
Nata

LumCAT: 3-2116-N
Luminaire: 92.70.135.00
Report No: NT2017122806
Test No: nata-0100
LampCAT: NICHIA NVEWJ048Z-V1
Lamp flux(lm): 3051.0
Number of Lamps: 1
Length(mm): 80
Phm Type: C

Voltage(V): 43.4000
Current(A): 0.5000
Power (W): 21.7000
PF: 0.0000
Ballast type: DC
Width(mm): 80
Height(mm): 0

Photometric Results

Lumens(lm): 2600.05
Efficiency(%): 85.22%
Lumens(lm)/Power(W): 122.38
Central intensity(cd): 9702.589
Maximum intensity(cd): 9702.589
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.8
 [C90/270]Total=25.8
Field angle(10%Imax): [C0/180]Total=53.6
 [C90/270]Total=53.6
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.04%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.075%

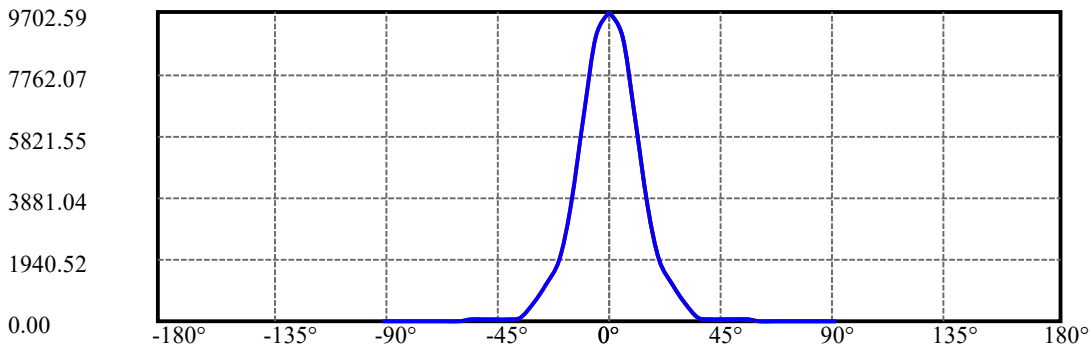
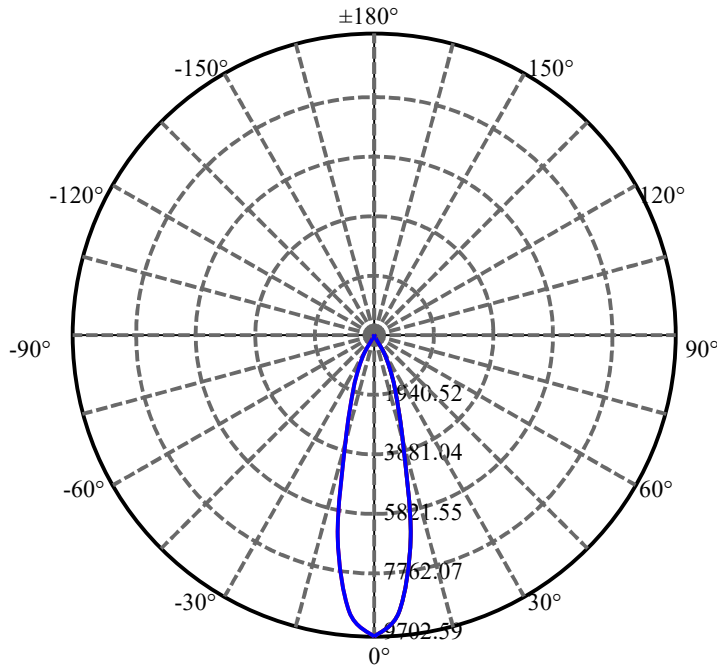
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	9702.589	58.023	58.023	1.902%	2.232%
5.0	8946.459	427.402	485.425	14.009%	18.670%
10.0	6585.640	626.841	1112.267	20.545%	42.779%
15.0	3591.191	509.477	1621.743	16.699%	62.374%
20.0	1924.496	360.793	1982.536	11.825%	76.250%
25.0	1172.440	271.599	2254.136	8.902%	86.696%
30.0	615.517	168.694	2422.829	5.529%	93.184%
35.0	141.598	44.518	2467.348	1.459%	94.896%
40.0	59.860	21.091	2488.439	.691%	95.707%
45.0	49.523	19.195	2507.633	.629%	96.446%
50.0	40.198	16.879	2524.512	.553%	97.095%
55.0	31.623	14.199	2538.711	.465%	97.641%
60.0	26.661	12.656	2551.367	.415%	98.128%
65.0	22.491	11.173	2562.54	.366%	98.557%
70.0	17.398	8.961	2571.502	.294%	98.902%
75.0	16.262	8.610	2580.112	.282%	99.233%
80.0	15.657	8.452	2588.563	.277%	99.558%
85.0	14.803	8.083	2596.647	.265%	99.869%
90.0	12.408	3.401	2600.048	.111%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2422.83	79.41%	93.18%
0-40	2488.44	81.56%	95.71%
0-60	2551.37	83.62%	98.13%
0-90	2596.65	85.11%	99.87%
0-120	2596.65	85.11%	99.87%
0-180	2600.05	85.22%	100.00%
60-90	57.94	1.90%	2.23%
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%
0-21.79	2080.04	68.18%	80.00%

