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Nata

LumCAT: 2-1258-N
Luminaire: 92.70.045.00+92.70.059.00
Report No: NATA0100
Test No: GC2018062207
LampCAT: NICHIA NFCWJ120B-V3
Lamp flux(lm): 2303.0
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): 1724.09
Efficiency(%): 74.86%
Lumens(lm)/Power(W): 103.47
Central intensity(cd): 3525.675
Maximum intensity(cd): 3525.675
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=36.3
 [C90/270]Total=36.3
Field angle(10%Imax): [C0/180]Total=67.5
 [C90/270]Total=67.5
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.60 C90_270=0.60
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 75.71%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.466%

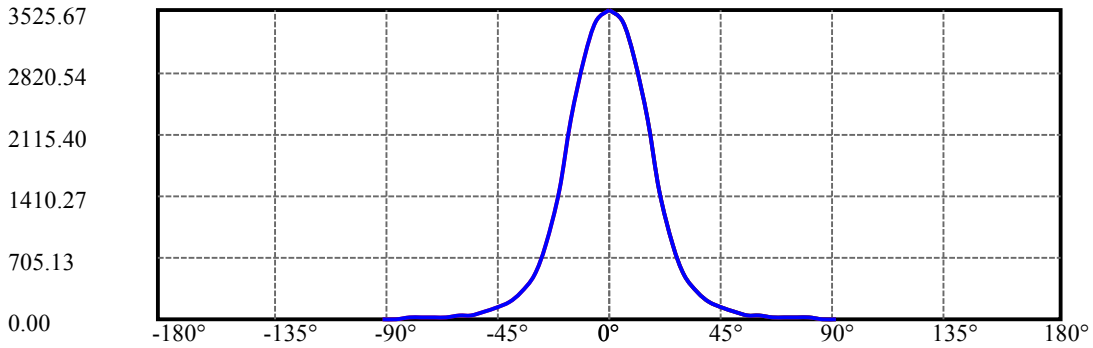
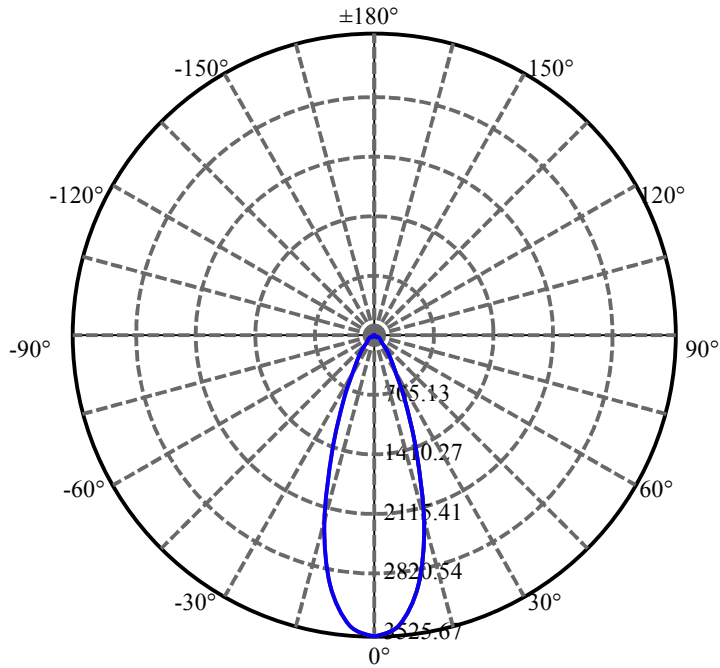
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3525.674	21.084	21.084	.916%	1.223%
5.0	3398.356	162.351	183.435	7.050%	10.640%
10.0	2972.770	282.957	466.392	12.286%	27.051%
15.0	2269.907	322.028	788.42	13.983%	45.730%
20.0	1459.270	273.575	1061.996	11.879%	61.597%
25.0	853.877	197.803	1259.799	8.589%	73.070%
30.0	493.560	135.269	1395.068	5.874%	80.916%
35.0	304.613	95.770	1490.838	4.158%	86.471%
40.0	201.575	71.022	1561.86	3.084%	90.590%
45.0	124.015	48.067	1609.927	2.087%	93.378%
50.0	80.217	33.683	1643.61	1.463%	95.332%
55.0	50.507	22.678	1666.288	.985%	96.647%
60.0	32.924	15.629	1681.917	.679%	97.554%
65.0	22.470	11.163	1693.08	.485%	98.201%
70.0	18.251	9.401	1702.481	.408%	98.746%
75.0	14.989	7.936	1710.417	.345%	99.207%
80.0	12.133	6.550	1716.966	.284%	99.587%
85.0	9.325	5.092	1722.058	.221%	99.882%
90.0	7.426	2.035	1724.094	.088%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1395.07	60.58%	80.92%
0-40	1561.86	67.82%	90.59%
0-60	1681.92	73.03%	97.55%
0-90	1722.06	74.77%	99.88%
0-120	1722.06	74.77%	99.88%
0-180	1724.09	74.86%	100.00%
60-90	55.77	2.42%	3.23%
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%
0-29.42	1379.28	59.89%	80.00%

