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Nata

LumCAT: 3-2046-M	
Luminaire: 92.70.135.00	
Report No: NATA0100	Voltage(V): 34.0000
Test No: GC2018070411	Current(A): 0.5000
LampCAT: NICHIA NFCWD096B-V3	Power (W): 17.0000
Lamp flux(lm): 2202.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 84	Width(mm): 84
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1965.03
Efficiency(%): 89.24%
Lumens(lm)/Power(W): 115.59
Central intensity(cd): 5018.281
Maximum intensity(cd): 5018.281
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=32.2
 [C90/270]Total=32.2
Field angle(10%Imax): [C0/180]Total=67.2
 [C90/270]Total=67.2
Maximum s/h(1/2): C0_180=0.52 C90_270=0.52
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.52%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.289%

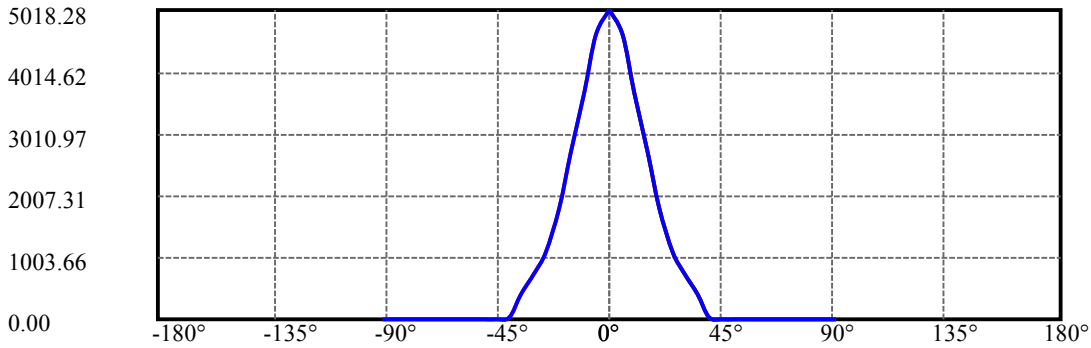
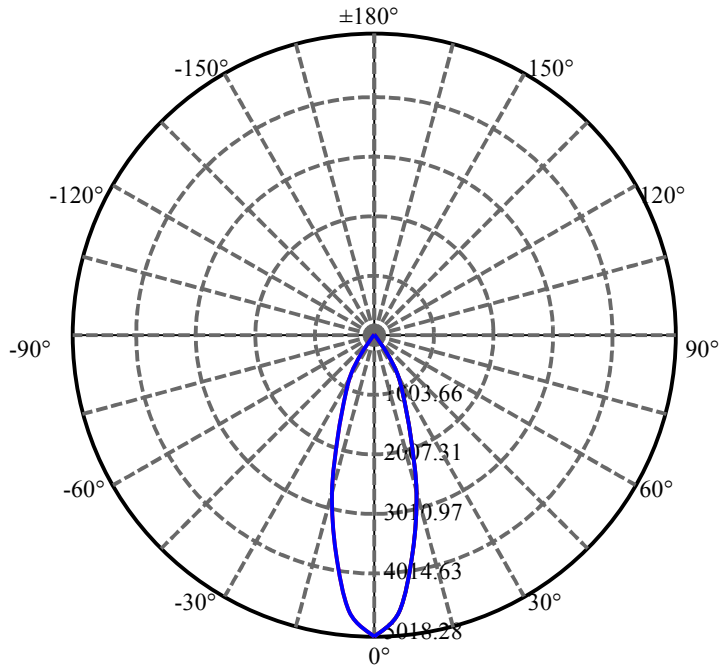
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5018.281	30.010	30.01	1.363%	1.527%
5.0	4622.315	220.823	250.834	10.028%	12.765%
10.0	3669.289	349.254	600.088	15.861%	30.538%
15.0	2707.729	384.141	984.229	17.445%	50.087%
20.0	1814.714	340.212	1324.441	15.450%	67.401%
25.0	1099.531	254.710	1579.15	11.567%	80.363%
30.0	737.370	202.090	1781.24	9.178%	90.647%
35.0	408.739	128.507	1909.747	5.836%	97.187%
40.0	32.704	11.523	1921.27	.523%	97.773%
45.0	11.562	4.481	1925.751	.204%	98.001%
50.0	10.516	4.416	1930.167	.201%	98.226%
55.0	9.910	4.450	1934.617	.202%	98.452%
60.0	9.525	4.521	1939.138	.205%	98.683%
65.0	9.249	4.595	1943.733	.209%	98.916%
70.0	9.029	4.651	1948.384	.211%	99.153%
75.0	8.919	4.722	1953.106	.214%	99.393%
80.0	8.809	4.755	1957.861	.216%	99.635%
85.0	8.754	4.780	1962.641	.217%	99.879%
90.0	8.699	2.384	1965.025	.108%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1781.24	80.89%	90.65%
0-40	1921.27	87.25%	97.77%
0-60	1939.14	88.06%	98.68%
0-90	1962.64	89.13%	99.88%
0-120	1962.64	89.13%	99.88%
0-180	1965.03	89.24%	100.00%
60-90	28.02	1.27%	1.43%
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%
0-24.86	1572.02	71.39%	80.00%

