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Nata

LumCAT: 3-1699-N
Luminaire: 92.70.045.00+92.70.089.00
Report No: NATA0100
Test No: GC2018062019
LampCAT: NICHIA NFCW108B-V3
Lamp flux(lm): 2255.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 33.8000
Current(A): 0.5000
Power (W): 16.9000
PF: 0.0000
Ballast type: DC
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 1781.78
Efficiency(%): 79.01%
Lumens(lm)/Power(W): 107.84
Central intensity(cd): 7090.989
Maximum intensity(cd): 7090.989
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=23.6
 [C90/270]Total=23.6
Field angle(10%Imax): [C0/180]Total=47.3
 [C90/270]Total=47.3
Maximum s/h(1/2): C0_180=0.40 C90_270=0.40
Maximum s/h(1/4): C0_180=0.41 C90_270=0.41
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 80.82%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 95.865%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/6/20
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

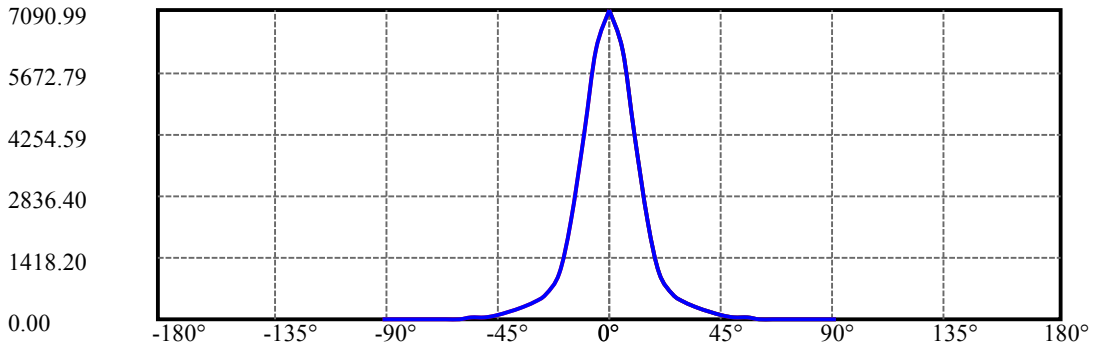
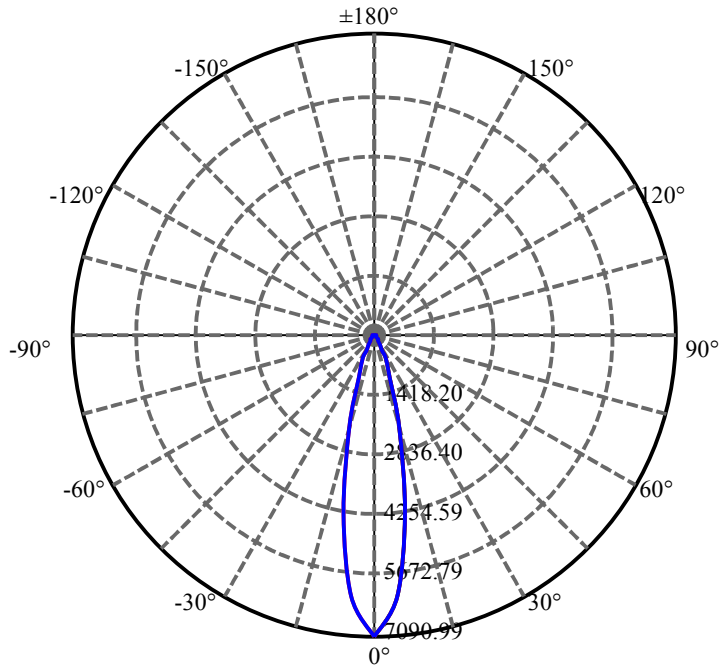
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7090.989	42.406	42.406	1.881%	2.380%
5.0	6186.412	295.545	337.951	13.106%	18.967%
10.0	4278.777	407.267	745.218	18.061%	41.824%
15.0	2267.085	321.628	1066.846	14.263%	59.875%
20.0	1041.165	195.191	1262.037	8.656%	70.830%
25.0	588.739	136.383	1398.42	6.048%	78.484%
30.0	396.090	108.556	1506.976	4.814%	84.577%
35.0	270.293	84.980	1591.955	3.768%	89.346%
40.0	173.820	61.243	1653.198	2.716%	92.784%
45.0	106.445	41.257	1694.456	1.830%	95.099%
50.0	63.742	26.765	1721.22	1.187%	96.601%
55.0	35.869	16.106	1737.326	.714%	97.505%
60.0	20.667	9.811	1747.137	.435%	98.056%
65.0	15.849	7.874	1755.01	.349%	98.498%
70.0	14.074	7.249	1762.259	.321%	98.904%
75.0	12.553	6.646	1768.906	.295%	99.278%
80.0	10.832	5.847	1774.753	.259%	99.606%
85.0	9.043	4.938	1779.691	.219%	99.883%
90.0	7.618	2.088	1781.779	.093%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1506.98	66.83%	84.58%
0-40	1653.20	73.31%	92.78%
0-60	1747.14	77.48%	98.06%
0-90	1779.69	78.92%	99.88%
0-120	1779.69	78.92%	99.88%
0-180	1781.78	79.01%	100.00%
60-90	42.36	1.88%	2.38%
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%
0-26.24	1425.42	63.21%	80.00%