ZONAL LUMEN SUMMARY

0-10	466.39
10-20	595.60
20-30	333.07
30-40	166.79
40-50	81.75
50-60	38.31
60-70	20.56
70-80	14.49
80-90	5.09
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: —————

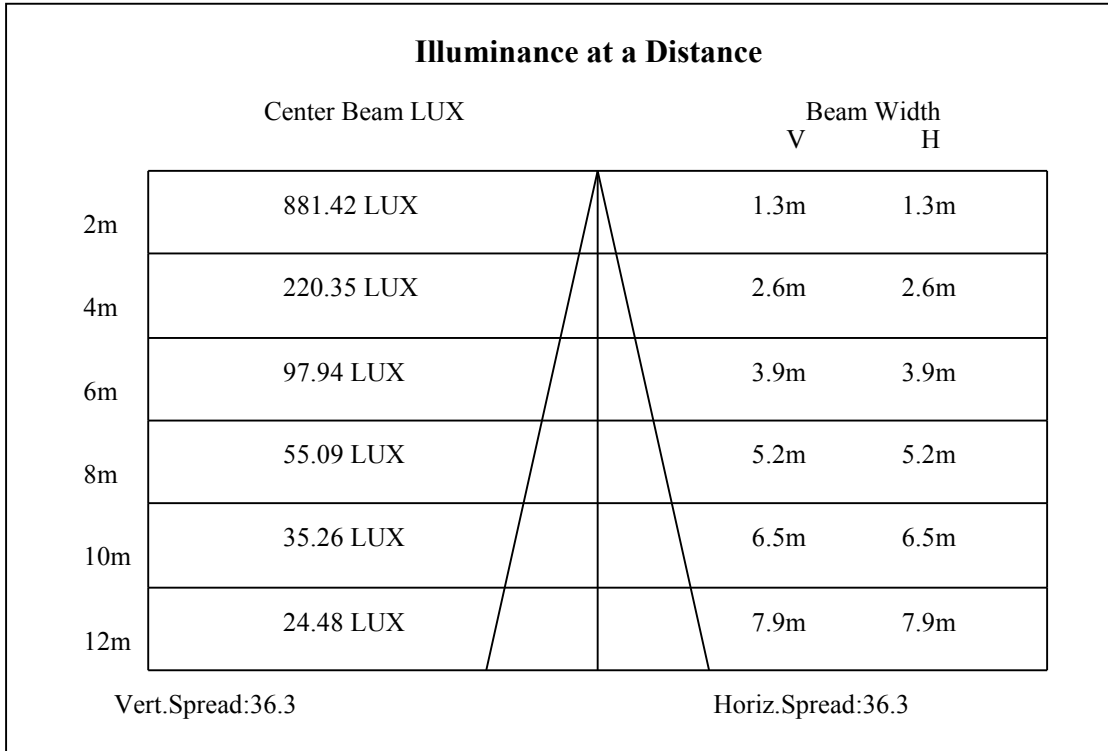
