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Nata

LumCAT: 2-1299-N
Luminaire: 92.70.045.00+92.70.059.00
Report No: NATA0100
Test No: GC2018062206
LampCAT: NICHIA NFCWJ120B-V3
Lamp flux(lm): 2303.4
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 33.7000
Current(A): 0.5000
Power (W): 16.8500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1766.42
Efficiency(%): 76.69%
Lumens(lm)/Power(W): 104.83
Central intensity(cd): 7132.969
Maximum intensity(cd): 7132.969
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=22.8
 [C90/270]Total=22.8
Field angle(10%Imax): [C0/180]Total=47.4
 [C90/270]Total=47.4
Maximum s/h(1/2): C0_180=0.39 C90_270=0.39
Maximum s/h(1/4): C0_180=0.40 C90_270=0.40
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.47%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.629%

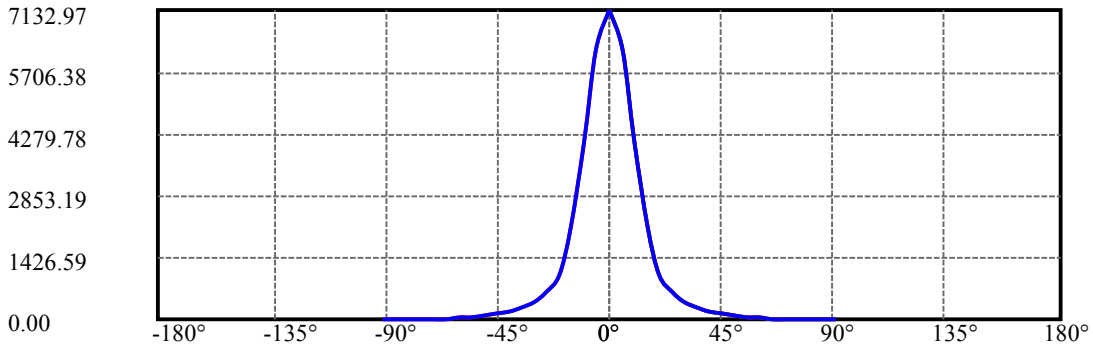
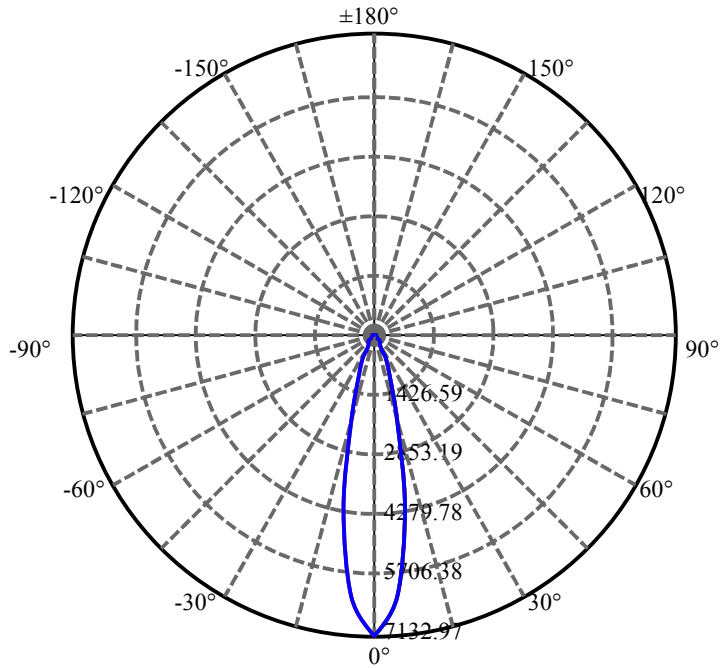
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7132.970	42.657	42.657	1.852%	2.415%
5.0	6197.630	296.081	338.738	12.854%	19.177%
10.0	4134.185	393.504	732.242	17.084%	41.454%
15.0	2126.003	301.613	1033.855	13.094%	58.528%
20.0	1013.533	190.011	1223.866	8.249%	69.285%
25.0	607.974	140.839	1364.705	6.114%	77.258%
30.0	400.349	109.723	1474.428	4.764%	83.470%
35.0	271.648	85.406	1559.834	3.708%	88.305%
40.0	176.869	62.317	1622.151	2.705%	91.833%
45.0	111.758	43.316	1665.468	1.881%	94.285%
50.0	71.381	29.973	1695.44	1.301%	95.982%
55.0	44.162	19.829	1715.269	.861%	97.105%
60.0	27.638	13.120	1728.389	.570%	97.847%
65.0	18.754	9.316	1737.706	.404%	98.375%
70.0	15.767	8.121	1745.827	.353%	98.834%
75.0	13.620	7.211	1753.038	.313%	99.243%
80.0	11.555	6.237	1759.275	.271%	99.596%
85.0	9.291	5.073	1764.349	.220%	99.883%
90.0	7.543	2.067	1766.416	.090%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1474.43	64.01%	83.47%
0-40	1622.15	70.42%	91.83%
0-60	1728.39	75.04%	97.85%
0-90	1764.35	76.60%	99.88%
0-120	1764.35	76.60%	99.88%
0-180	1766.42	76.69%	100.00%
60-90	49.08	2.13%	2.78%
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%
0-27.21	1413.13	61.35%	80.00%