ZONAL LUMEN SUMMARY

0-10	745.22
10-20	516.82
20-30	244.94
30-40	146.22
40-50	68.02
50-60	25.92
60-70	15.12
70-80	12.49
80-90	4.94
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: —————

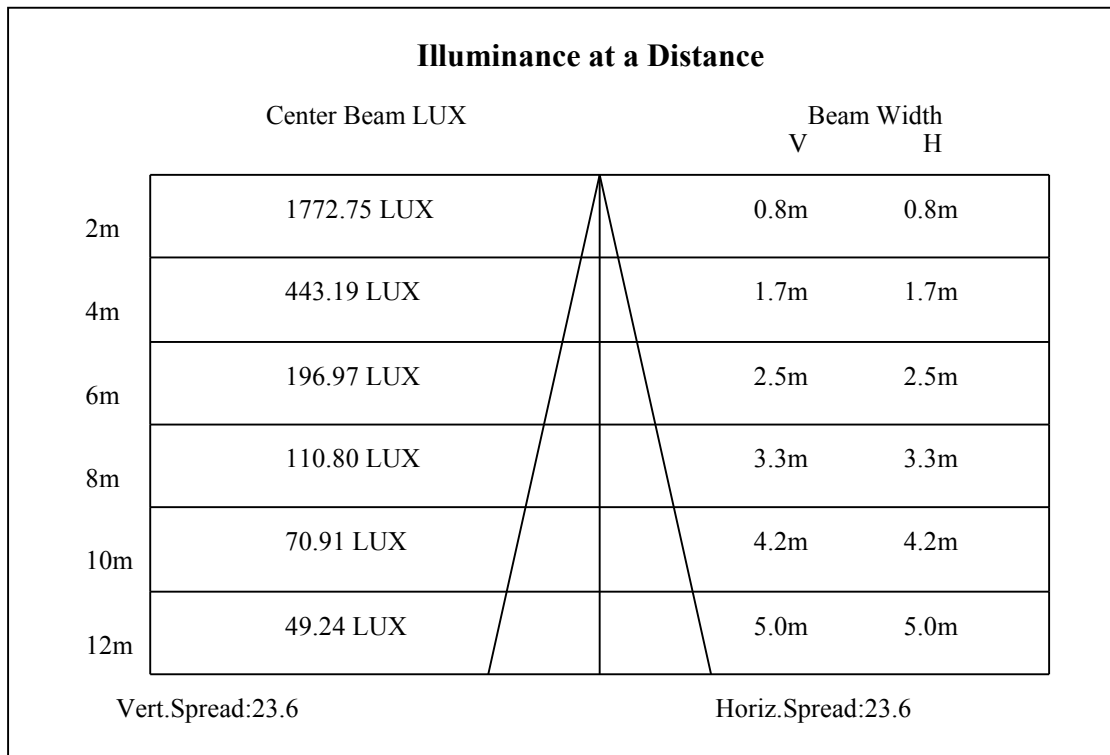