C90/C270: —————

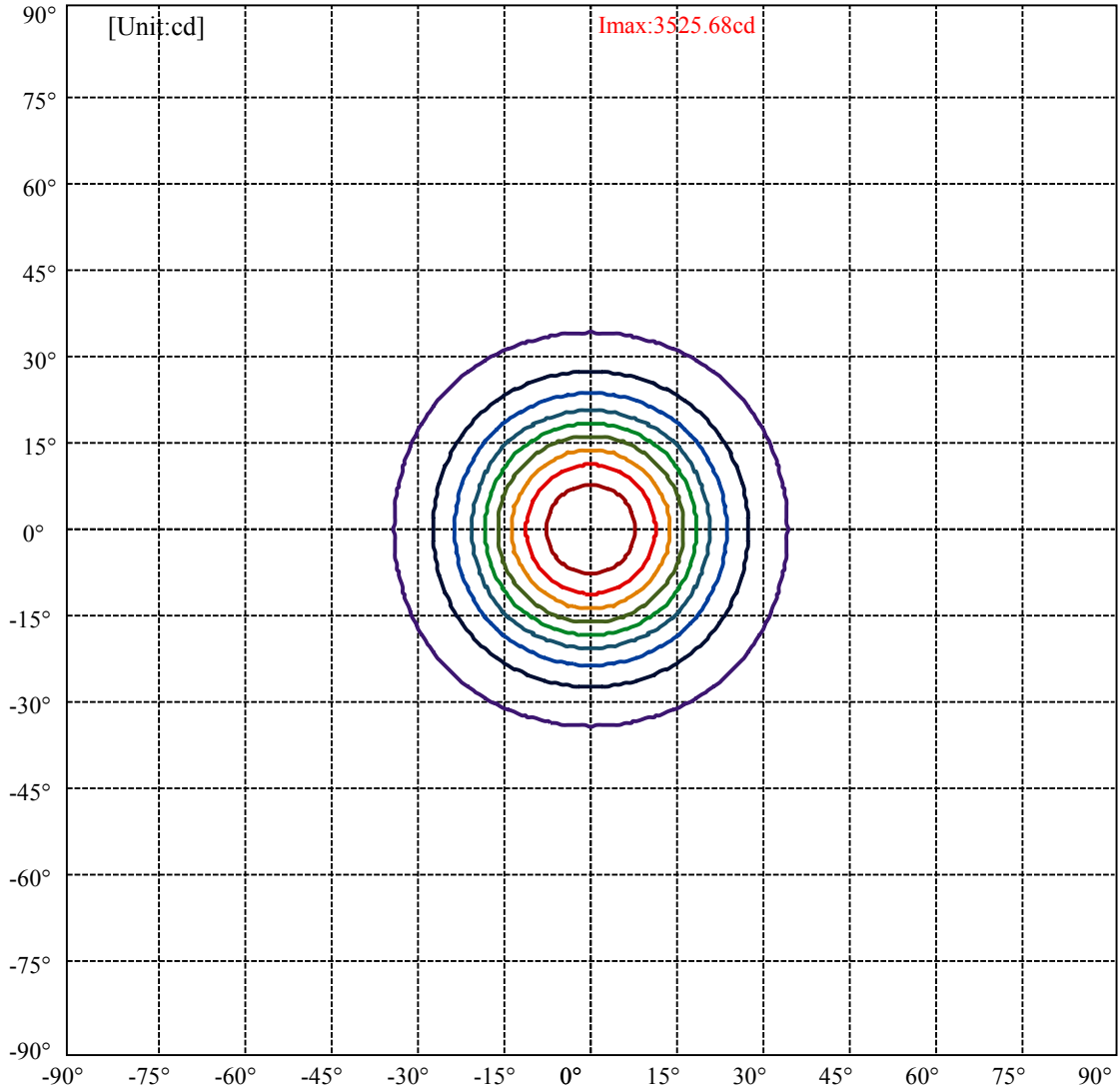
Field angle(10%Imax):C0/180Left:33.7 Right:33.7

:C90/270Left:33.7 Right:33.7

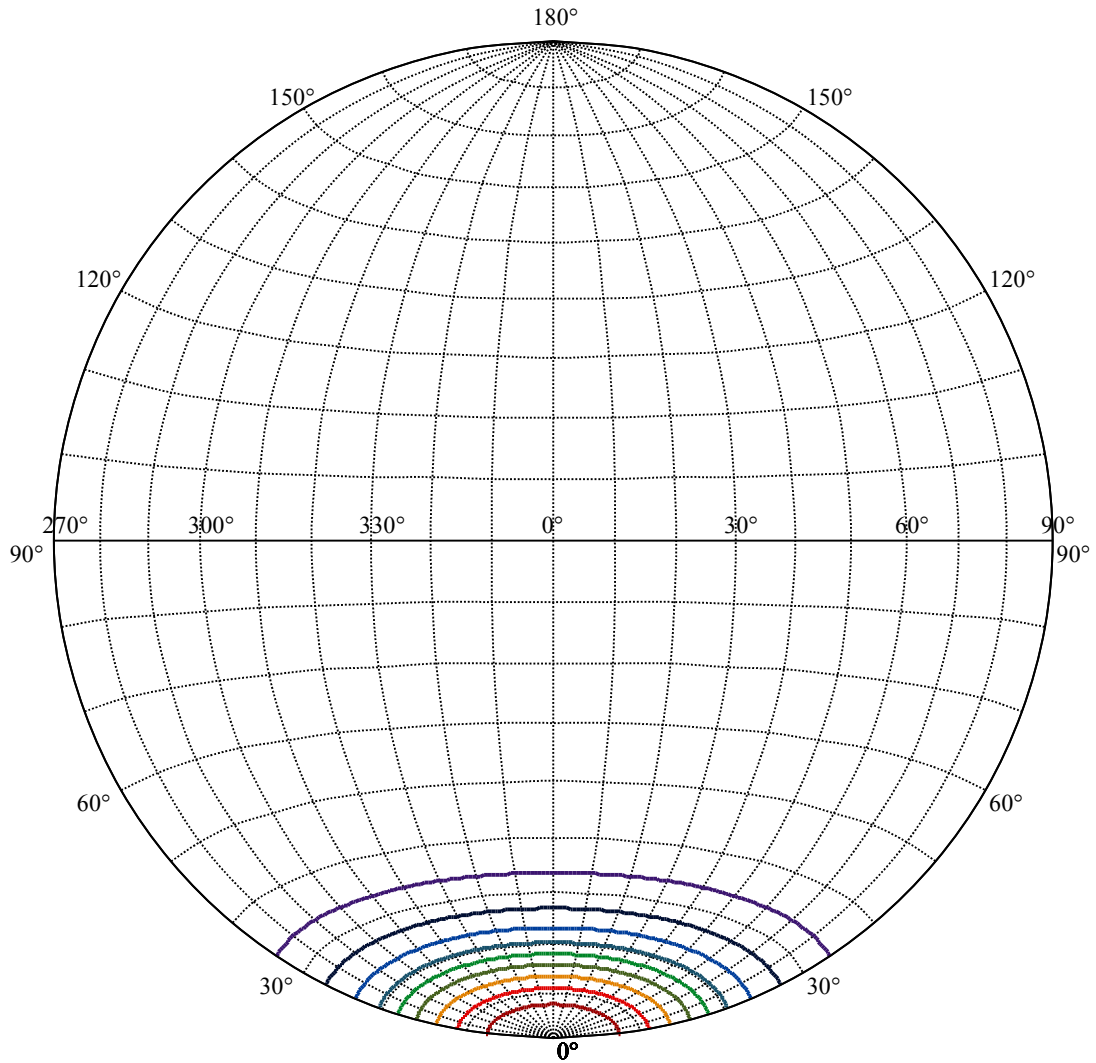
Beam Angle(50%Imax):C0/180Left:18.1 Right:18.1