ZONAL LUMEN SUMMARY

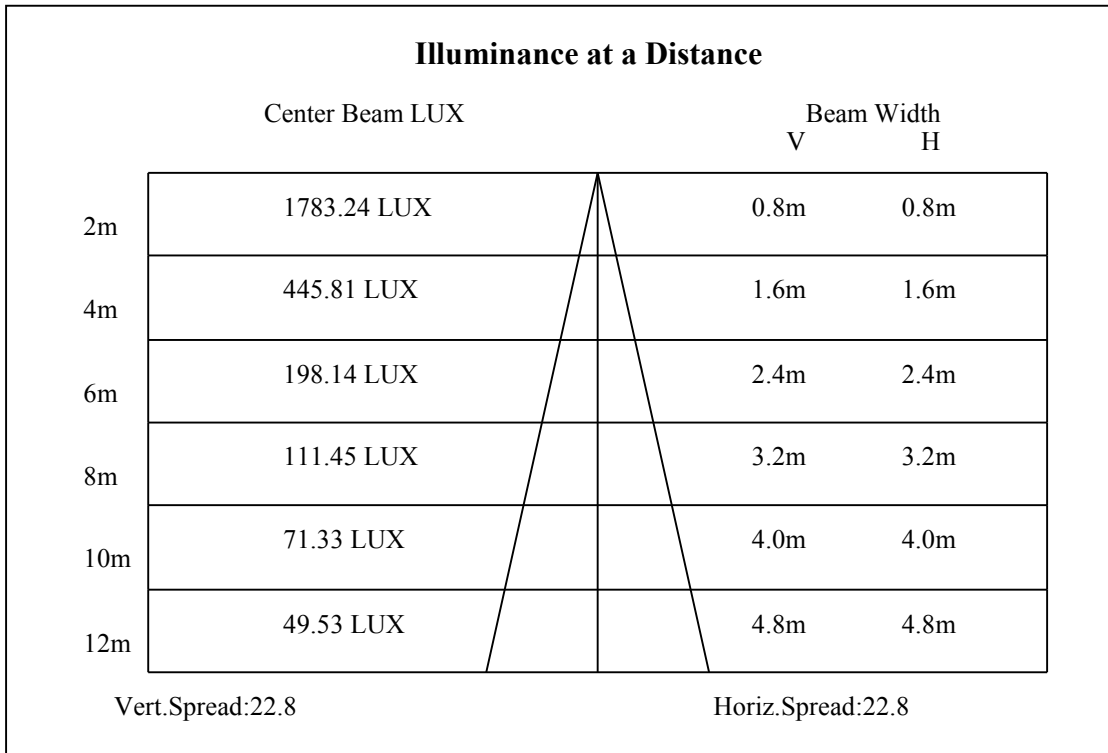
0-10	732.24
10-20	491.62
20-30	250.56
30-40	147.72
40-50	73.29
50-60	32.95
60-70	17.44
70-80	13.45
80-90	5.07
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

