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Nata

LumCAT: 3-2035-M
Luminaire: 92.70.135.00
Report No: NATA0100
Test No: GC2018062006
LampCAT: NICHIA NFCW108B-V3
Lamp flux(lm): 2255.0
Number of Lamps: 1
Length(mm): 78
Phm Type: C

Voltage(V): 33.7000
Current(A): 0.4900
Power (W): 16.5130
PF: 0.0000
Ballast type: DC
Width(mm): 78
Height(mm): 0

Photometric Results

Lumens(lm): 1981.46
Efficiency(%): 87.87%
Lumens(lm)/Power(W): 121.12
Central intensity(cd): 3415.561
Maximum intensity(cd): 3415.561
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=43.0
 [C90/270]Total=43.0
Field angle(10%Imax): [C0/180]Total=74.1
 [C90/270]Total=74.1
Maximum s/h(1/2): C0_180=0.69 C90_270=0.69
Maximum s/h(1/4): C0_180=0.71 C90_270=0.71
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.69%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.787%

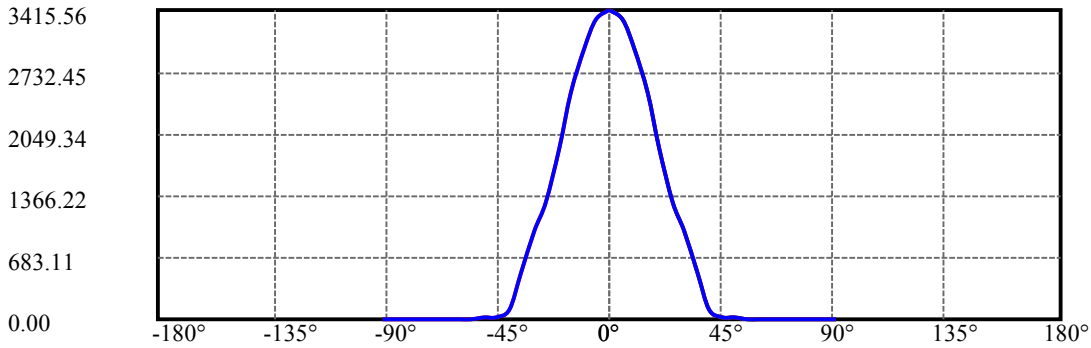
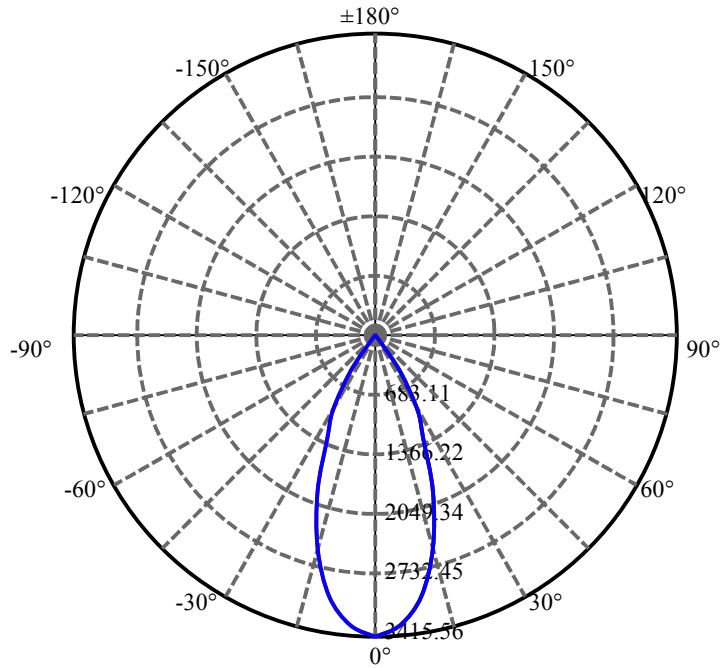
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3415.561	20.426	20.426	.906%	1.031%
5.0	3307.100	157.991	178.417	7.006%	9.004%
10.0	3001.056	285.650	464.067	12.667%	23.420%
15.0	2498.597	354.472	818.539	15.719%	41.310%
20.0	1885.062	353.400	1171.939	15.672%	59.145%
25.0	1298.388	300.775	1472.714	13.338%	74.325%
30.0	976.976	267.758	1740.473	11.874%	87.838%
35.0	502.341	157.936	1898.408	7.004%	95.808%
40.0	109.548	38.598	1937.006	1.712%	97.756%
45.0	13.365	5.180	1942.186	.230%	98.018%
50.0	10.729	4.505	1946.691	.200%	98.245%
55.0	10.020	4.499	1951.19	.200%	98.472%
60.0	9.580	4.548	1955.738	.202%	98.702%
65.0	9.256	4.598	1960.336	.204%	98.934%
70.0	9.002	4.637	1964.973	.206%	99.168%
75.0	8.830	4.675	1969.648	.207%	99.404%
80.0	8.740	4.718	1974.366	.209%	99.642%
85.0	8.665	4.731	1979.097	.210%	99.881%
90.0	8.637	2.367	1981.464	.105%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1740.47	77.18%	87.84%
0-40	1937.01	85.90%	97.76%
0-60	1955.74	86.73%	98.70%
0-90	1979.10	87.76%	99.88%
0-120	1979.10	87.76%	99.88%
0-180	1981.46	87.87%	100.00%
60-90	27.91	1.24%	1.41%
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%
0-27.10	1585.17	70.30%	80.00%