ZONAL LUMEN SUMMARY

0-10	600.09
10-20	724.35
20-30	456.80
30-40	140.03
40-50	8.90
50-60	8.97
60-70	9.25
70-80	9.48
80-90	4.78
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: —————

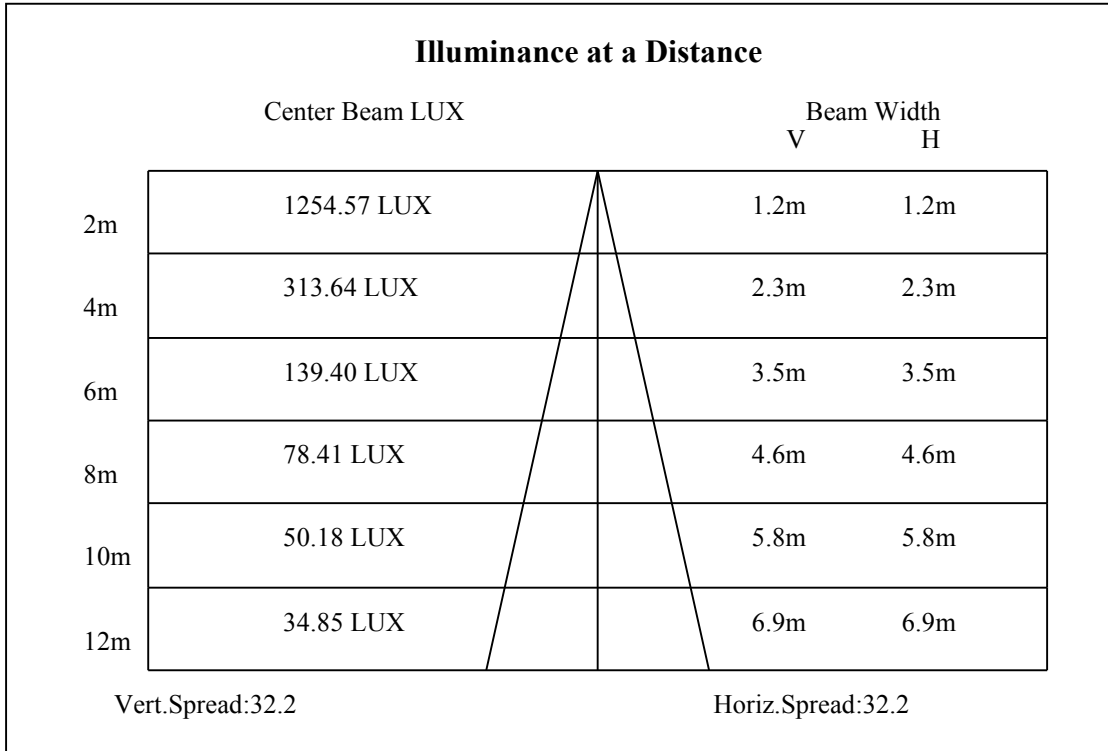
C90/C270: —————

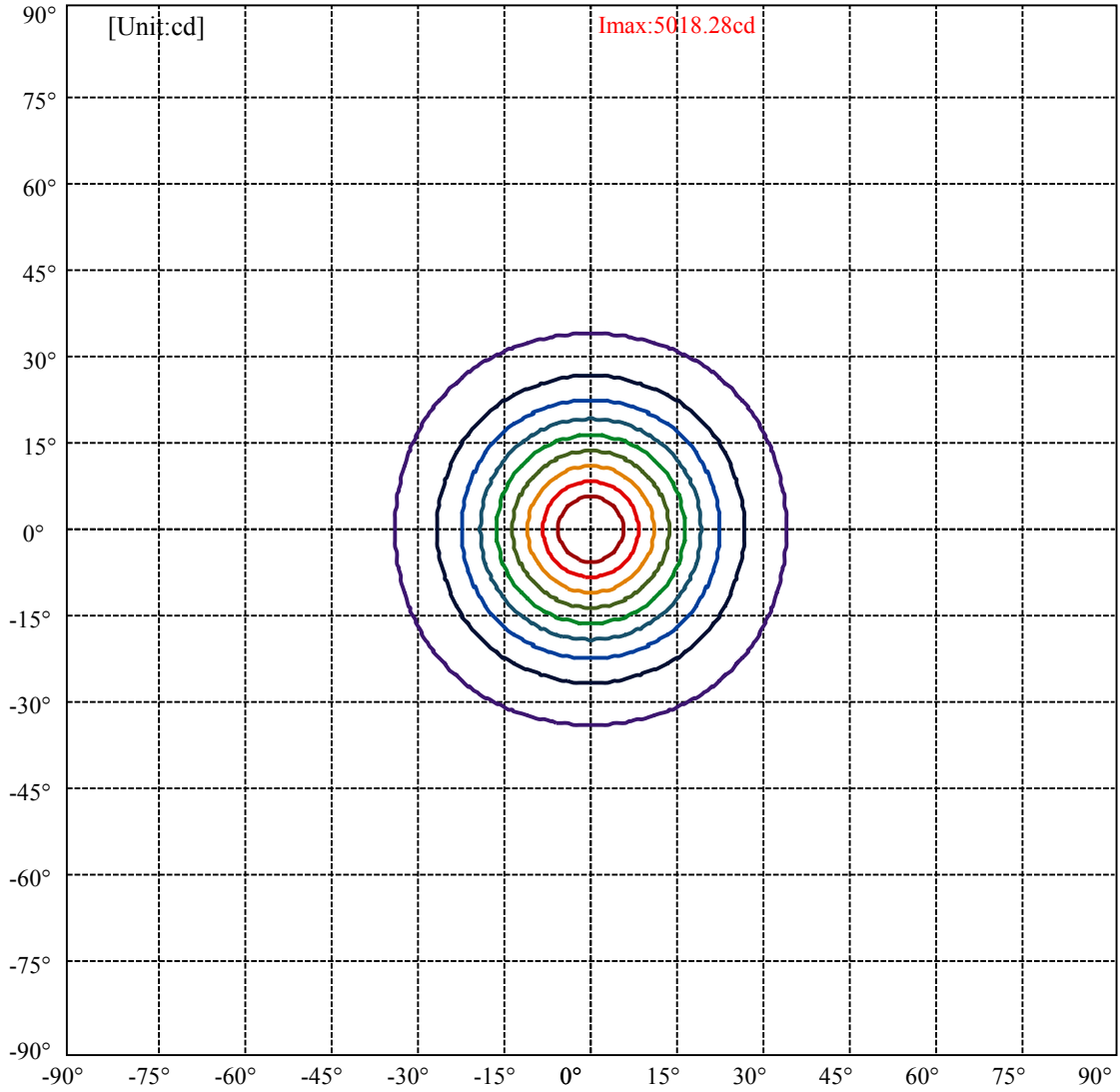
Field angle(10%Imax):C0/180Left:33.6 Right:33.6