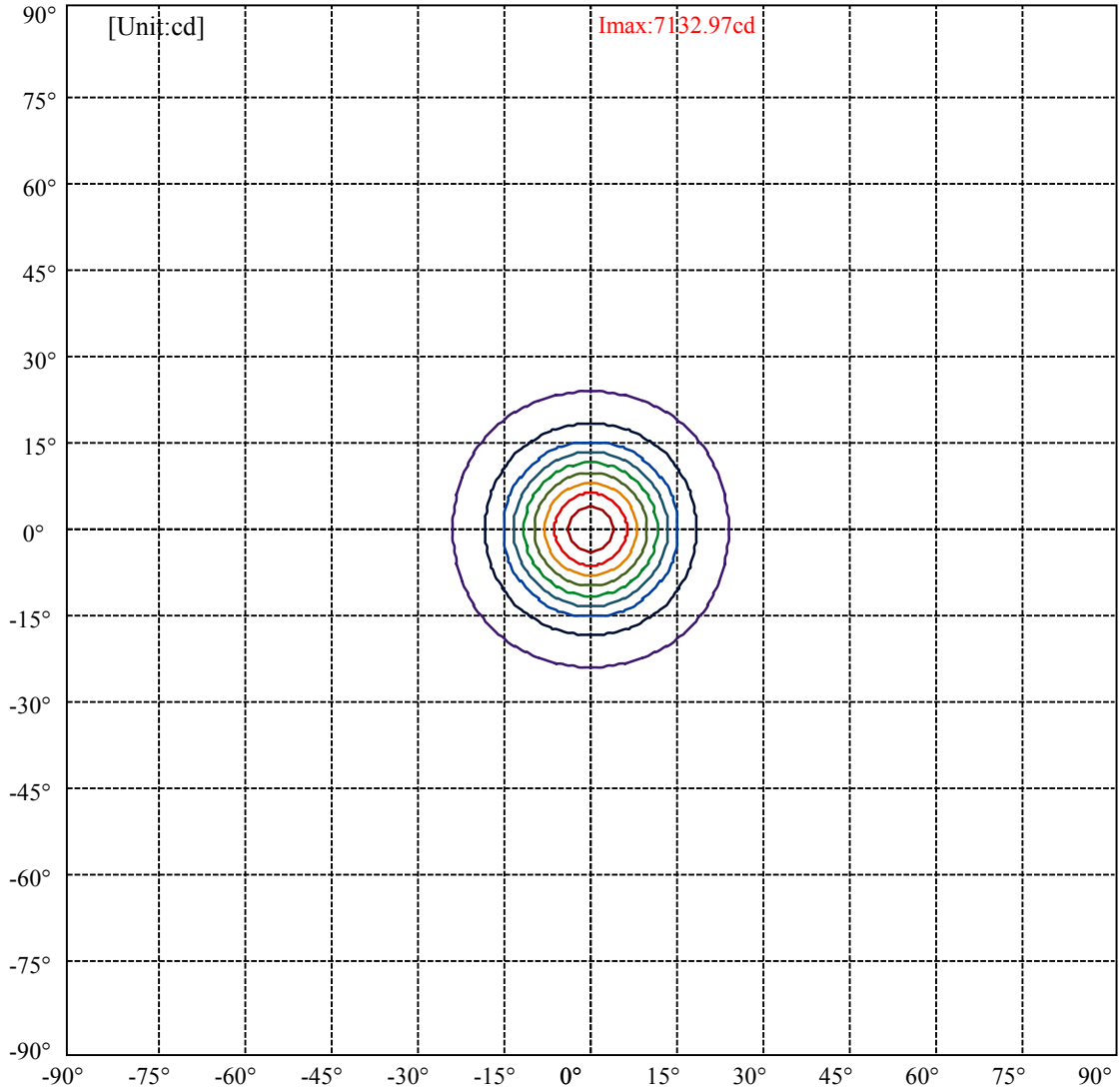


C0(Max): —————
C0/C180: —————
C90/C270: —————

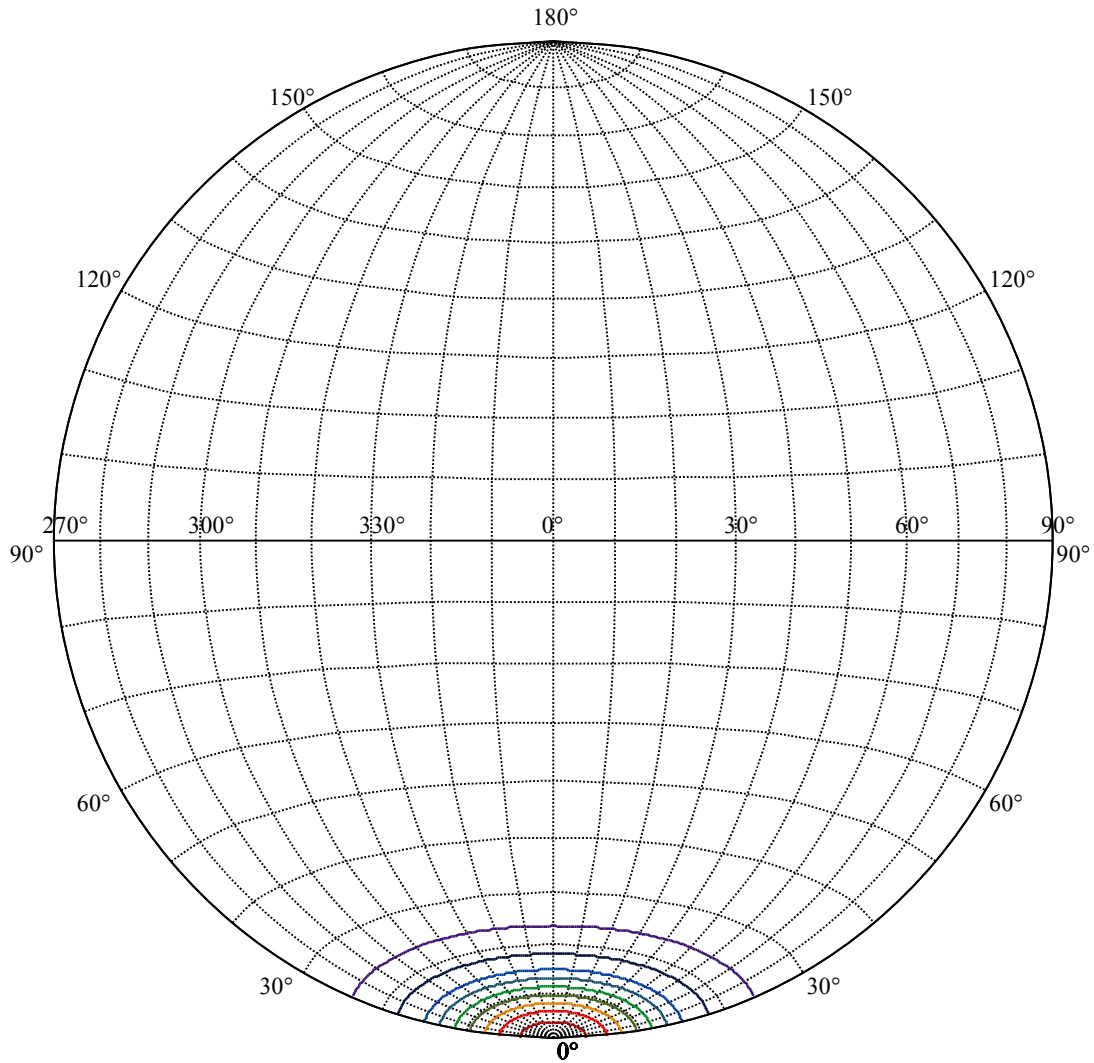
Field angle(10%Imax):C0/180Left:23.7 Right:23.7
:C90/270Left:23.7 Right:23.7