ZONAL LUMEN SUMMARY

0-10	464.07
10-20	707.87
20-30	568.53
30-40	196.53
40-50	9.69
50-60	9.05
60-70	9.23
70-80	9.39
80-90	4.73
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: —————

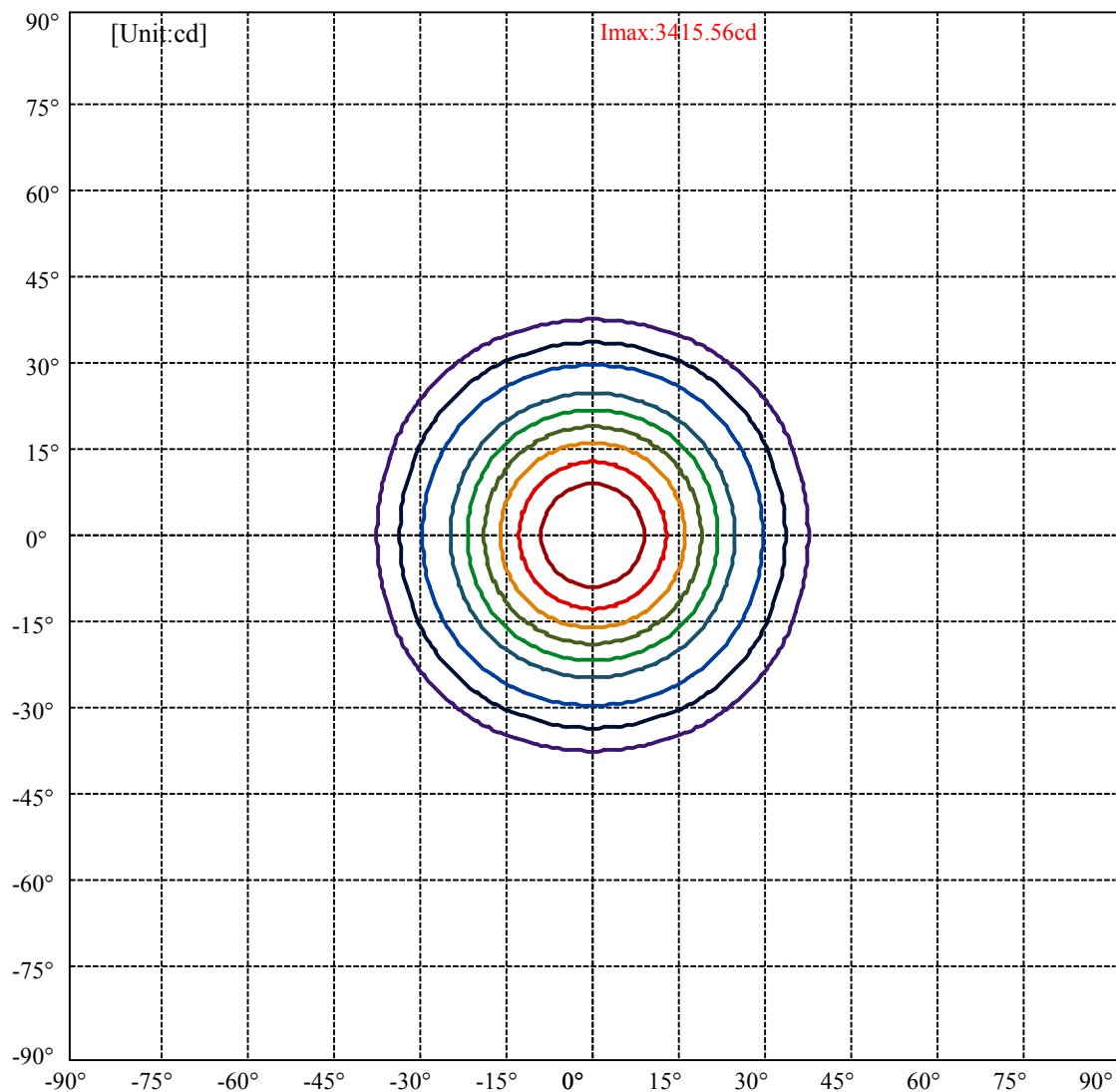
C90/C270: —————

Field angle(10%Imax):C0/180Left:37.0 Right:37.0