:C90/270Left:33.6 Right:33.6

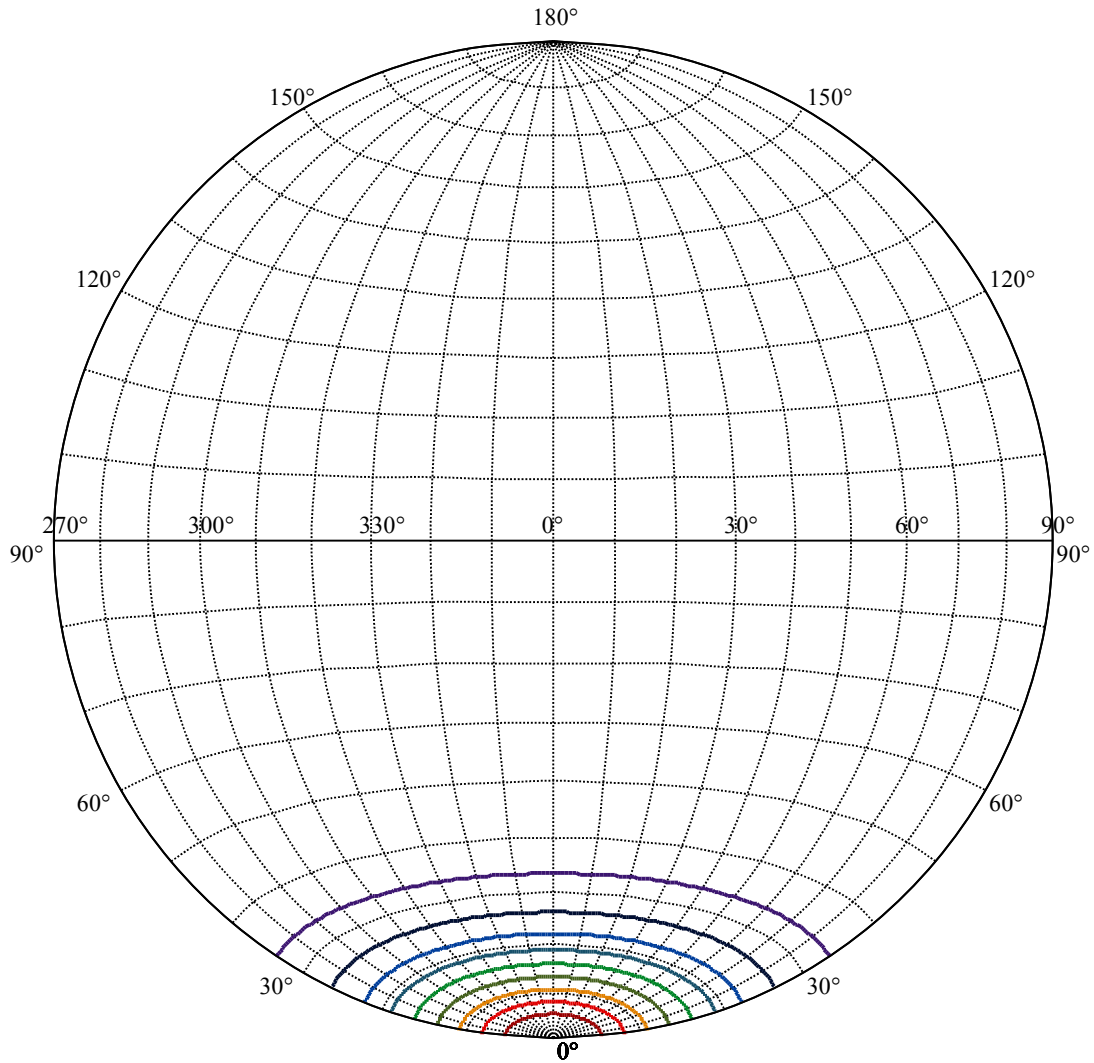
Beam Angle(50%Imax):C0/180Left:16.1 Right:16.1

:C90/270Left:16.1 Right:16.1





(10%Imax) 501.828	—
(20%Imax) 1003.66	—
(30%Imax) 1505.48	—
(40%Imax) 2007.31	—
(50%Imax) 2509.14	—
(60%Imax) 3010.97	—
(70%Imax) 3512.8	—
(80%Imax) 4014.62	—
(90%Imax) 4516.45	—