C90/C270: —————

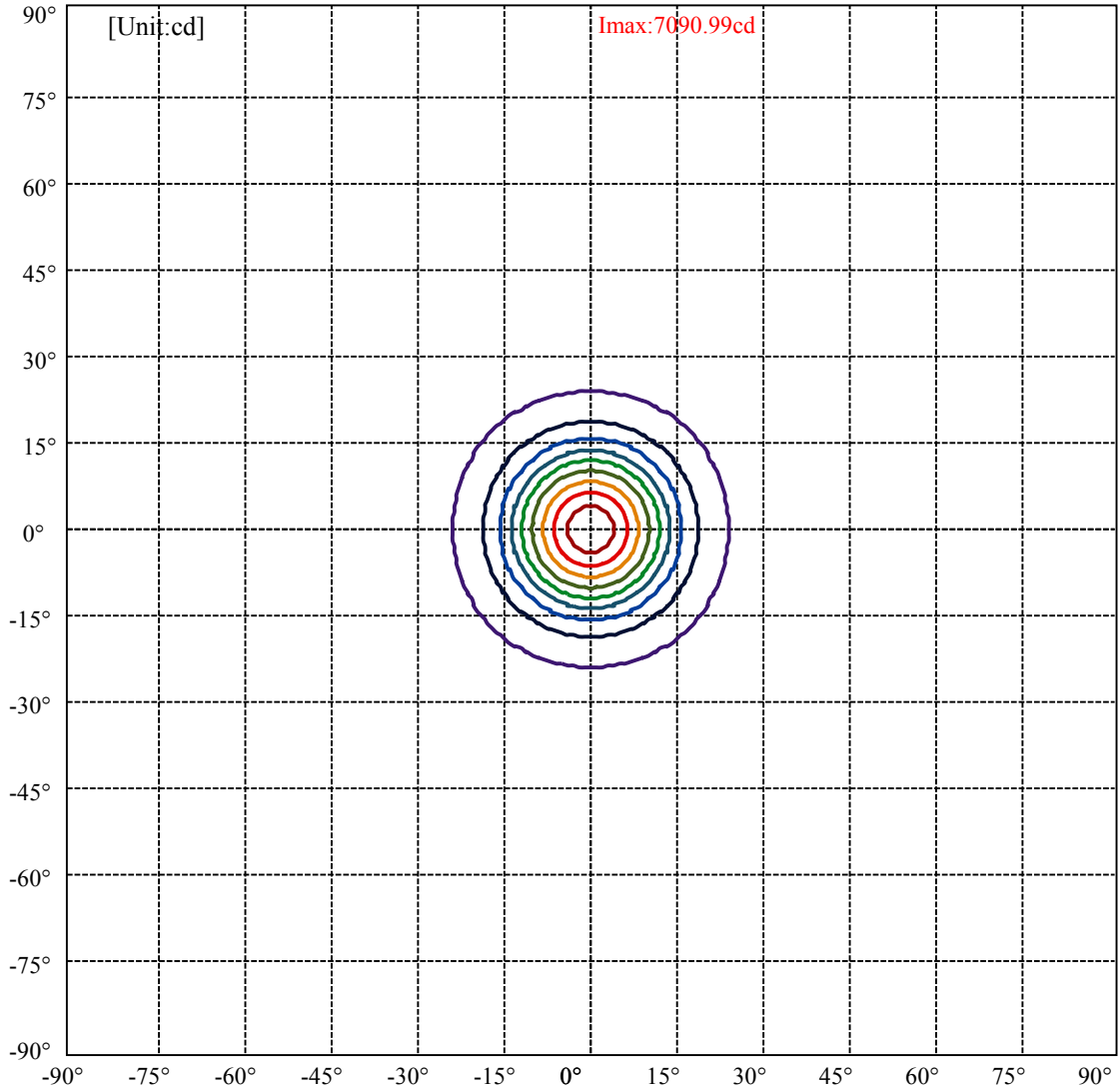
Field angle(10%Imax):C0/180Left:23.7 Right:23.7

:C90/270Left:23.7 Right:23.7

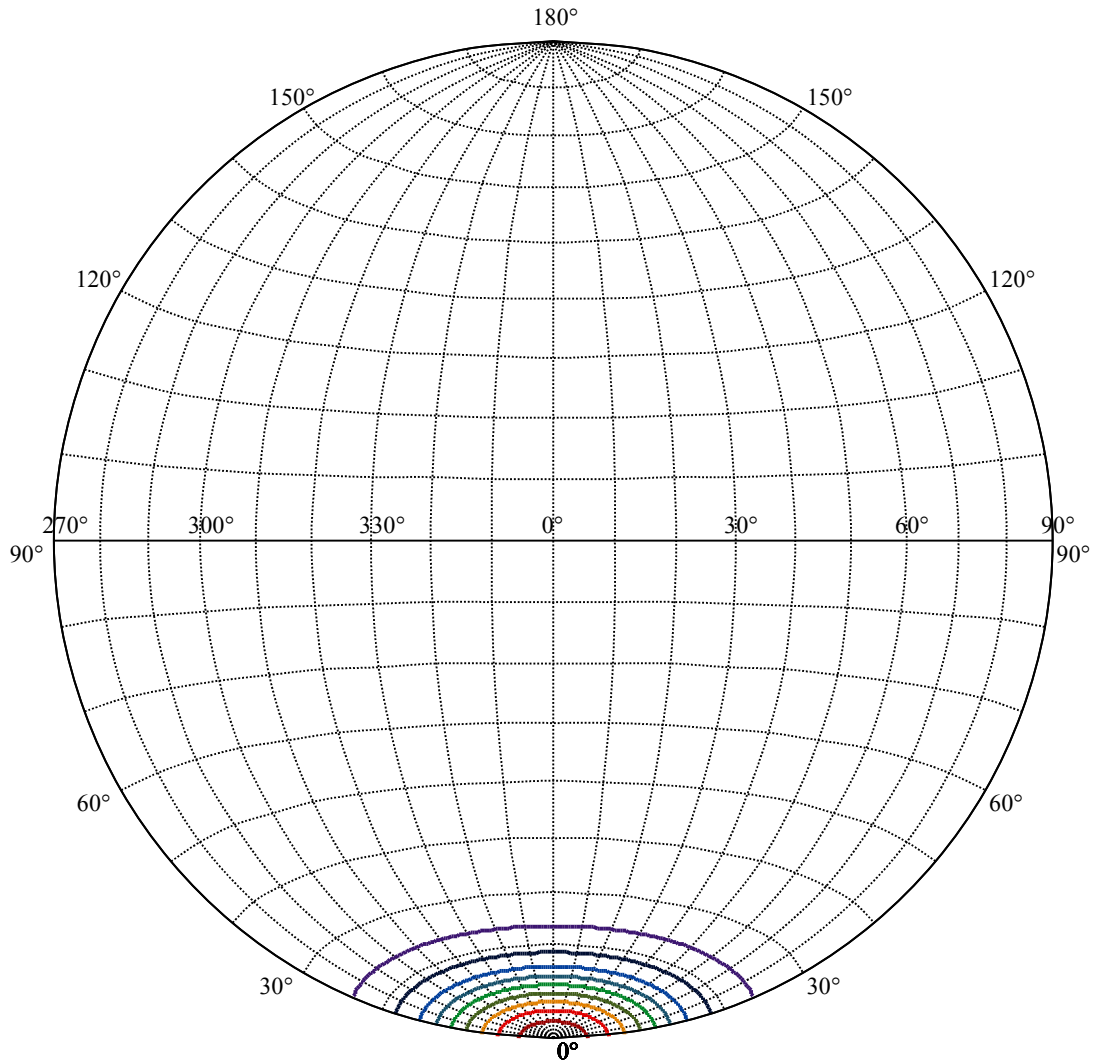
Beam Angle(50%Imax):C0/180Left:11.8 Right:11.8