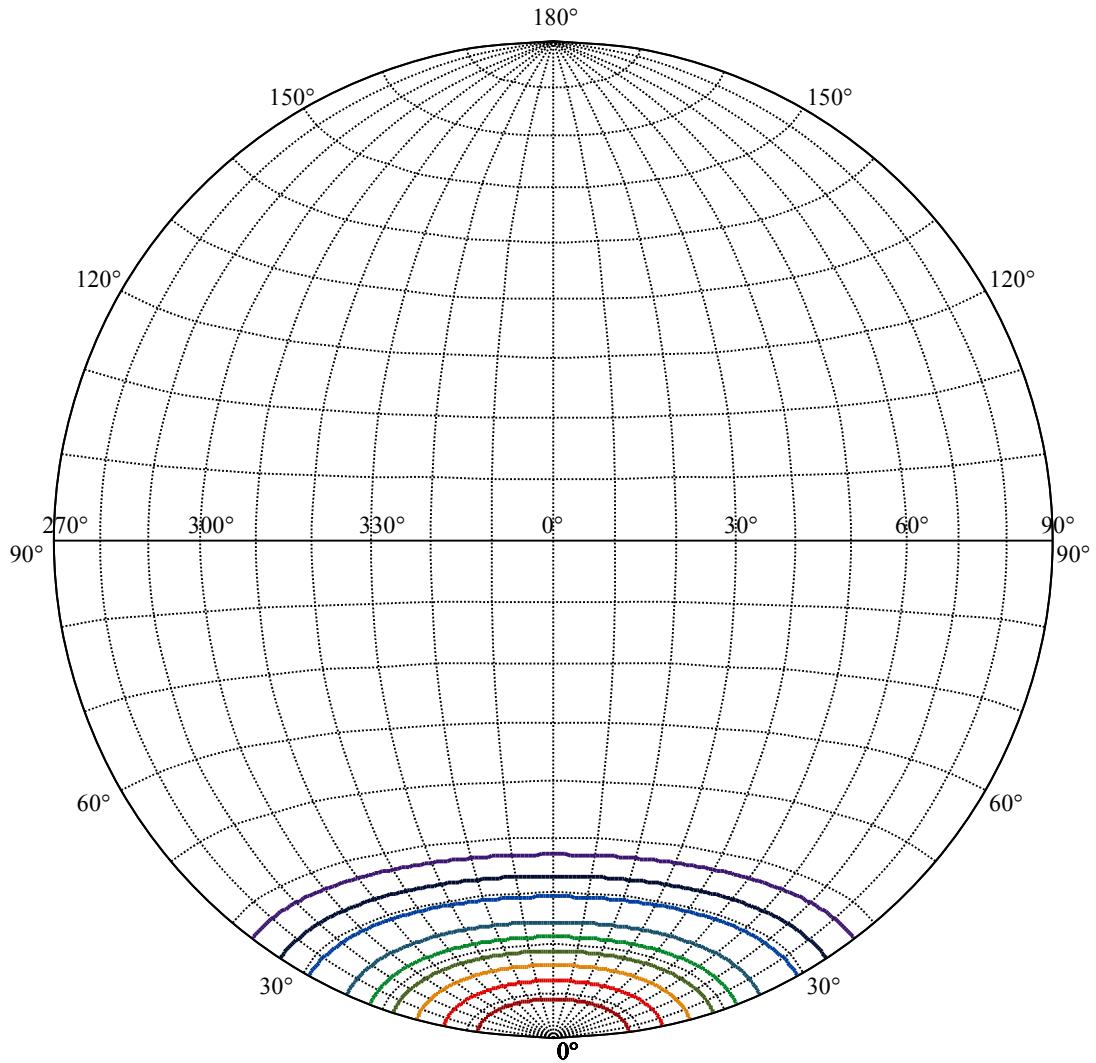
:C90/270Left:37.0 Right:37.0

Beam Angle(50%Imax):C0/180Left:21.5 Right:21.5

:C90/270Left:21.5 Right:21.5



(10%Imax) 341.556	—
(20%Imax) 683.112	—
(30%Imax) 1024.67	—
(40%Imax) 1366.22	—
(50%Imax) 1707.78	—
(60%Imax) 2049.34	—
(70%Imax) 2390.89	—
(80%Imax) 2732.45	—
(90%Imax) 3074.01	—