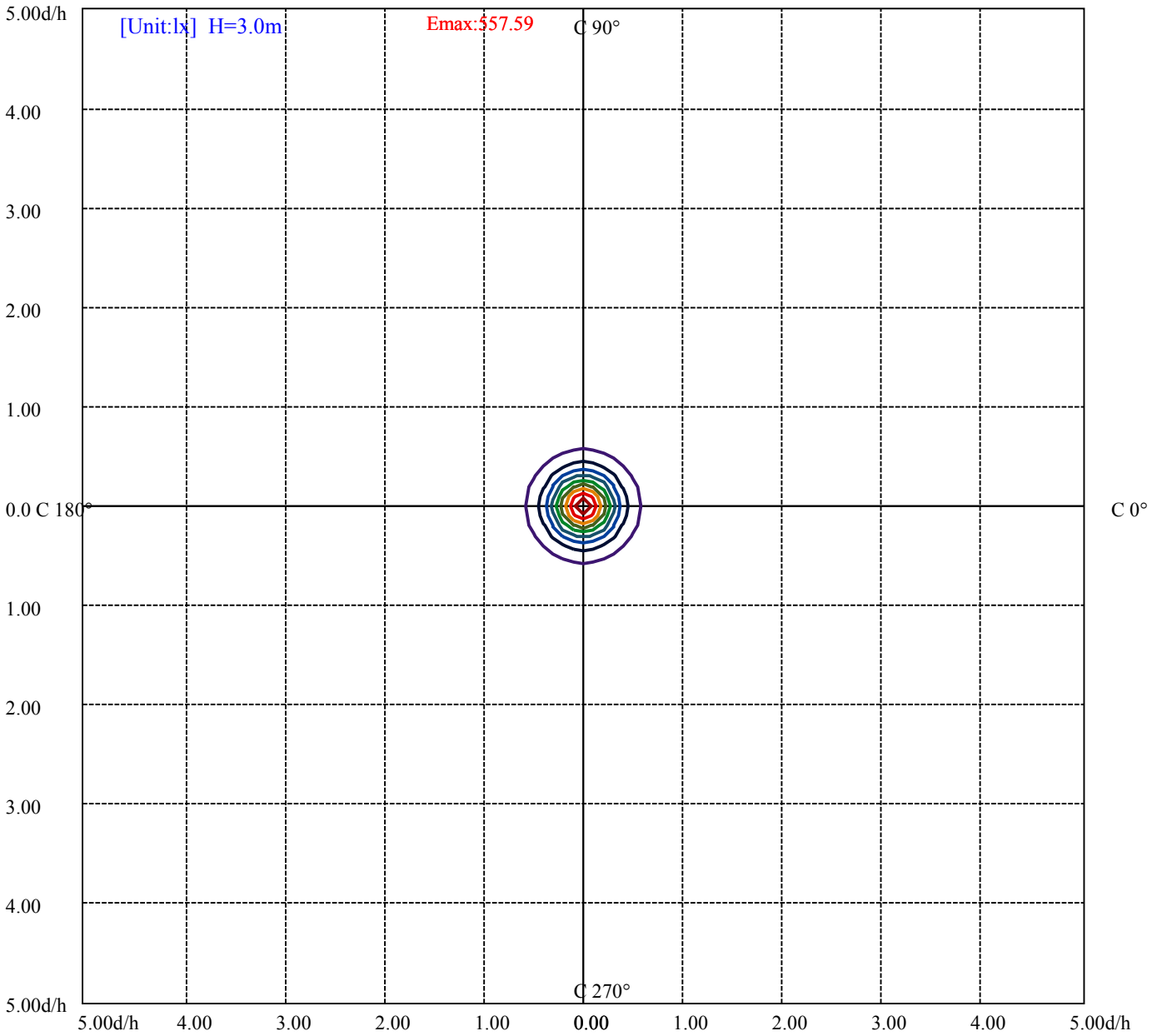
House

[Unit:cd]