:C90/270Left:11.8 Right:11.8





(10%Imax) 709.099	—
(20%Imax) 1418.2	—
(30%Imax) 2127.3	—
(40%Imax) 2836.4	—
(50%Imax) 3545.49	—
(60%Imax) 4254.59	—
(70%Imax) 4963.69	—
(80%Imax) 5672.79	—
(90%Imax) 6381.89	—



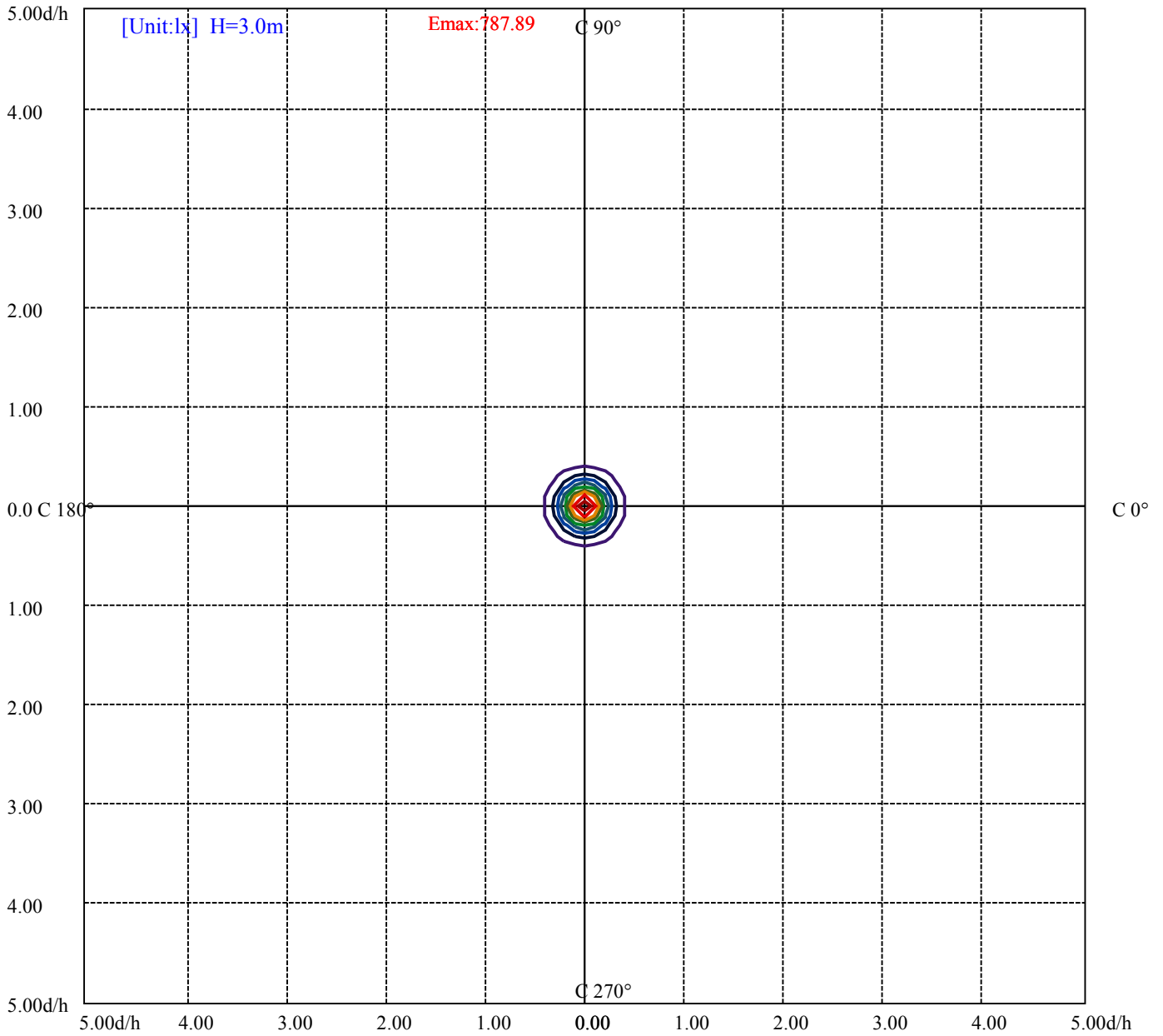
House

[Unit:cd]