Beam Angle(50%Imax):C0/180Left:11.4 Right:11.4
:C90/270Left:11.4 Right:11.4





(10%Imax) 713.297	—
(20%Imax) 1426.59	—
(30%Imax) 2139.89	—
(40%Imax) 2853.19	—
(50%Imax) 3566.48	—
(60%Imax) 4279.78	—
(70%Imax) 4993.08	—
(80%Imax) 5706.38	—
(90%Imax) 6419.67	—



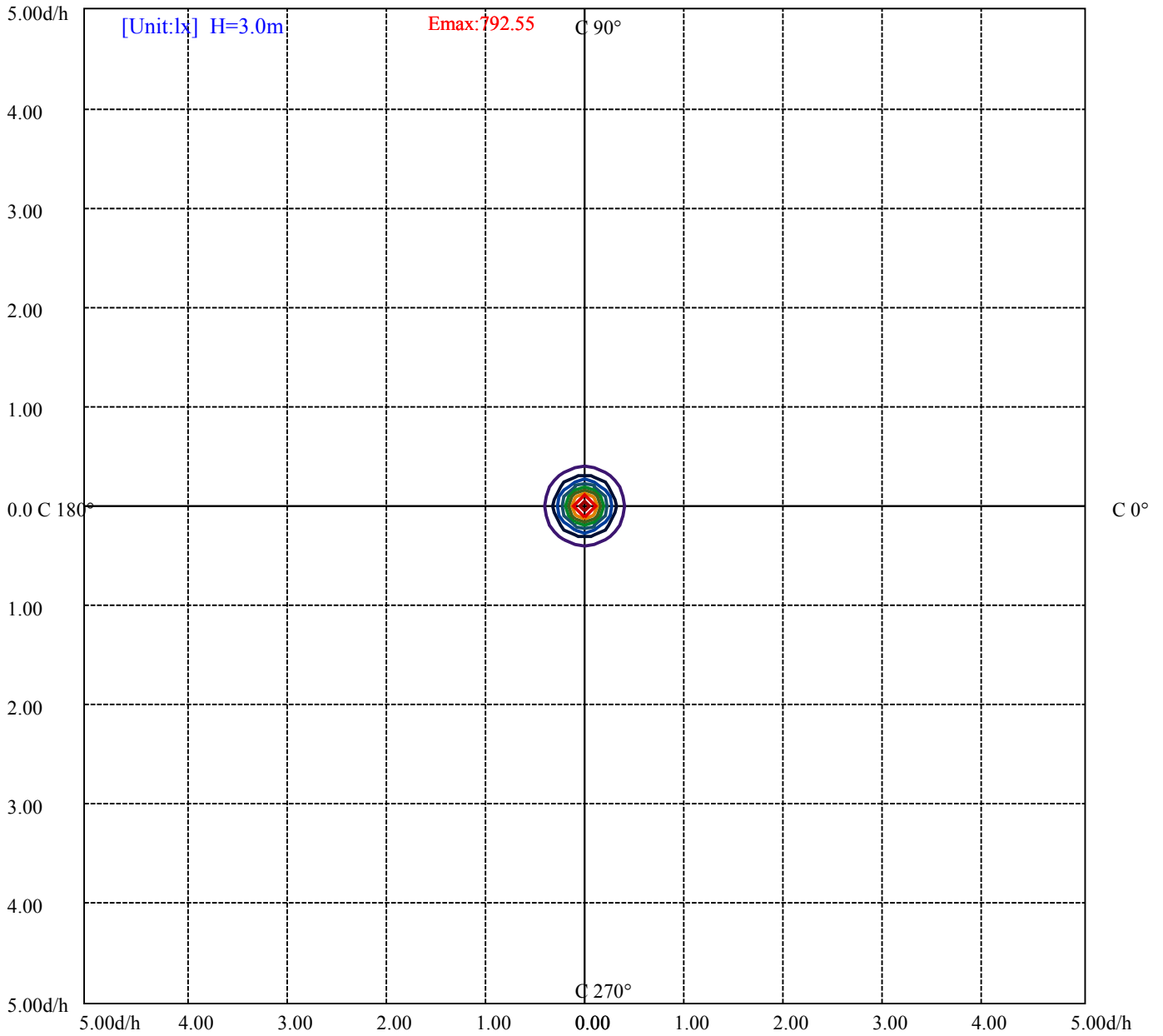
House

[Unit:cd]

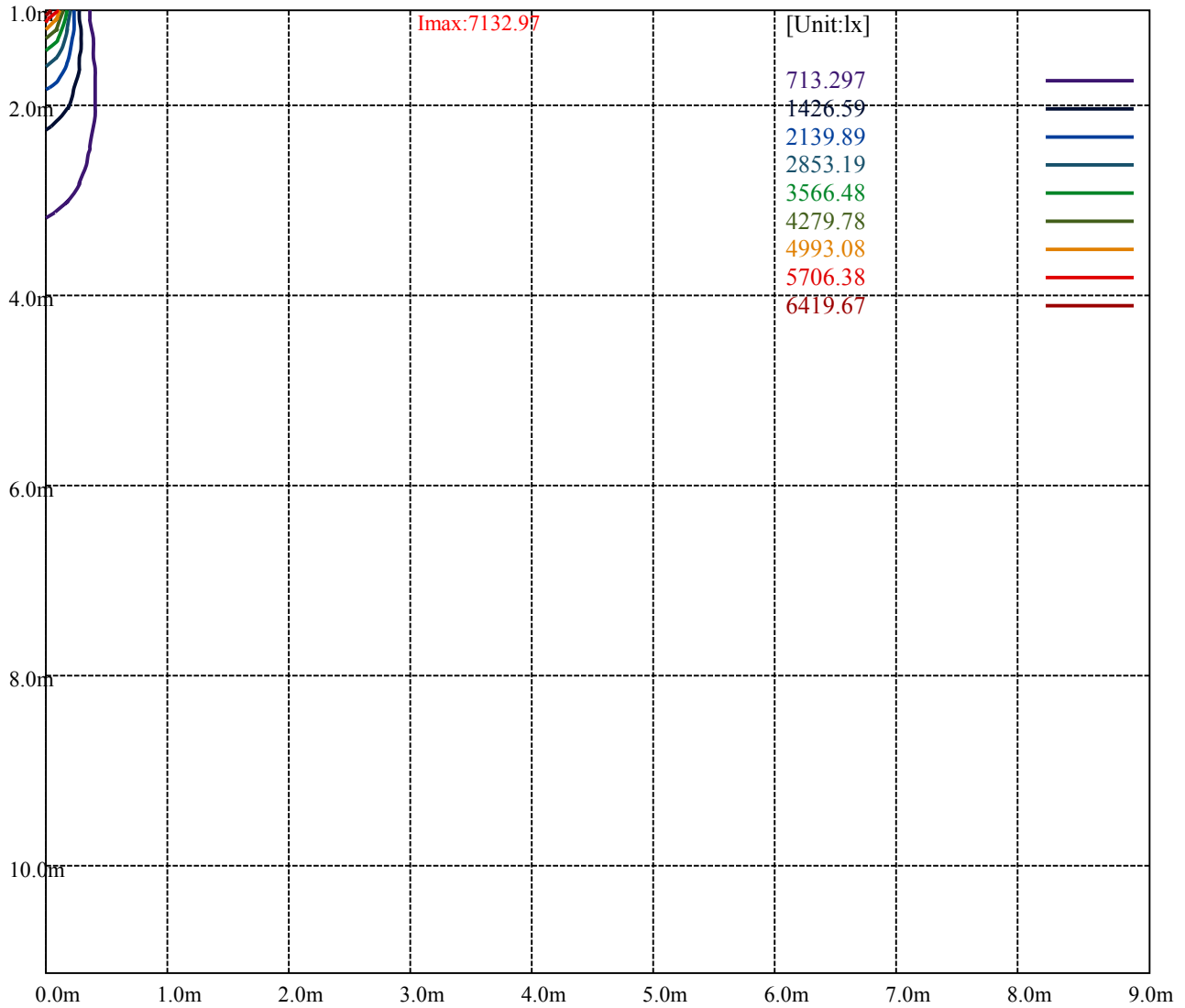
Road

Imax:7132.97

(10%Imax)	713.297	—
(20%Imax)	1426.59	—
(30%Imax)	2139.89	—
(40%Imax)	2853.19	—
(50%Imax)	3566.48	—
(60%Imax)	4279.78	—
(70%Imax)	4993.08	—
(80%Imax)	5706.38	—
(90%Imax)	6419.67	—