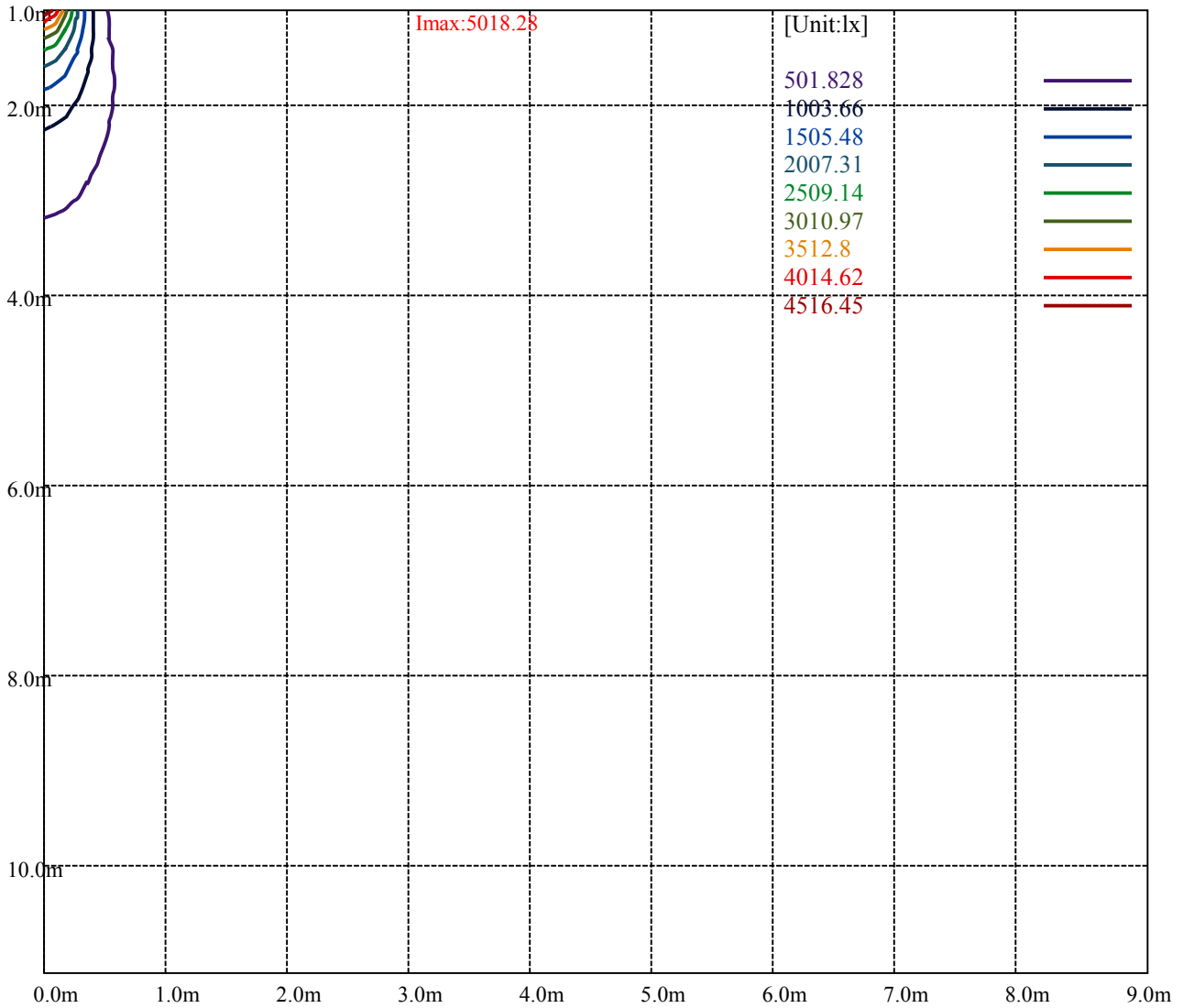
Road

Imax:5018.28

(10%Imax) 501.828	—
(20%Imax) 1003.66	—
(30%Imax) 1505.48	—
(40%Imax) 2007.31	—
(50%Imax) 2509.14	—
(60%Imax) 3010.97	—
(70%Imax) 3512.8	—
(80%Imax) 4014.62	—
(90%Imax) 4516.45	—



- (10%E_{max}) 55.75856
- (20%E_{max}) 111.5167
- (30%E_{max}) 167.2756
- (40%E_{max}) 223.0345