:C90/270Left:18.1 Right:18.1





(10%Imax) 352.567	—
(20%Imax) 705.135	—
(30%Imax) 1057.7	—
(40%Imax) 1410.27	—
(50%Imax) 1762.84	—
(60%Imax) 2115.4	—
(70%Imax) 2467.97	—
(80%Imax) 2820.54	—
(90%Imax) 3173.11	—



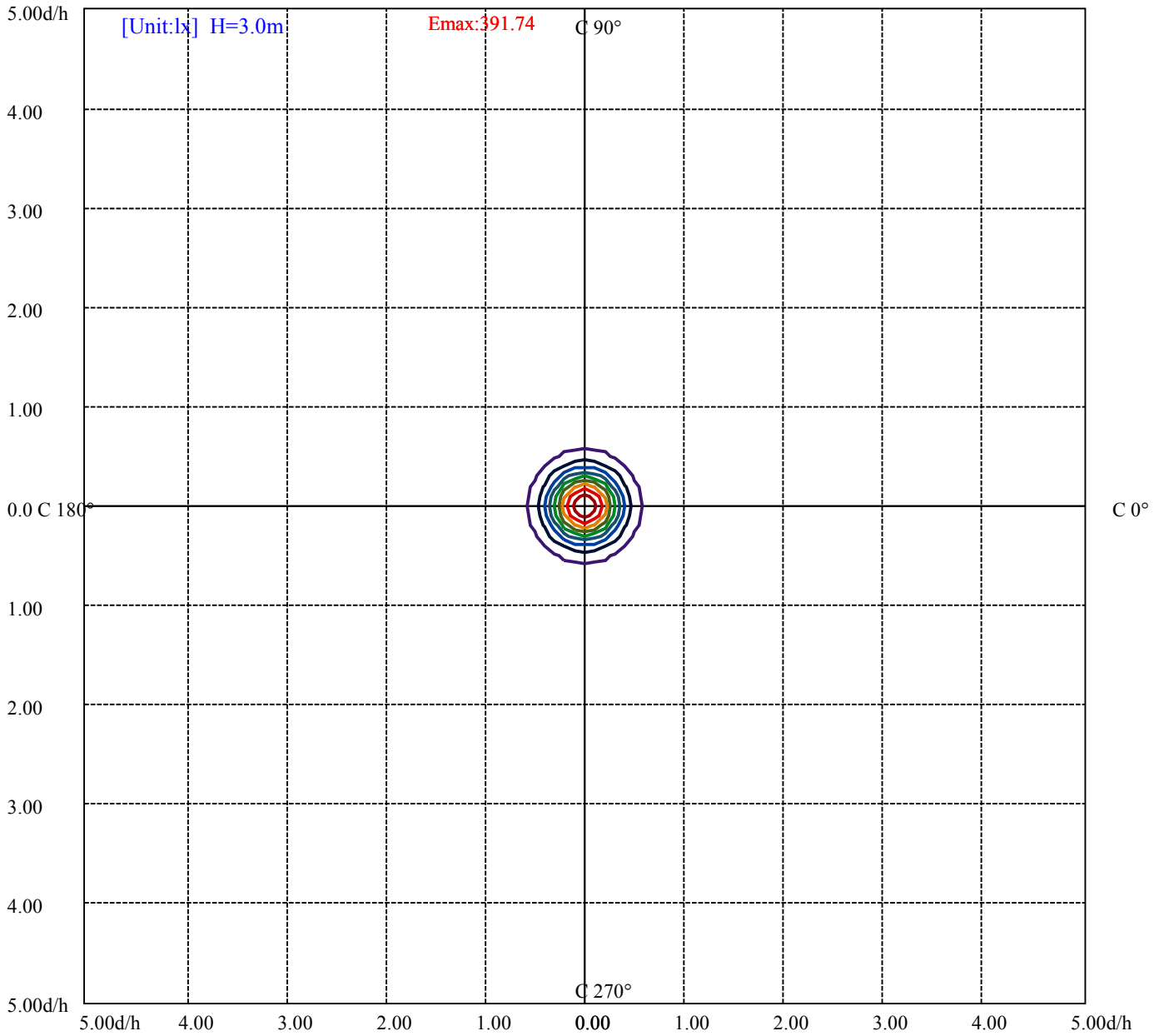