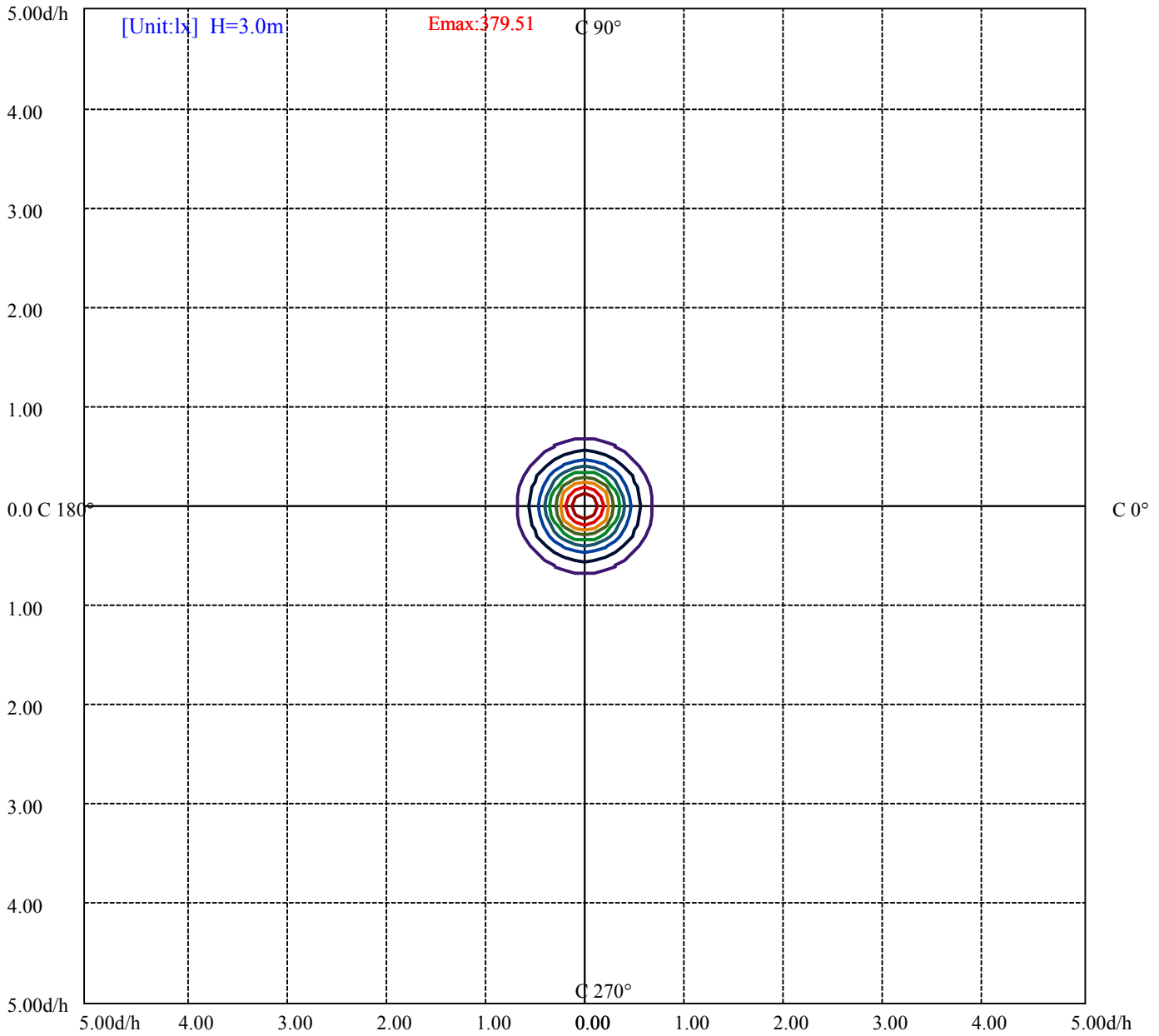
House

[Unit:cd]