- (50%E_{max}) 278.7922
- (60%E_{max}) 334.5511
- (70%E_{max}) 390.31
- (80%E_{max}) 446.0678
- (90%E_{max}) 501.8267



Luminance Table

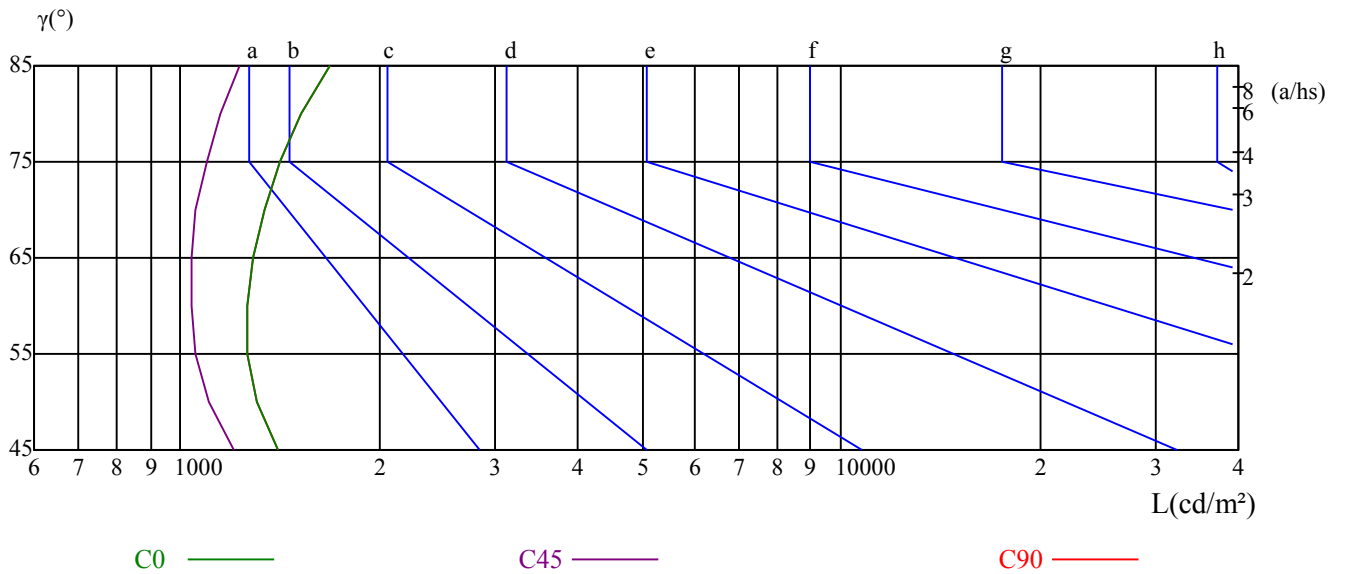
γ	45	50	55	60	65	70	75	80	85
C0	1400	1302	1265	1265	1290	1337	1418	1525	1678
C45	1203	1102	1054	1037	1039	1056	1096	1150	1229
C90	1400	1302	1265	1265	1290	1337	1418	1525	1678