House

[Unit:cd]

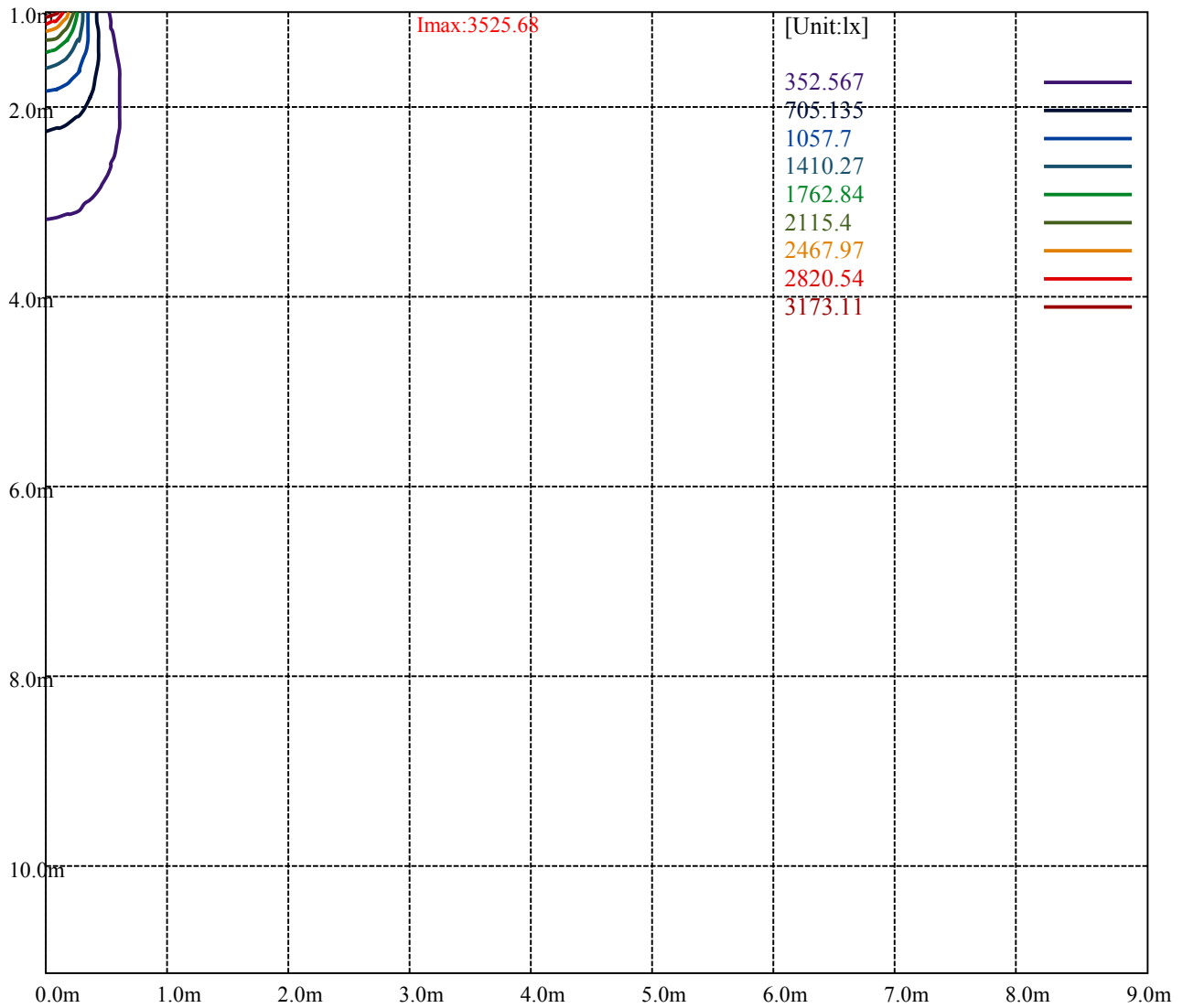
Road

Imax:3525.68

(10%Imax) 352.567	—
(20%Imax) 705.135	—
(30%Imax) 1057.7	—
(40%Imax) 1410.27	—
(50%Imax) 1762.84	—
(60%Imax) 2115.4	—
(70%Imax) 2467.97	—
(80%Imax) 2820.54	—
(90%Imax) 3173.11	—