ZONAL LUMEN SUMMARY

0-10	1112.27
10-20	870.27
20-30	440.29
30-40	65.61
40-50	36.07
50-60	26.86
60-70	20.13
70-80	17.06
80-90	8.08
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: —————

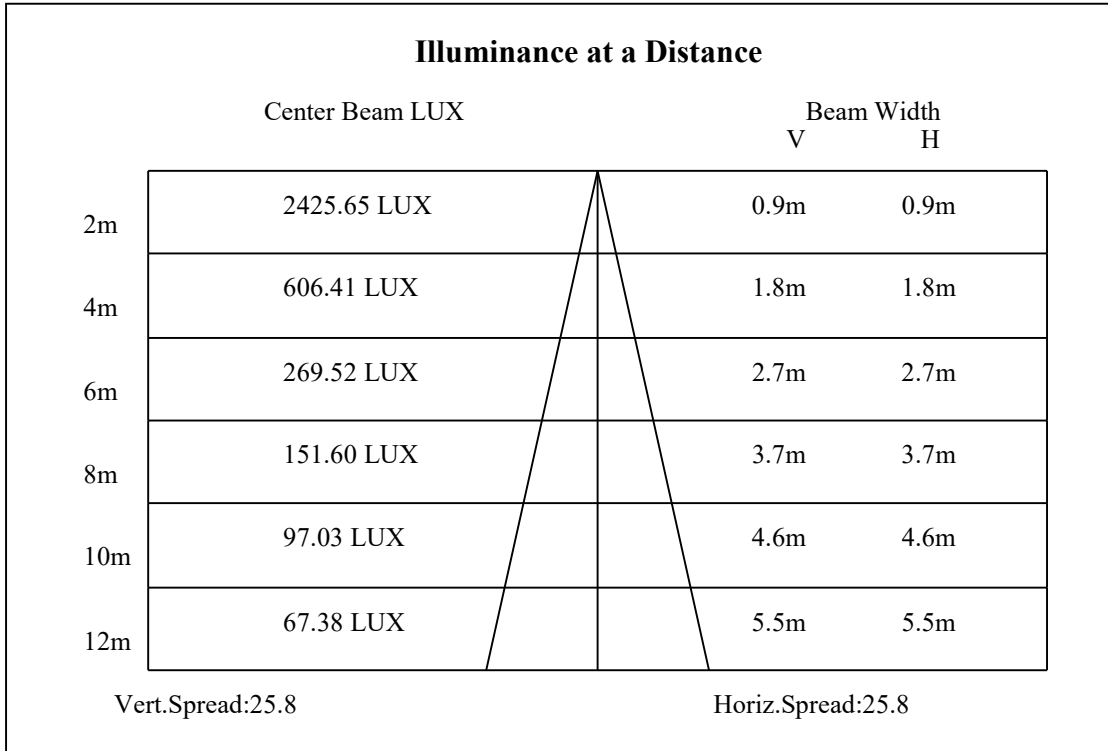