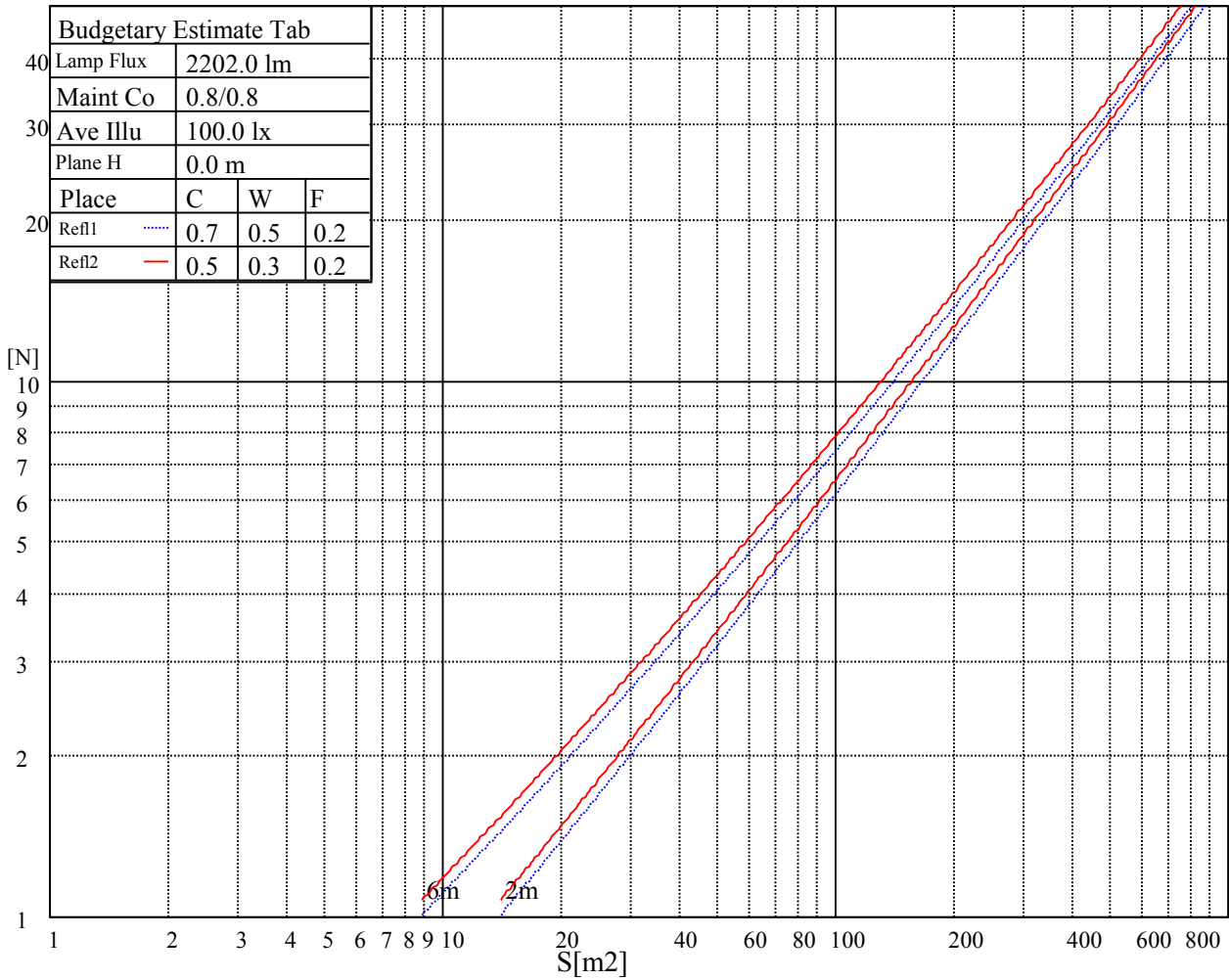
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3102	3102	3102	4884	4884	4884	14235	14235	14235