(10%Emax) 39.17411	—
(20%Emax) 78.34822	—
(30%Emax) 117.5222	—
(40%Emax) 156.6967	—
(50%Emax) 195.8711	—
(60%Emax) 235.0444	—
(70%Emax) 274.2189	—
(80%Emax) 313.3933	—
(90%Emax) 352.5667	—



Luminance Table

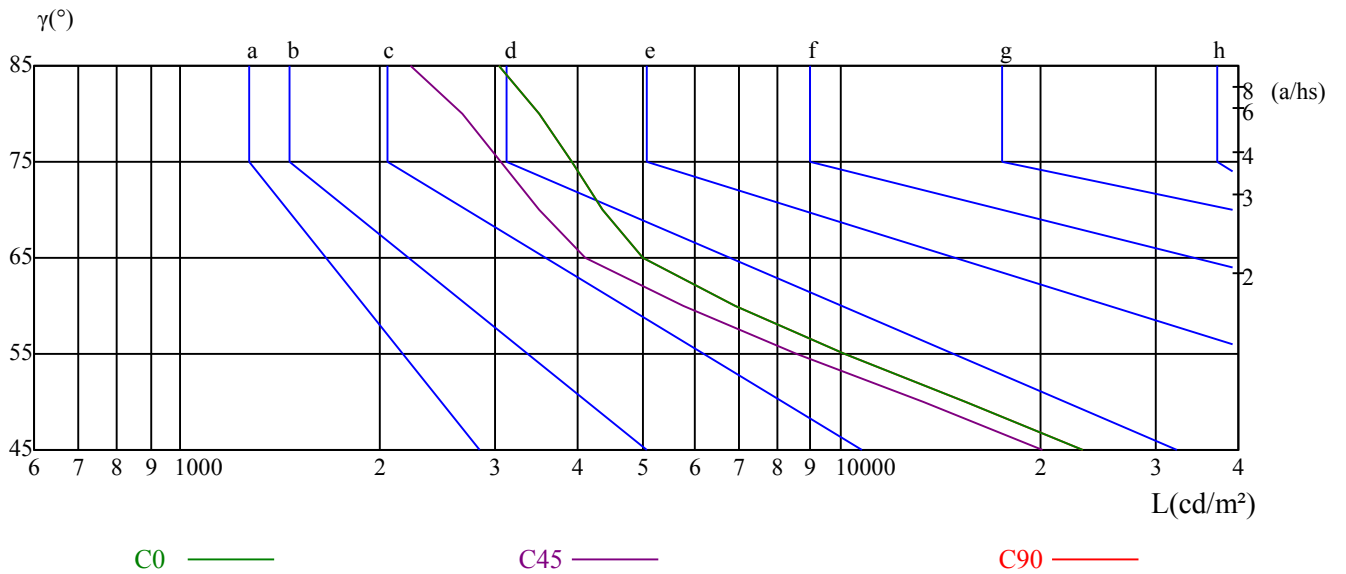
γ	45	50	55	60	65	70	75	80	85
C0	23199	15464	10123	6926	5014	4371	3906	3496	3031
C45	20248	13300	8572	5768	4100	3503	3058	2663	2234
C90	23199	15464	10123	6926	5014	4371	3906	3496	3031