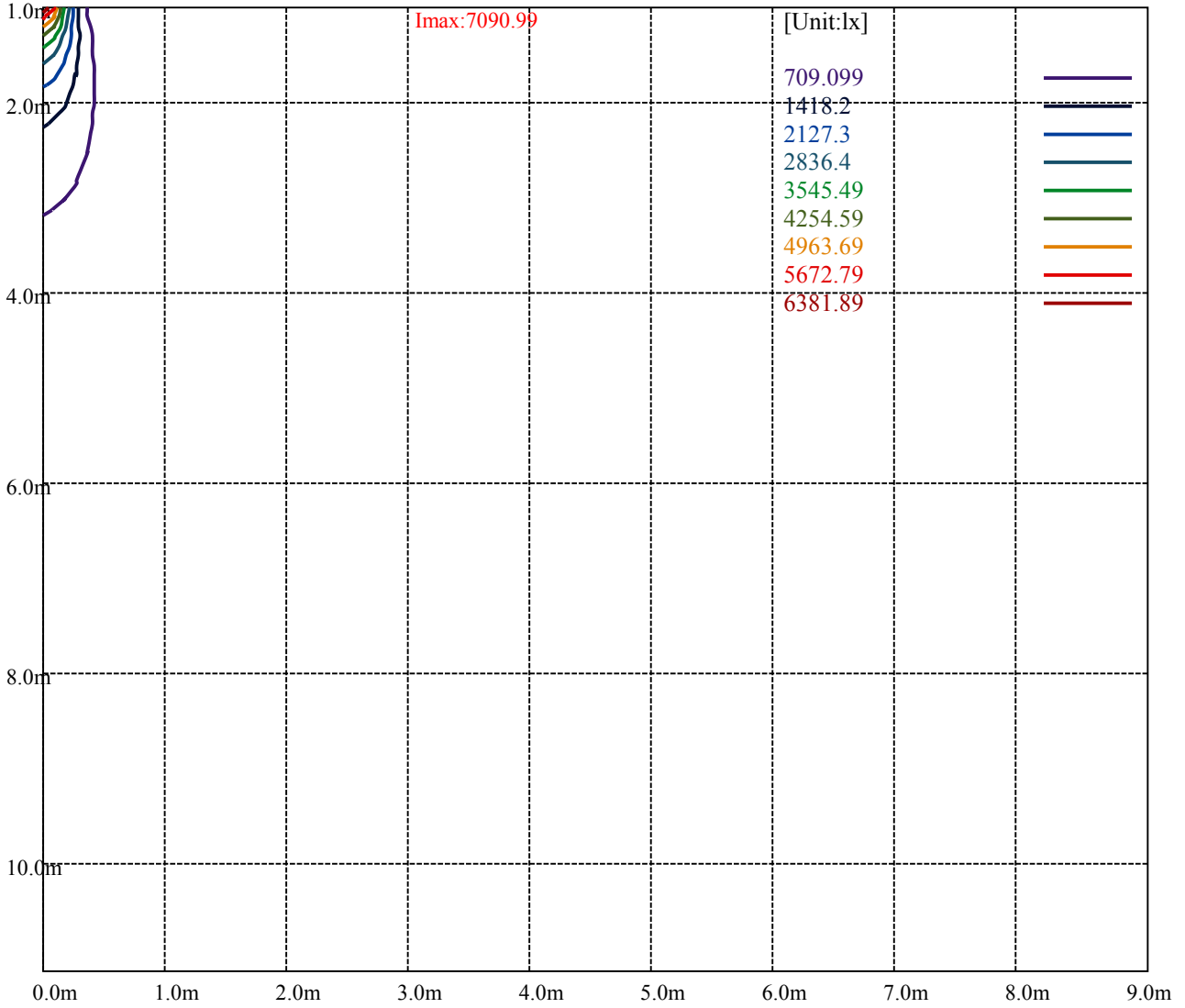
Road

Imax:7090.99

(10%Imax) 709.099	—
(20%Imax) 1418.2	—
(30%Imax) 2127.3	—
(40%Imax) 2836.4	—
(50%Imax) 3545.49	—
(60%Imax) 4254.59	—
(70%Imax) 4963.69	—
(80%Imax) 5672.79	—
(90%Imax) 6381.89	—



- (10%Emax) 78.78844 ———
- (20%Emax) 157.5767 ———
- (30%Emax) 236.3656 ———
- (40%Emax) 315.1533 ———