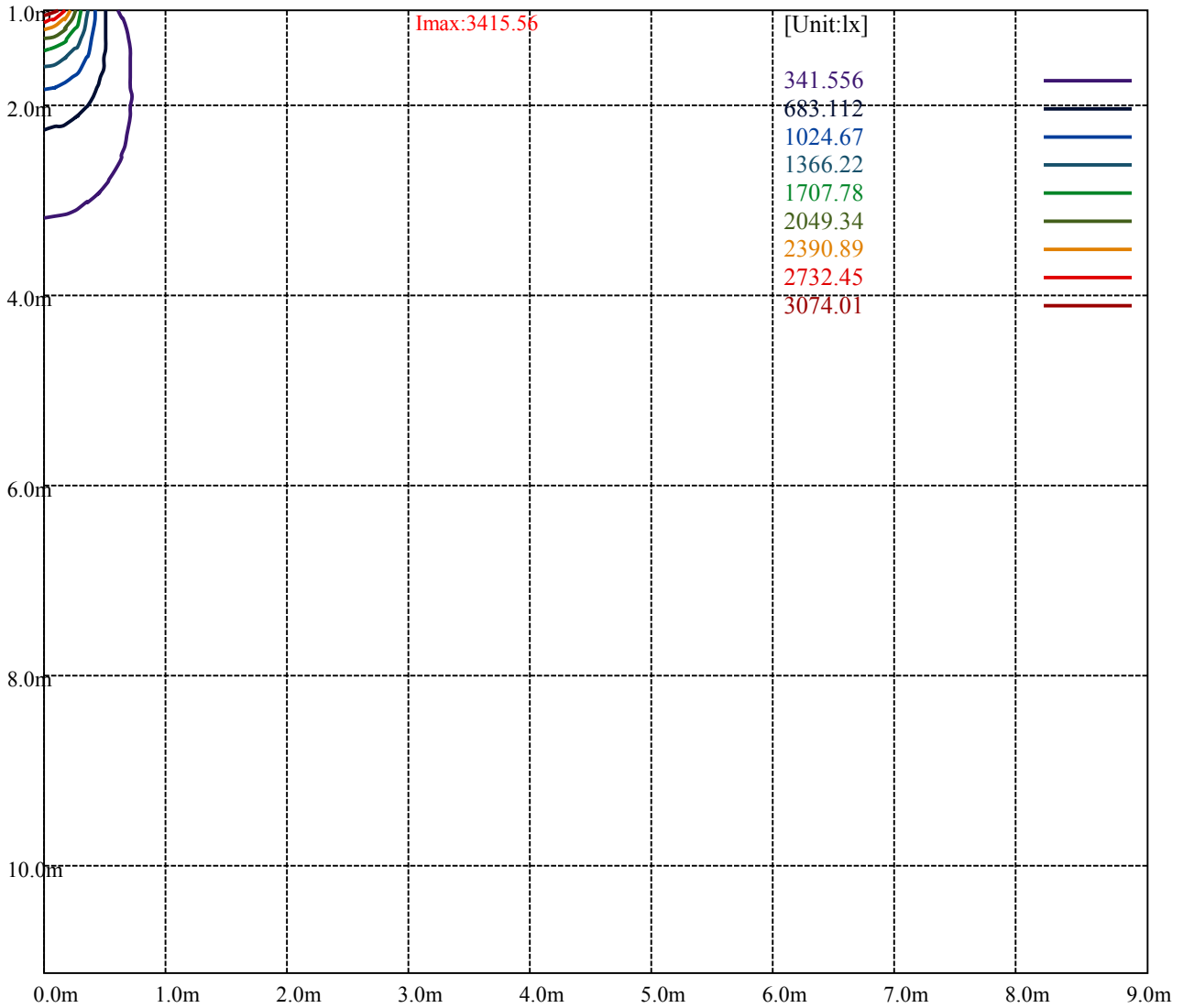
Road

Imax:3415.56

(10%Imax) 341.556	—
(20%Imax) 683.112	—
(30%Imax) 1024.67	—
(40%Imax) 1366.22	—
(50%Imax) 1707.78	—
(60%Imax) 2049.34	—
(70%Imax) 2390.89	—
(80%Imax) 2732.45	—
(90%Imax) 3074.01	—



- (10%Emax) 37.95067
- (20%Emax) 75.90134
- (30%Emax) 113.8522
- (40%Emax) 151.8022
- (50%Emax) 189.7533
- (60%Emax) 227.7033
- (70%Emax) 265.6544
- (80%Emax) 303.6056
- (90%Emax) 341.5555



