	5005.69	4290.19	3321.56	1996.31	1176.75	925.88	573.19	290.81
315.0	5258.81	5042.25	4415.63	3365.44	2098.13	1111.95	937.63	611.16	226.58
360.0	5233.50	5208.19	4702.50	3864.38	2578.50	1458.56	1013.06	749.81	367.88

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	28.07	14.01	12.60	11.87	11.42	11.14	10.91	10.74	10.63
45.0	24.47	14.74	12.60	11.87	11.36	11.08	10.80	10.63	10.52
90.0	18.28	13.39	12.49	11.81	11.31	10.97	10.80	10.63	10.52
135.0	17.10	13.11	12.15	11.64	11.25	10.97	10.80	10.63	10.58
180.0	15.13	12.71	11.93	11.48	11.14	10.97	10.74	10.63	10.58
225.0	14.51	12.71	11.87	11.36	11.08	10.86	10.69	10.58	10.52
270.0	19.18	13.50	12.38	11.76	11.31	11.03	10.80	10.63	10.52
315.0	20.42	13.44	12.32	11.70	11.31	11.03	10.80	10.69	10.58
360.0	28.07	14.01	12.60	11.87	11.42	11.14	10.91	10.74	10.63

C/γ(°)	90.0
0.0	10.58
45.0	10.46
90.0	10.46
135.0	10.46
180.0	10.58
225.0	10.52
270.0	10.46
315.0	10.46
360.0	10.58