C90/C270: —————

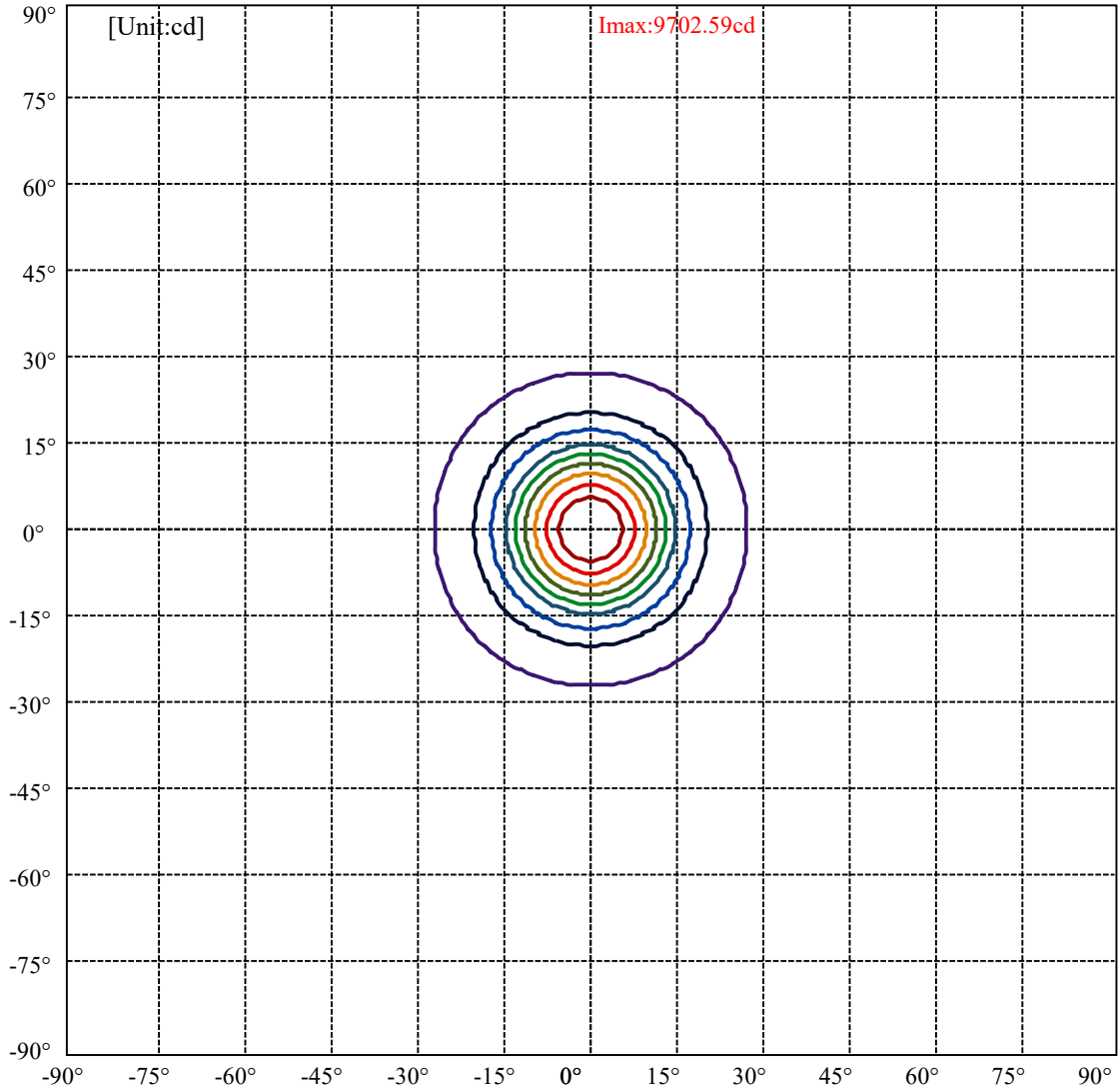
Field angle(10%Imax):C0/180Left:26.8 Right:26.8

:C90/270Left:26.8 Right:26.8

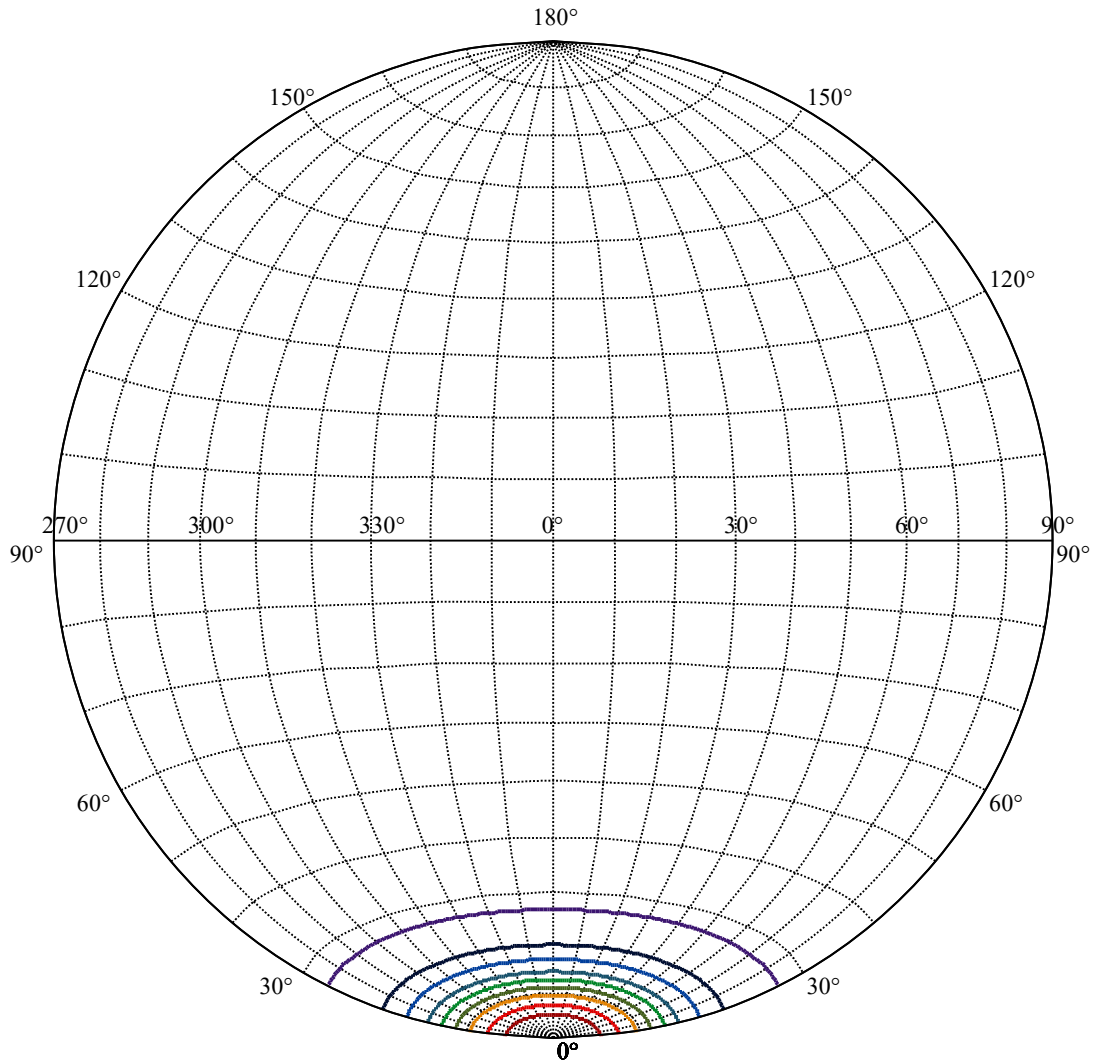
Beam Angle(50%Imax):C0/180Left:12.9 Right:12.9