Luminance Table

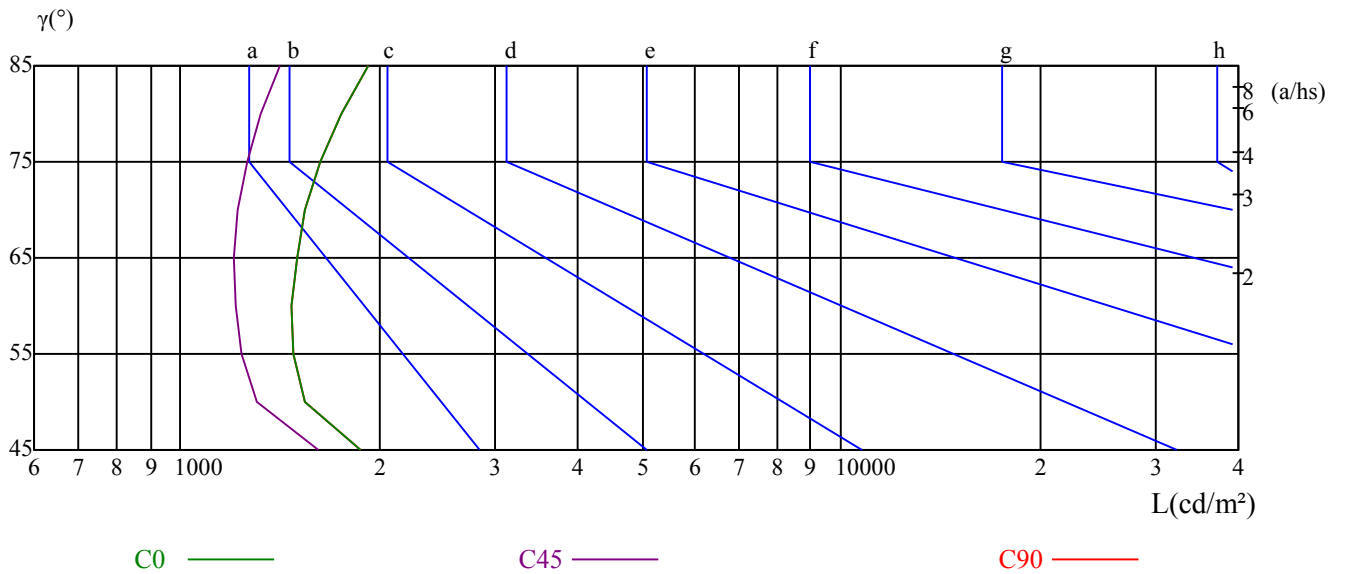
γ	45	50	55	60	65	70	75	80	85
C0	1878	1542	1485	1477	1499	1547	1630	1757	1928
C45	1614	1305	1237	1210	1207	1222	1260	1325	1412
C90	1878	1542	1485	1477	1499	1547	1630	1757	1928