- (10%Emax) 79.25489
- (20%Emax) 158.51
- (30%Emax) 237.7644
- (40%Emax) 317.02
- (50%Emax) 396.2744
- (60%Emax) 475.5289
- (70%Emax) 554.7844
- (80%Emax) 634.0389
- (90%Emax) 713.2944



Luminance Table

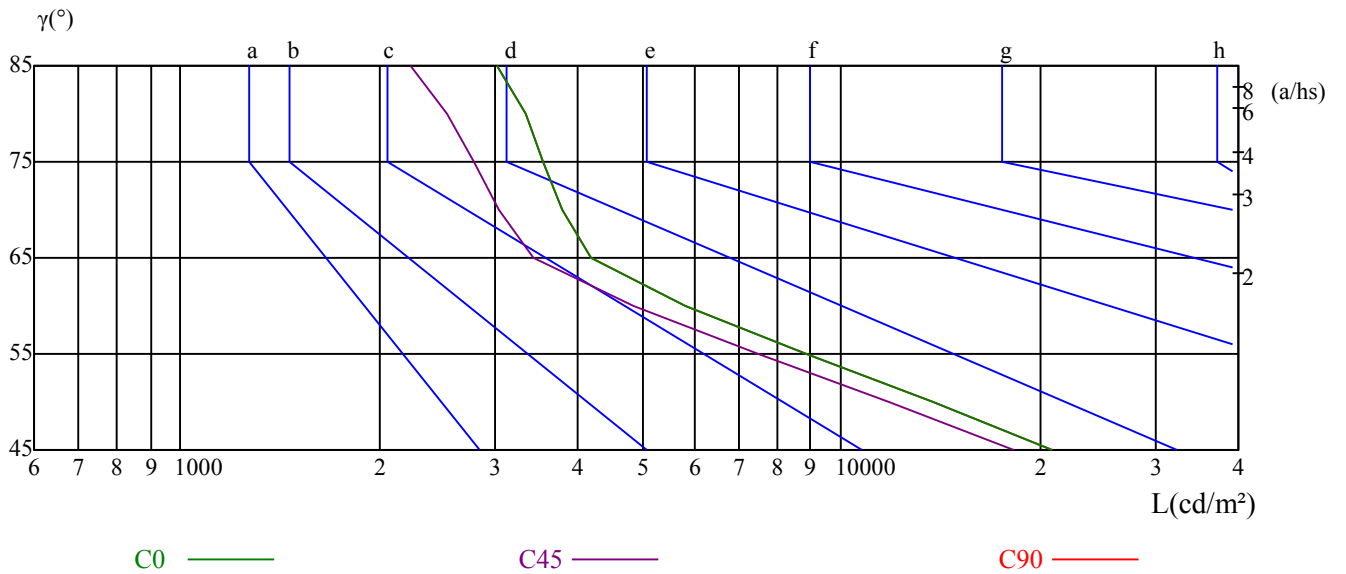
γ	45	50	55	60	65	70	75	80	85
C0	20906	13761	8851	5814	4185	3776	3549	3330	3019
C45	18247	11835	7495	4842	3422	3026	2778	2536	2226
C90	20906	13761	8851	5814	4185	3776	3549	3330	3019