:C90/270Left:12.9 Right:12.9





(10%Imax) 970.259	—
(20%Imax) 1940.52	—
(30%Imax) 2910.78	—
(40%Imax) 3881.04	—
(50%Imax) 4851.29	—
(60%Imax) 5821.55	—
(70%Imax) 6791.81	—
(80%Imax) 7762.07	—
(90%Imax) 8732.33	—



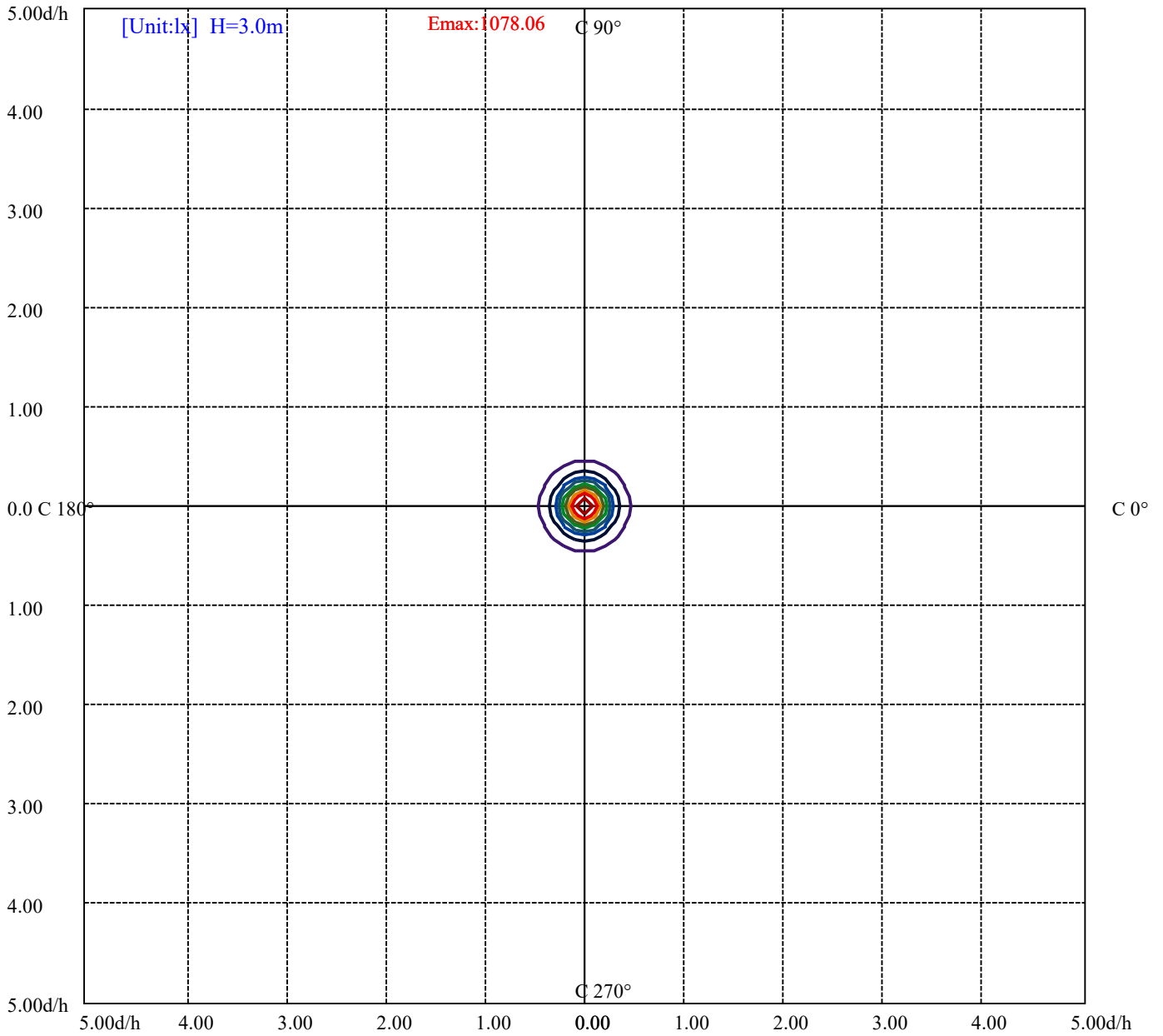
House

[Unit:cd]