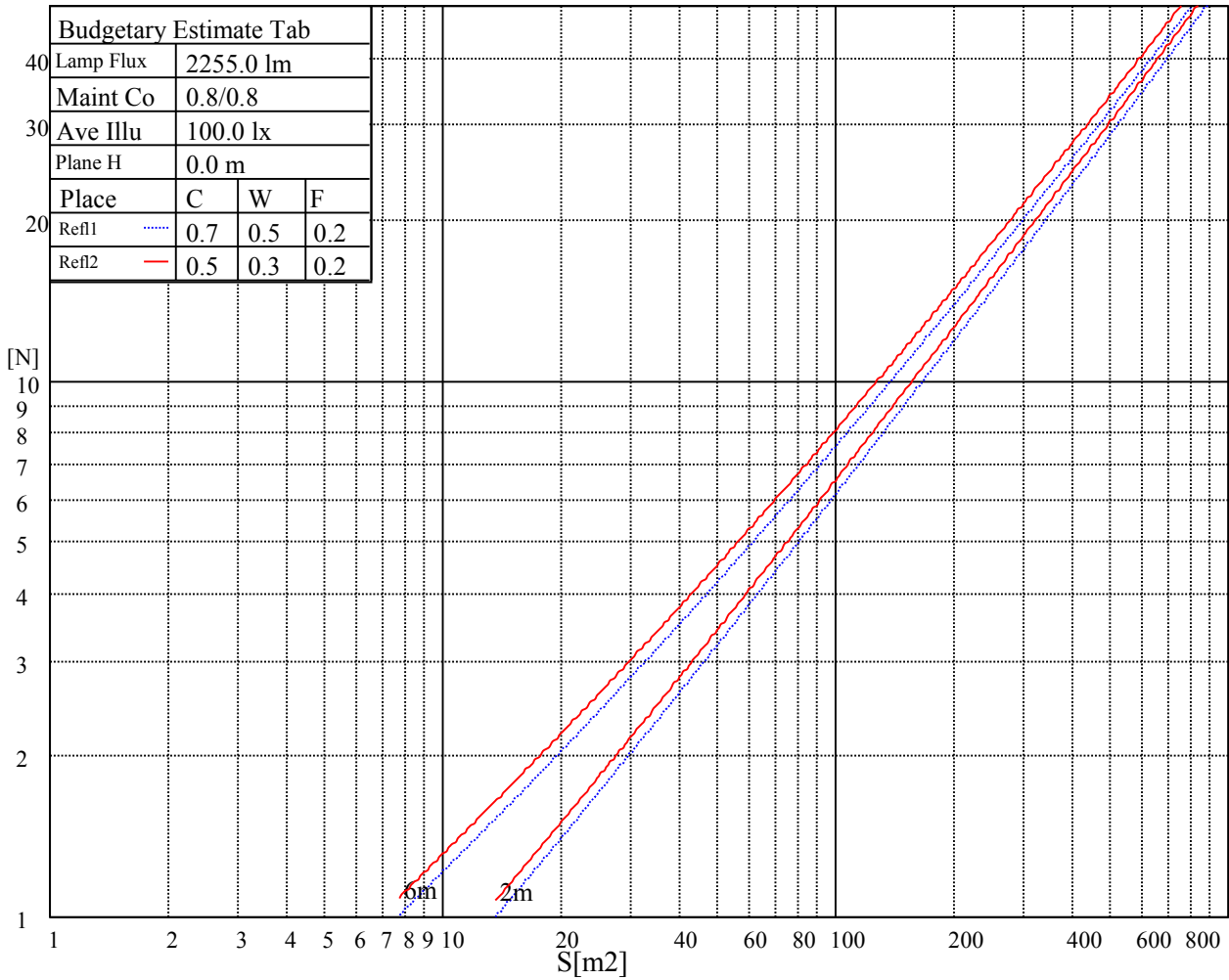
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3600	3600	3600	5607	5607	5607	16340	16340	16340