- (50%Emax) 393.9422 ———
- (60%Emax) 472.7311 ———
- (70%Emax) 551.5189 ———
- (80%Emax) 630.3078 ———
- (90%Emax) 709.0967 ———



Luminance Table

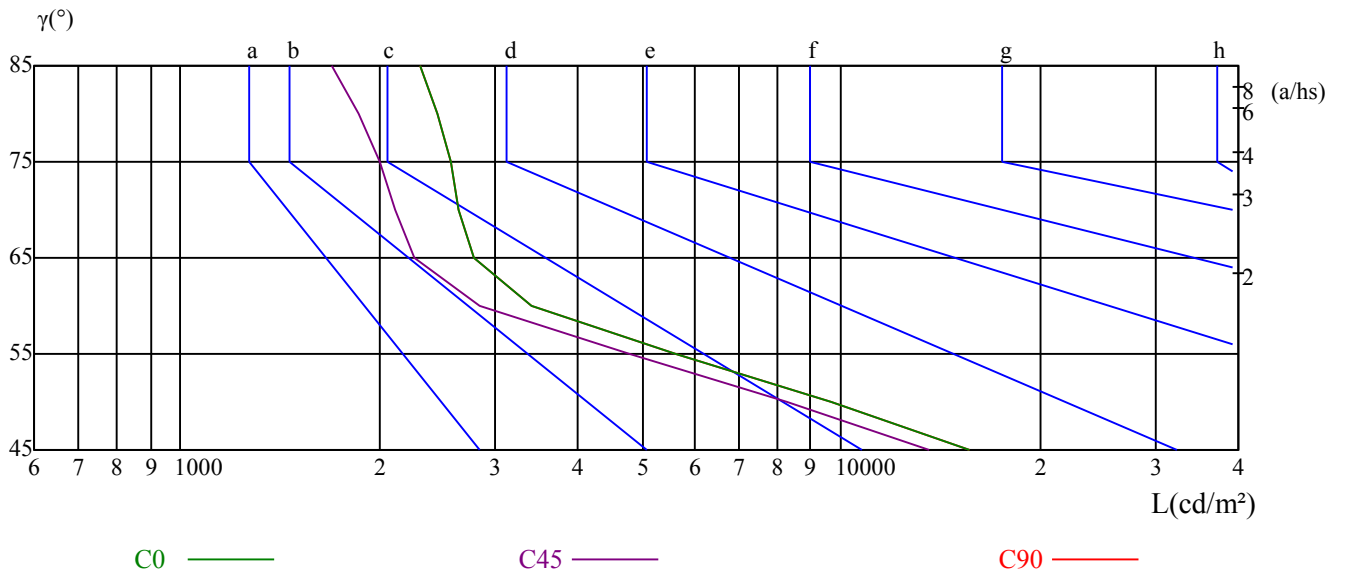
γ	45	50	55	60	65	70	75	80	85
C0	15619	9638	5638	3409	2773	2642	2564	2446	2302
C45	13629	8287	4773	2838	2267	2117	2007	1863	1697
C90	15619	9638	5638	3409	2773	2642	2564	2446	2302