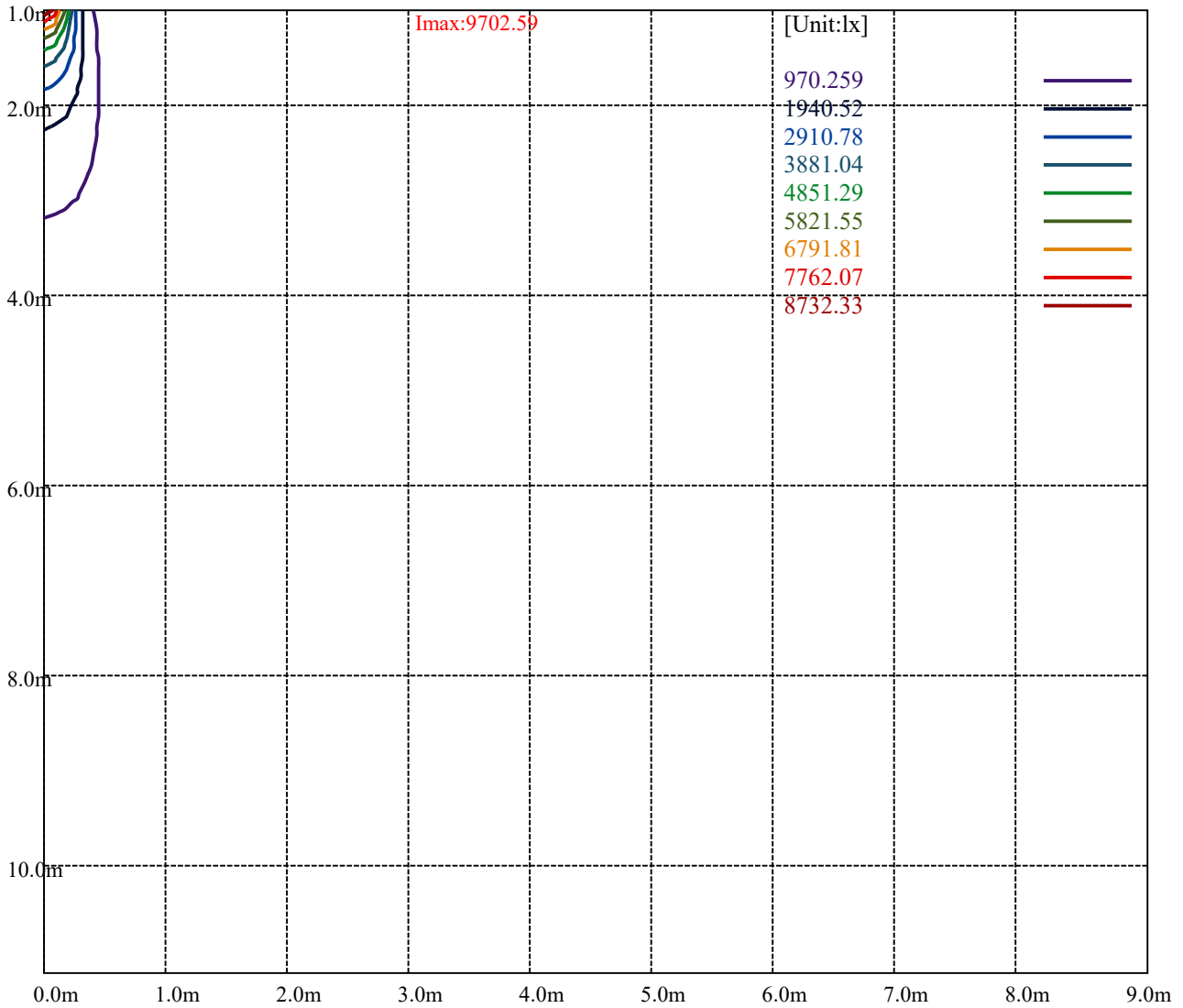
Road

Imax:9702.59

(10%Imax) 970.259	—
(20%Imax) 1940.52	—
(30%Imax) 2910.78	—
(40%Imax) 3881.04	—
(50%Imax) 4851.29	—
(60%Imax) 5821.55	—
(70%Imax) 6791.81	—
(80%Imax) 7762.07	—
(90%Imax) 8732.33	—



- (10%Emax) 107.8063
- (20%Emax) 215.6122
- (30%Emax) 323.4189
- (40%Emax) 431.2256