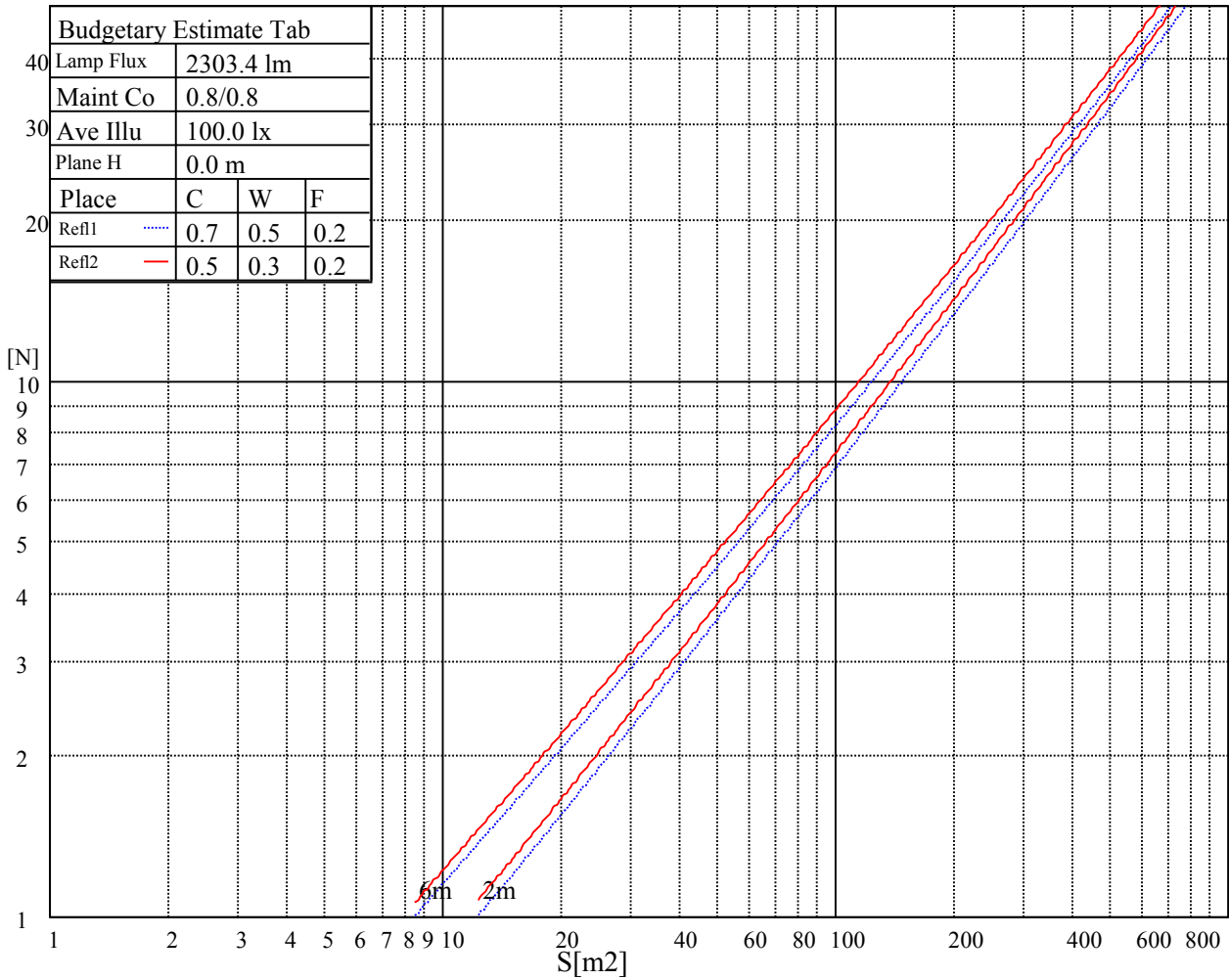
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9056	9056	9056	10739	10739	10739	21755	21755	21755