Glare Table

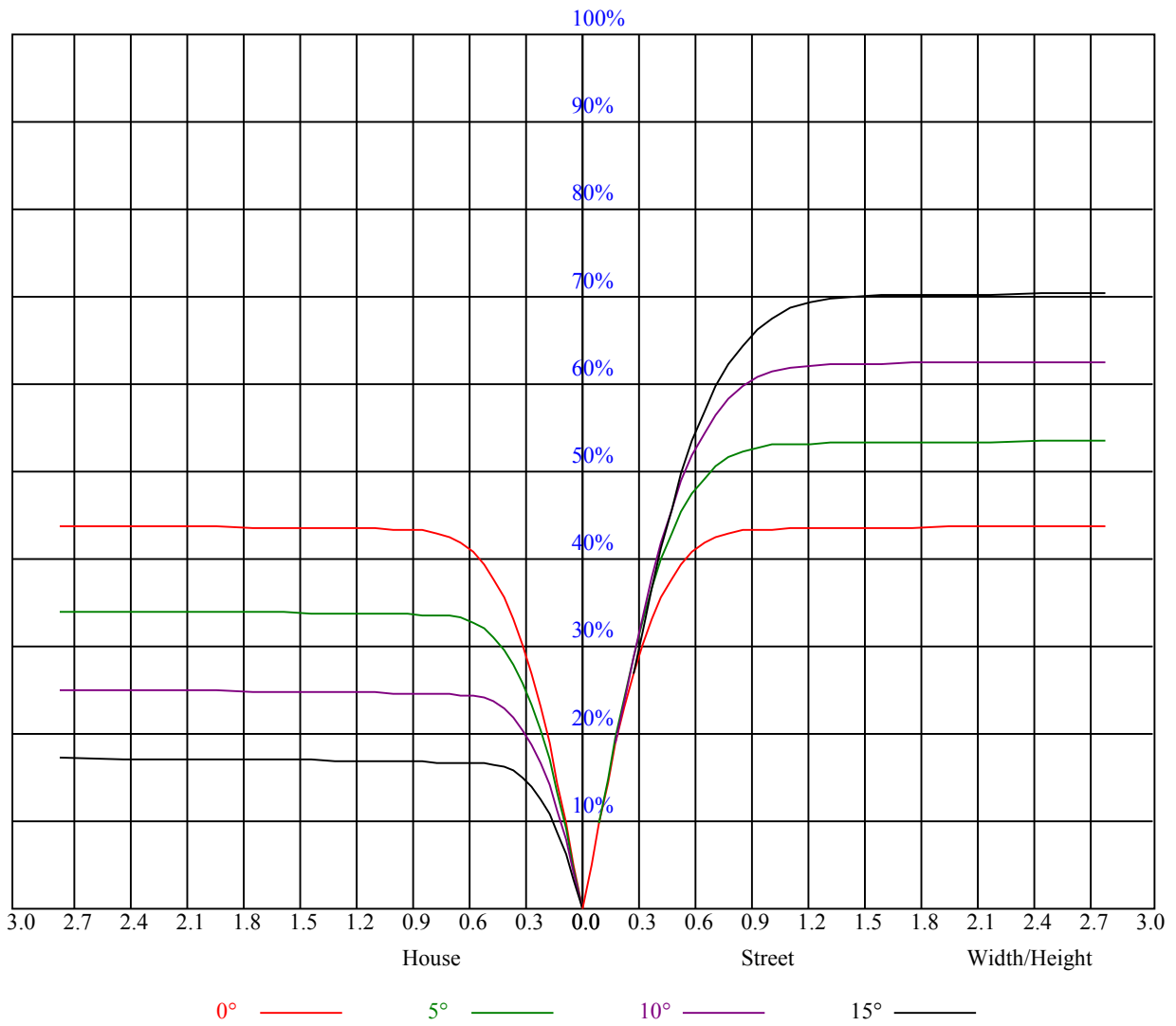
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.06	1.06	1.06	1.03	1.03	1.03	0.99	0.99	0.99	0.94	0.94	0.94	0.91	0.91	0.91	0.89
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.82
2	0.92	0.89	0.86	0.91	0.88	0.85	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.80	0.78
3	0.87	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.74
4	0.83	0.78	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
6	0.75	0.71	0.67	0.75	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
8	0.69	0.64	0.61	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
9	0.66	0.62	0.59	0.66	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55



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	3408.54	3378.26	3139.87	2692.81	2134.54	1501.39	1102.78	688.21	303.91
45.0	3422.31	3323.75	3059.48	2584.35	1984.23	1360.44	1013.04	580.85	174.53
90.0	3416.80	3283.56	2971.94	2440.10	1833.93	1200.78	916.41	434.51	47.79
135.0	3414.60	3289.62	3013.24	2452.76	1833.93	1288.87	978.35	474.04	48.23
180.0	3408.54	3226.31	2811.73	2298.05	1631.32	1090.83	870.11	310.57	24.11
225.0	3422.31	3287.42	2954.33	2413.67	1787.13	1263.54	939.54	424.15	41.57
270.0	3416.80	3345.23	3047.92	2596.46	1968.27	1338.97	1006.98	592.41	165.83
315.0	3414.60	3322.65	3009.93	2510.57	1907.15	1342.28	988.59	514.01	70.42
360.0	3408.54	3378.26	3139.87	2692.81	2134.54	1501.39	1102.78	688.21	303.91
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	16.74	11.12	10.24	9.69	9.30	9.03	8.86	8.75	8.70
45.0	14.59	10.85	10.08	9.63	9.30	9.08	8.86	8.75	8.70
90.0	11.89	10.63	10.02	9.58	9.25	8.97	8.81	8.70	8.64
135.0	12.33	10.63	9.97	9.58	9.25	8.97	8.81	8.75	8.64
180.0	11.51	10.41	9.86	9.47	9.19	8.97	8.86	8.75	8.64
225.0	12.17	10.57	9.97	9.52	9.25	8.97	8.81	8.75	8.70
270.0	14.31	10.90	10.08	9.63	9.30	9.03	8.81	8.75	8.64
315.0	13.38	10.74	9.97	9.52	9.19	8.97	8.81	8.70	8.64
360.0	16.74	11.12	10.24	9.69	9.30	9.03	8.86	8.75	8.70
C/γ(°)	90.0								
0.0	8.64								
45.0	8.64								
90.0	8.64								
135.0	8.64								
180.0	8.64								
225.0	8.64								
270.0	8.64								
315.0	8.59								
360.0	8.64								