- (50%Emax) 539.0311
- (60%Emax) 646.8378
- (70%Emax) 754.6444
- (80%Emax) 862.45
- (90%Emax) 970.2566



Luminance Table

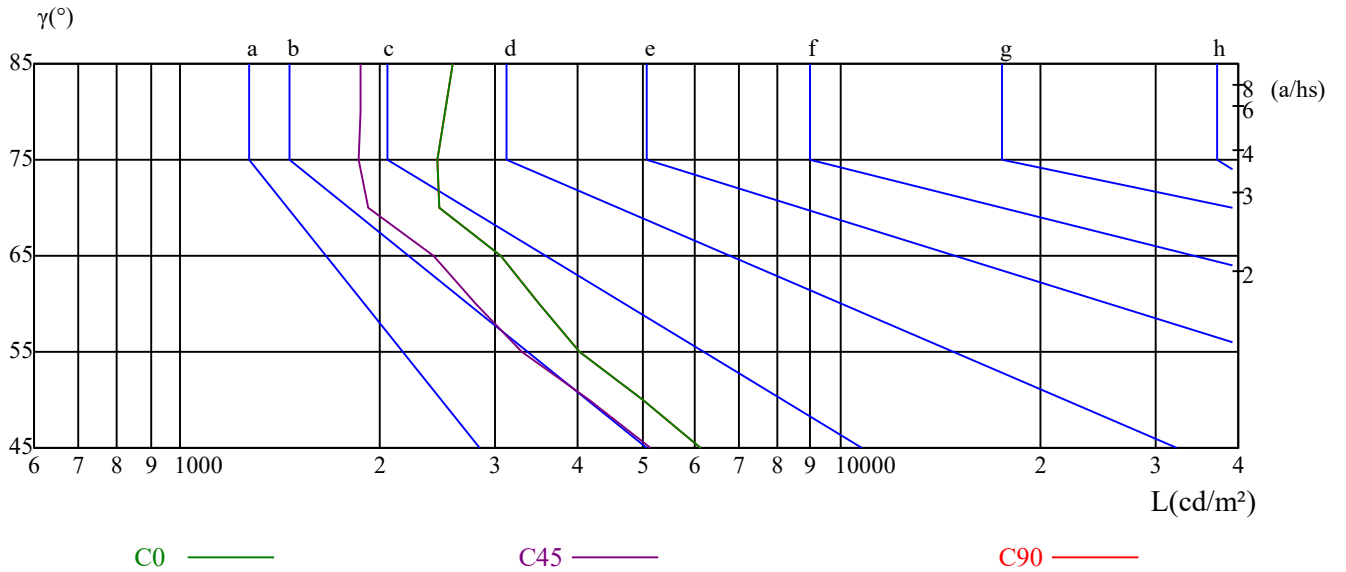
γ	45	50	55	60	65	70	75	80	85
C0	6114	5021	4028	3492	3055	2473	2445	2518	2580
C45	5144	4161	3287	2805	2413	1920	1861	1876	1876
C90	6114	5021	4028	3492	3055	2473	2445	2518	2580