Glare Table

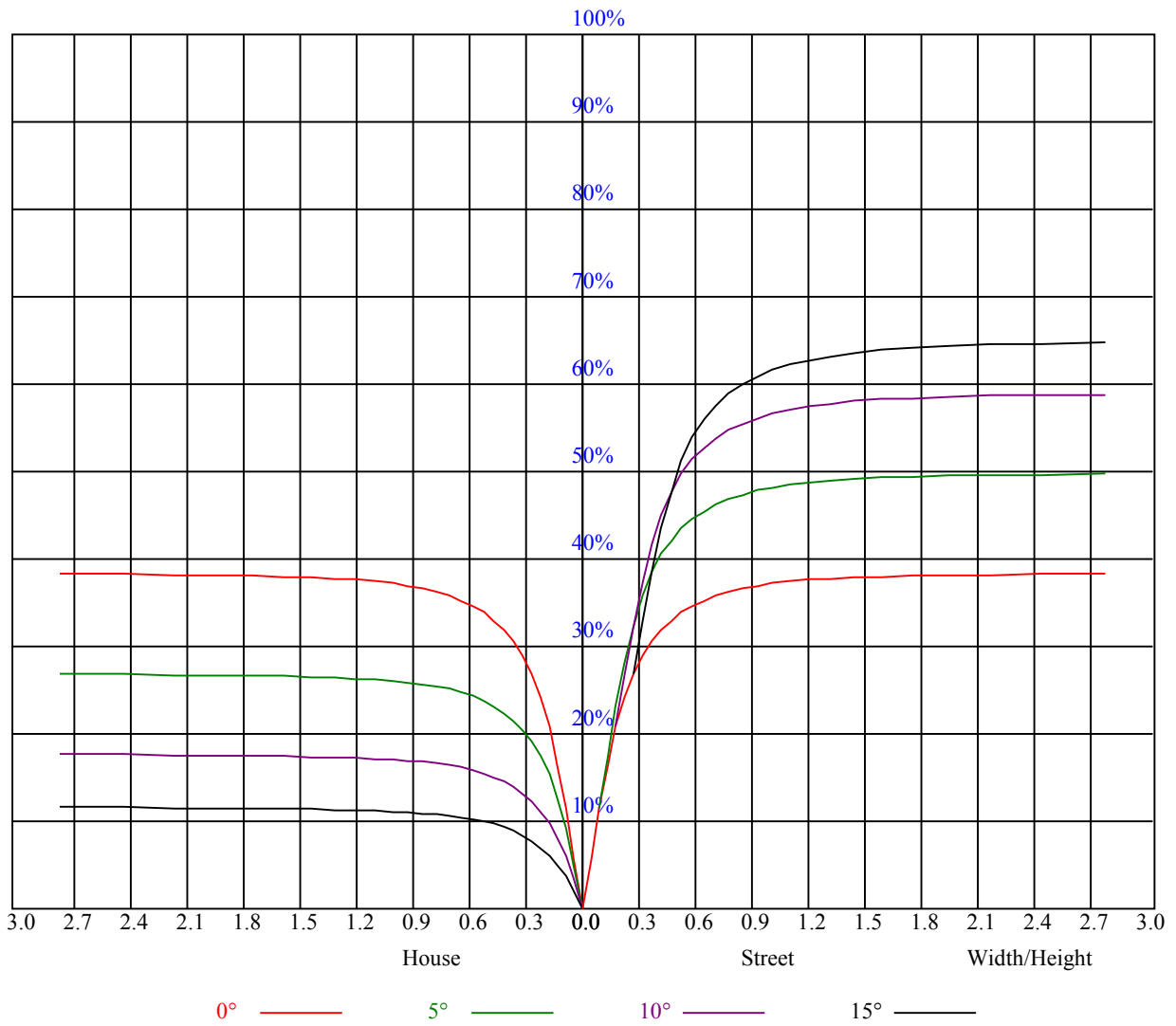
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.85	0.83	0.81	0.84	0.82	0.80	0.80	0.79	0.77	0.78	0.76	0.75	0.75	0.74	0.73	0.71
2	0.81	0.77	0.75	0.79	0.76	0.74	0.77	0.74	0.72	0.74	0.72	0.71	0.72	0.71	0.69	0.68
3	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.65
4	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.67	0.65	0.69	0.66	0.64	0.68	0.65	0.64	0.62
5	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.65	0.63	0.61	0.60
6	0.67	0.63	0.60	0.67	0.63	0.60	0.65	0.62	0.60	0.64	0.62	0.59	0.63	0.61	0.59	0.58
7	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.60	0.57	0.62	0.59	0.57	0.56
8	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.54
9	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.53
10	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.52	0.57	0.54	0.52	0.52



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	7264.69	6354.06	4448.56	2328.34	1100.03	638.10	422.83	281.89	187.80
45.0	7120.99	5630.07	3358.99	1622.51	779.60	518.63	340.80	226.89	146.73
90.0	6916.74	5370.20	3098.57	1074.15	762.37	497.65	325.22	219.29	139.02
135.0	7229.46	6054.55	3847.34	1970.47	951.93	570.93	381.54	279.69	161.92
180.0	7264.69	5986.83	3873.77	1920.92	925.66	571.98	377.36	249.57	163.63
225.0	7120.99	6774.69	4887.91	2772.09	1079.38	691.67	455.98	310.35	206.35
270.0	6916.74	6935.45	5173.10	2942.76	1464.50	739.96	483.40	329.24	221.49
315.0	7229.46	6475.18	4385.24	2376.78	1044.81	634.86	415.68	276.27	188.02
360.0	7264.69	6354.06	4448.56	2328.34	1100.03	638.10	422.83	281.89	187.80
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	118.26	73.72	46.63	29.12	18.77	15.75	13.65	11.45	9.25
45.0	93.87	58.03	37.05	22.79	17.12	14.98	12.83	10.63	8.09
90.0	87.48	57.04	34.63	21.75	16.74	14.76	12.72	10.57	8.04
135.0	104.55	67.33	41.46	26.43	18.06	15.58	13.49	11.51	9.25
180.0	104.77	68.32	40.52	26.21	18.17	15.64	13.43	11.45	9.47
225.0	131.97	83.25	51.75	31.44	20.76	16.63	14.42	12.39	10.30
270.0	137.26	89.58	54.62	34.25	21.53	16.96	14.59	12.72	10.41
315.0	115.89	73.78	46.63	29.12	18.88	15.86	13.82	11.73	9.52
360.0	118.26	73.72	46.63	29.12	18.77	15.75	13.65	11.45	9.25
C/ γ (°)	90.0								
0.0	7.38								
45.0	7.43								
90.0	7.49								
135.0	7.49								
180.0	7.38								
225.0	7.82								
270.0	7.76								
315.0	7.60								
360.0	7.38								