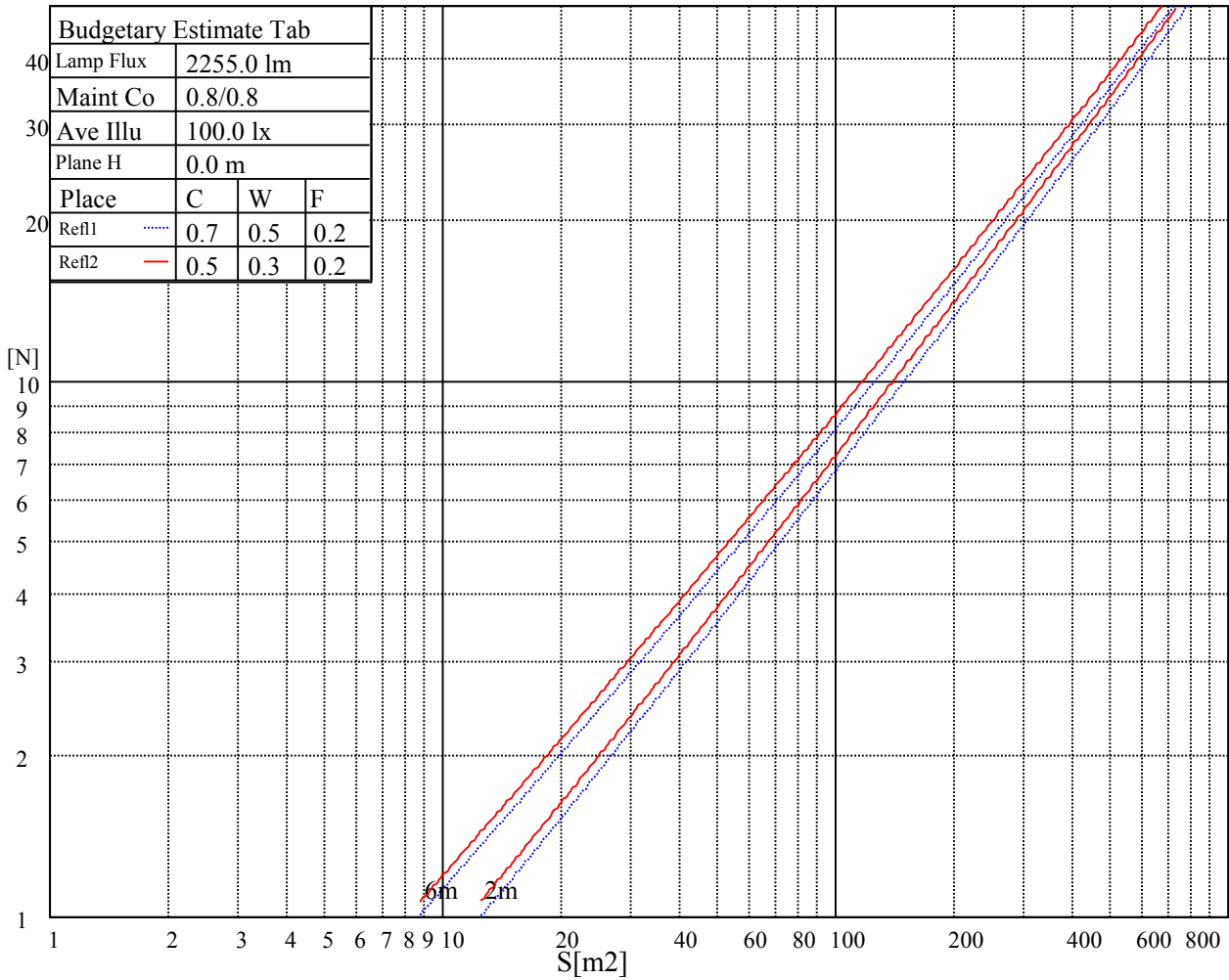
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6009	6009	6009	7771	7771	7771	16625	16625	16625