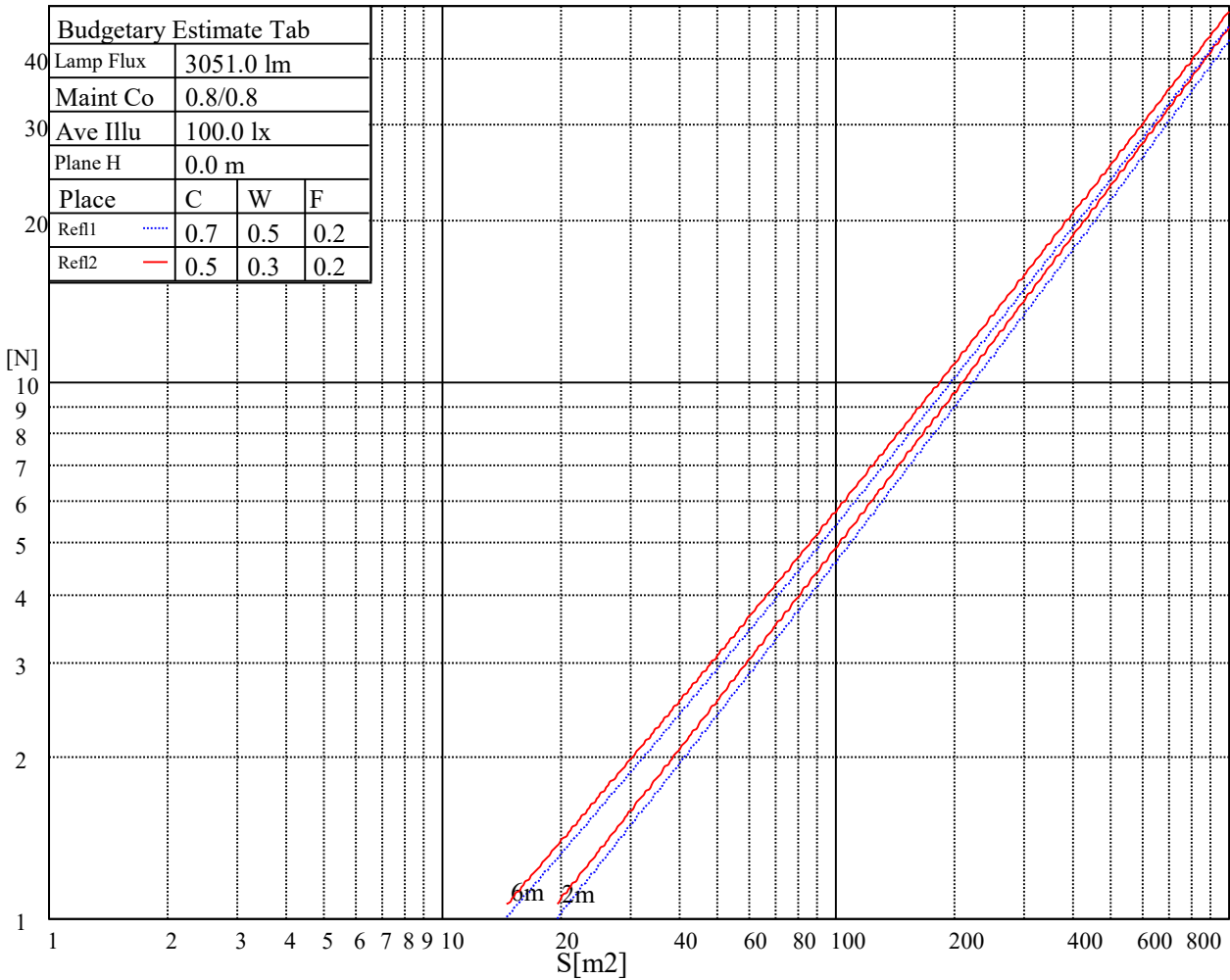
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8527	8527	8527	10068	10068	10068	27215	27215	27215