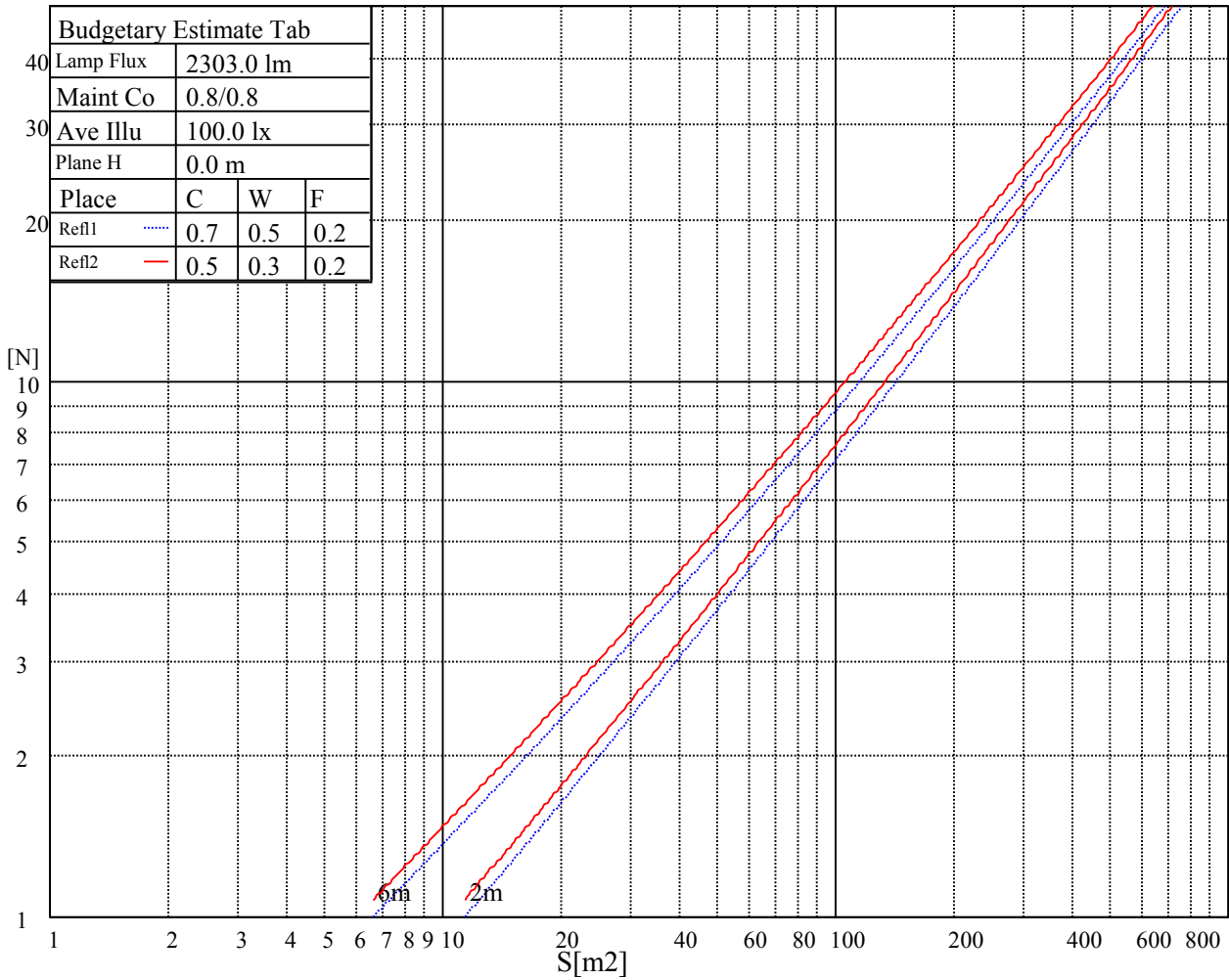
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10851	10851	10851	11819	11819	11819	21836	21836	21836