Glare Table

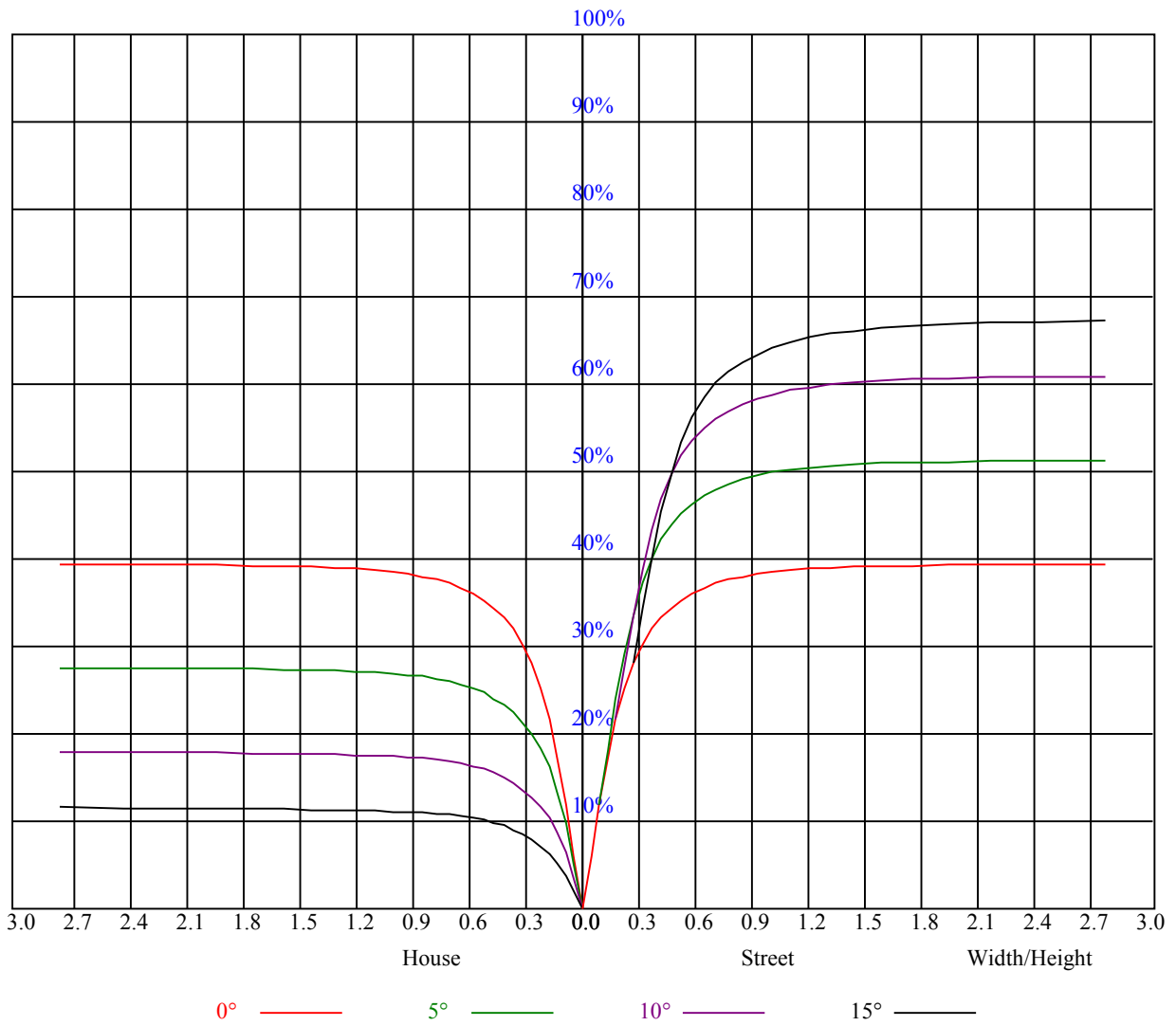
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.81
1	0.88	0.86	0.84	0.86	0.84	0.82	0.83	0.81	0.80	0.80	0.79	0.77	0.77	0.76	0.75	0.74
2	0.83	0.80	0.77	0.82	0.79	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.75	0.73	0.72	0.70
3	0.79	0.75	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.72	0.70	0.69	0.67
4	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.65
5	0.72	0.68	0.66	0.72	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.68	0.66	0.64	0.63
6	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
7	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.59
8	0.65	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
9	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.55
10	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	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	7111.64	6585.85	4694.66	2665.28	1275.11	643.61	428.34	281.34	191.65
45.0	7124.85	5809.55	3769.71	1905.50	893.57	537.35	366.13	279.69	157.57
90.0	7002.62	5352.58	3351.28	1349.43	745.19	479.05	319.16	211.69	141.94
135.0	7124.85	5916.36	3990.49	1994.14	907.88	549.46	365.02	278.03	164.89
180.0	7111.64	5848.09	3806.05	1961.11	890.15	525.62	358.64	235.31	156.42
225.0	7124.85	6561.07	4748.61	2610.77	1067.38	651.32	438.36	293.89	193.58
270.0	7002.62	6914.53	5183.56	3109.59	1468.35	705.82	469.08	305.56	203.54
315.0	7124.85	6503.26	4685.85	2540.85	1081.69	617.68	423.99	276.82	180.97
360.0	7111.64	6585.85	4694.66	2665.28	1275.11	643.61	428.34	281.34	191.65
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	118.59	71.08	41.02	22.24	16.30	14.48	12.94	11.18	9.41
45.0	92.49	56.10	30.17	18.06	15.20	13.65	12.00	10.24	8.26
90.0	83.74	49.50	27.69	17.56	15.03	13.60	12.11	10.24	8.20
135.0	95.03	56.54	31.00	18.66	15.31	13.60	12.06	10.41	8.48
180.0	93.49	57.15	31.38	18.39	15.25	13.60	12.06	10.19	8.59
225.0	116.88	69.59	40.41	22.41	16.02	14.26	12.83	11.12	9.41
270.0	134.89	80.27	46.08	25.82	17.29	15.03	13.43	11.89	10.13
315.0	116.44	69.70	39.20	22.19	16.41	14.37	12.99	11.40	9.86
360.0	118.59	71.08	41.02	22.24	16.30	14.48	12.94	11.18	9.41
C/γ(°)	90.0								
0.0	7.49								
45.0	7.43								
90.0	7.49								
135.0	7.49								
180.0	7.49								
225.0	7.71								
270.0	7.98								
315.0	7.87								
360.0	7.49								