Glare Table

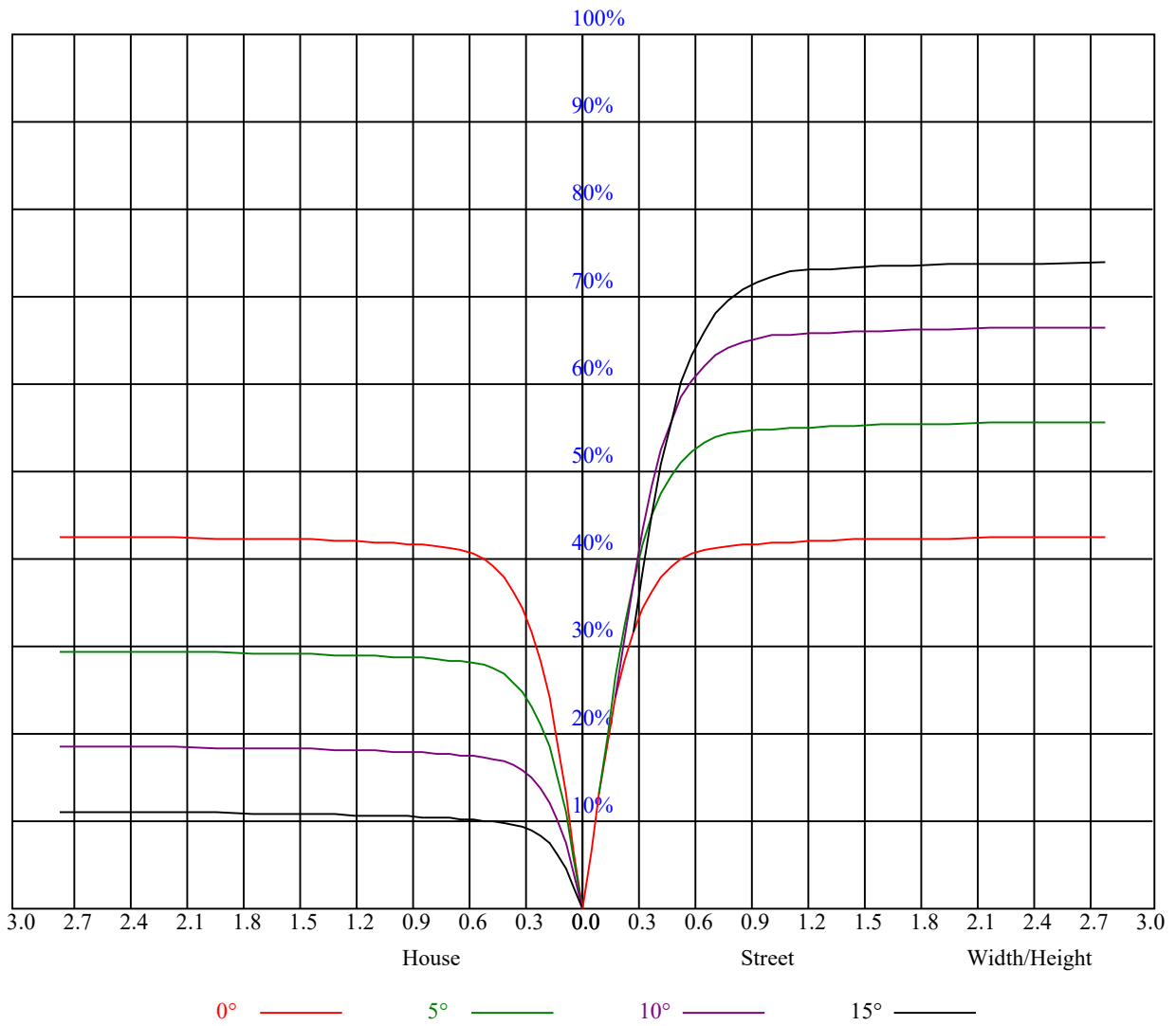
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.04	1.04	1.04	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.95	0.93	0.91	0.93	0.91	0.89	0.90	0.88	0.87	0.87	0.85	0.84	0.84	0.83	0.82	0.80
2	0.91	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.84	0.82	0.80	0.81	0.80	0.78	0.77
3	0.87	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.76	0.74
4	0.83	0.79	0.76	0.82	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
5	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.75	0.73	0.71	0.70
6	0.77	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.68
7	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.66
8	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
9	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.63
10	0.69	0.65	0.63	0.68	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61



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	9667.35	9247.27	7118.24	4265.77	2118.02	1291.62	715.18	286.84	59.46
45.0	9724.06	9228.55	6964.08	3951.95	2028.83	1226.11	666.73	171.83	60.95
90.0	9715.25	8920.24	6295.70	3421.76	1817.96	1088.58	565.10	83.47	58.86
135.0	9703.69	9157.53	6849.57	3687.68	2012.31	1236.57	655.17	169.85	61.72
180.0	9667.35	8647.16	6010.51	3105.73	1767.31	1094.58	493.69	83.69	58.91
225.0	9724.06	8540.90	6221.37	3233.46	1794.84	1083.34	534.10	83.03	58.80
270.0	9715.25	9002.82	6863.88	3747.14	1996.35	1264.65	701.97	168.64	61.11
315.0	9703.69	8827.19	6361.77	3316.05	1860.36	1094.08	592.19	85.45	59.08
360.0	9667.35	9247.27	7118.24	4265.77	2118.02	1291.62	715.18	286.84	59.46

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	49.72	41.29	32.15	26.70	23.34	16.96	15.97	15.09	14.37
45.0	50.43	41.13	31.82	27.20	23.07	17.07	15.91	14.92	14.76
90.0	48.84	39.42	30.89	26.04	22.08	16.96	15.75	14.98	14.31
135.0	51.48	41.18	32.76	26.70	23.18	17.62	16.52	15.69	14.98
180.0	48.45	38.54	31.05	26.32	20.98	17.67	16.24	15.80	14.59
225.0	49.00	39.26	31.22	26.76	21.75	17.84	16.68	17.62	15.75
270.0	49.77	40.52	31.93	27.25	22.90	17.78	16.74	15.80	15.36
315.0	48.50	40.25	31.16	26.32	22.63	17.29	16.30	15.36	14.31
360.0	49.72	41.29	32.15	26.70	23.34	16.96	15.97	15.09	14.37

C/γ(°)	90.0
0.0	12.39
45.0	12.44
90.0	12.39
135.0	12.39
180.0	12.39
225.0	12.44
270.0	12.44
315.0	12.39
360.0	12.39