Glare Table

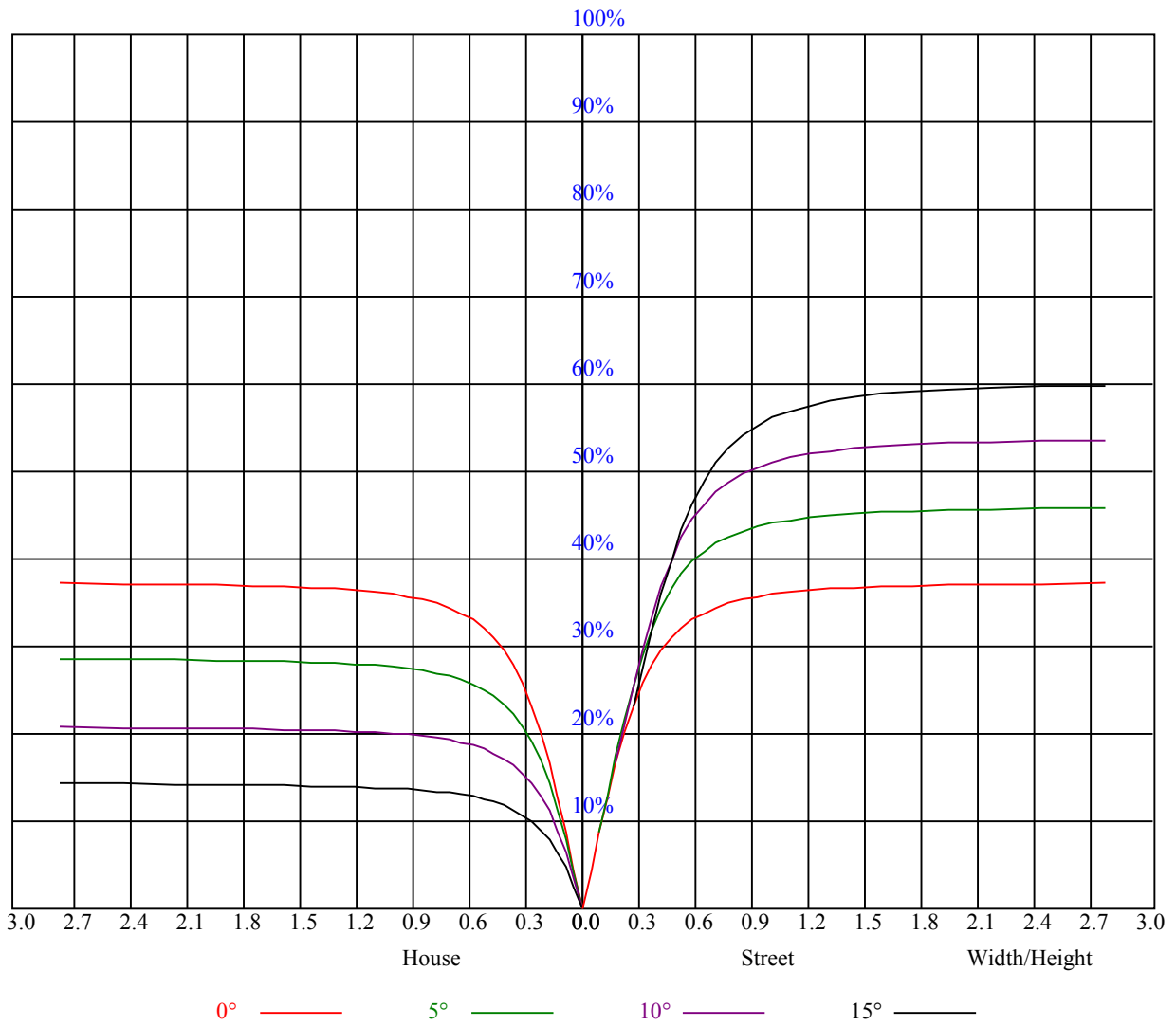
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.90	0.90	0.90	0.88	0.88	0.88	0.84	0.84	0.84	0.81	0.81	0.81	0.77	0.77	0.77	0.76
1	0.83	0.81	0.79	0.81	0.80	0.78	0.78	0.77	0.75	0.76	0.74	0.73	0.73	0.72	0.71	0.70
2	0.78	0.75	0.72	0.77	0.74	0.72	0.74	0.72	0.70	0.72	0.70	0.68	0.70	0.68	0.67	0.66
3	0.74	0.70	0.67	0.72	0.69	0.66	0.70	0.68	0.65	0.69	0.66	0.64	0.67	0.65	0.63	0.62
4	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.64	0.62	0.60	0.59
5	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.56
6	0.63	0.59	0.56	0.63	0.59	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.59	0.57	0.55	0.54
7	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.52
8	0.58	0.54	0.51	0.57	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.55	0.52	0.50	0.50
9	0.56	0.52	0.49	0.55	0.52	0.49	0.55	0.51	0.49	0.54	0.51	0.49	0.53	0.51	0.49	0.48
10	0.53	0.50	0.47	0.53	0.50	0.47	0.53	0.49	0.47	0.52	0.49	0.47	0.52	0.49	0.47	0.46



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	3507.09	3530.77	3262.64	2674.64	1927.52	1168.85	662.33	383.74	278.03
45.0	3538.47	3433.32	3072.70	2390.55	1645.09	916.14	520.83	329.79	212.90
90.0	3525.81	3367.80	2867.34	2122.42	1096.78	753.23	432.08	269.17	184.66
135.0	3531.32	3343.02	2889.91	2133.99	1349.98	748.22	436.05	284.09	174.69
180.0	3507.09	3217.50	2631.15	1881.83	1077.95	613.77	371.41	238.23	152.23
225.0	3538.47	3379.36	2896.52	2107.56	1275.11	754.33	427.73	281.06	184.49
270.0	3525.81	3450.38	3073.25	2433.49	1653.34	917.79	545.61	327.04	212.46
315.0	3531.32	3464.70	3088.66	2414.77	1648.39	958.70	552.44	323.79	213.12
360.0	3507.09	3530.77	3262.64	2674.64	1927.52	1168.85	662.33	383.74	278.03
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	155.53	100.15	65.35	41.46	26.26	20.26	16.52	13.71	10.52
45.0	130.59	87.65	53.02	34.19	22.79	18.72	15.42	12.44	9.52
90.0	113.64	72.34	46.03	30.06	21.20	17.78	14.65	11.84	9.08
135.0	111.82	71.68	44.98	30.23	21.31	17.56	14.59	11.67	9.08
180.0	97.23	62.32	39.53	25.93	20.04	16.63	13.43	10.74	7.93
225.0	114.57	74.66	46.69	30.28	21.58	17.73	14.53	11.45	9.03
270.0	134.50	86.38	53.96	35.07	23.23	18.72	15.31	12.66	9.58
315.0	134.23	86.55	54.51	36.17	23.34	18.61	15.47	12.55	9.86
360.0	155.53	100.15	65.35	41.46	26.26	20.26	16.52	13.71	10.52
C/ γ (°)	90.0								
0.0	7.87								
45.0	7.32								
90.0	7.32								
135.0	7.38								
180.0	7.38								
225.0	7.32								
270.0	7.32								
315.0	7.49								
360.0	7.87								