Glare Table

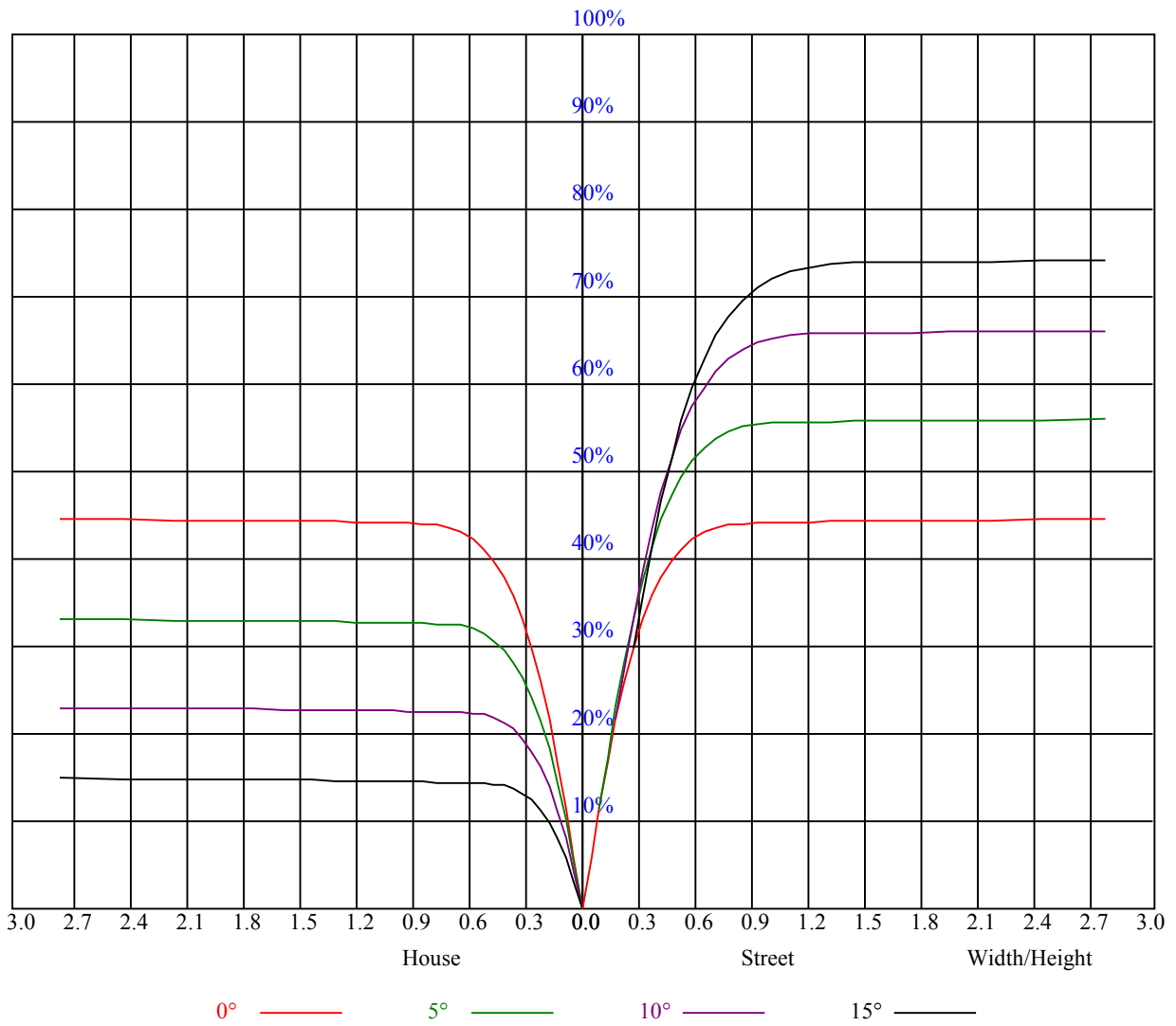
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.84
2	0.94	0.91	0.88	0.93	0.90	0.87	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.82	0.80
3	0.90	0.86	0.82	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.81	0.79	0.82	0.80	0.78	0.77
4	0.86	0.81	0.78	0.85	0.81	0.78	0.83	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
6	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.68
7	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.72	0.69	0.67	0.66
8	0.73	0.68	0.65	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.70	0.67	0.64	0.63
9	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.68	0.65	0.62	0.61
10	0.68	0.64	0.61	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.66	0.63	0.60	0.59



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	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
45.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
90.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
135.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
180.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
225.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
270.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
315.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
360.0	5018.28	4622.32	3669.29	2707.73	1814.71	1099.53	737.37	408.74	32.70
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
45.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
90.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
135.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
180.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
225.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
270.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
315.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
360.0	11.56	10.52	9.91	9.52	9.25	9.03	8.92	8.81	8.75
C/ γ (°)	90.0								
0.0	8.70								
45.0	8.70								
90.0	8.70								
135.0	8.70								
180.0	8.70								
225.0	8.70								
270.0	8.70								
315.0	8.70								
360.0	8.70								