



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

LumCAT: 2-2214-L	
Luminaire: 92.70.131.00	
Report No: 200416-B012	Voltage(V): 34.8100
Test No: 200416-C012	Current(A): 0.5010
LampCAT: SEOUL SAWx15	Power (W): 17.4400
Lamp flux(lm): 2526.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2361.69
Efficiency(%): 93.50%
Lumens(lm)/Power(W): 135.42
Central intensity(cd): 2776.078
Maximum intensity(cd): 2776.078
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=57.0
[C90/270]Total=57.0
Field angle(10%Imax): [C0/180]Total=80.6
[C90/270]Total=80.6
Maximum s/h(1/2): C0_180=0.90 C90_270=0.90
Maximum s/h(1/4): C0_180=0.86 C90_270=0.86
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 93.50%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.959%

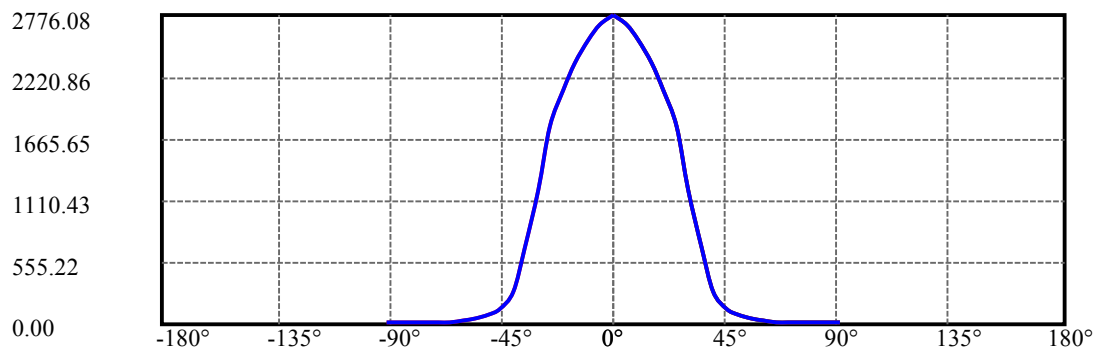
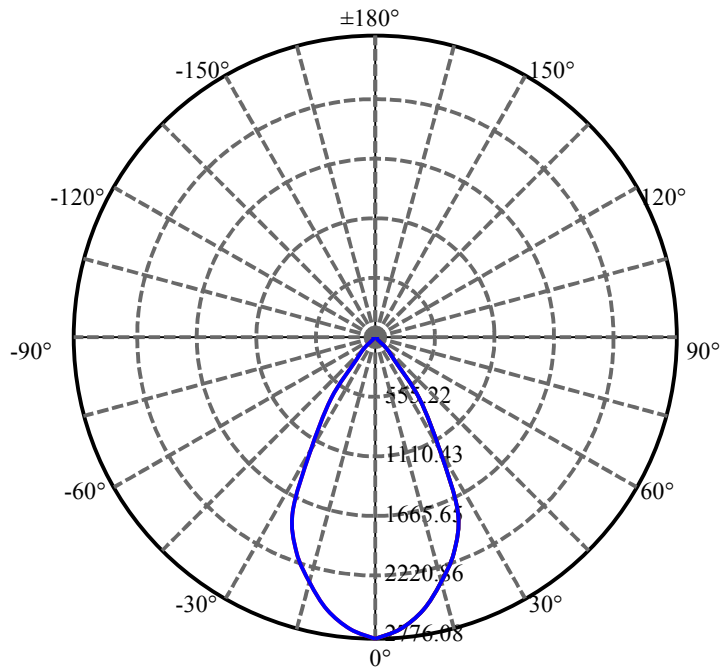
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2776.078	0.000	0	.000%	.000%
5.0	2697.891	65.440	65.44	2.591%	2.771%
10.0	2554.172	187.883	253.323	7.438%	10.726%
15.0	2350.617	290.949	544.271	11.518%	23.046%
20.0	2106.000	367.288	911.559	14.540%	38.598%
25.0	1783.195	407.905	1319.464	16.148%	55.869%
30.0	1214.972	379.421	1698.885	15.021%	71.935%
35.0	695.327	281.305	1980.19	11.136%	83.846%
40.0	286.228	163.765	2143.955	6.483%	90.780%
45.0	142.875	79.452	2223.407	3.145%	94.145%
50.0	79.678	44.970	2268.377	1.780%	96.049%
55.0	46.491	27.433	2295.81	1.086%	97.210%
60.0	30.009	17.683	2313.493	.700%	97.959%
65.0	20.313	12.234	2325.726	.484%	98.477%
70.0	16.088	9.217	2334.943	.365%	98.867%
75.0	13.556	7.748	2342.692	.307%	99.195%
80.0	12.312	6.922	2349.613	.274%	99.489%
85.0	10.997	6.334	2355.947	.251%	99.757%
90.0	9.984	5.745	2361.691	.227%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1698.88	67.26%	71.94%
0-40	2143.95	84.88%	90.78%
0-60	2313.49	91.59%	97.96%
0-90	2355.95	93.27%	99.76%
0-120	2355.95	93.27%	99.76%
0-180	2361.69	93.50%	100.00%
60-90	60.14	2.38%	2.55%
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%
0-33.39	1889.35	74.80%	80.00%

ZONAL LUMEN SUMMARY

0-10	253.32
10-20	658.24
20-30	787.33
30-40	445.07
40-50	124.42
50-60	45.12
60-70	21.45
70-80	14.67
80-90	6.33
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:

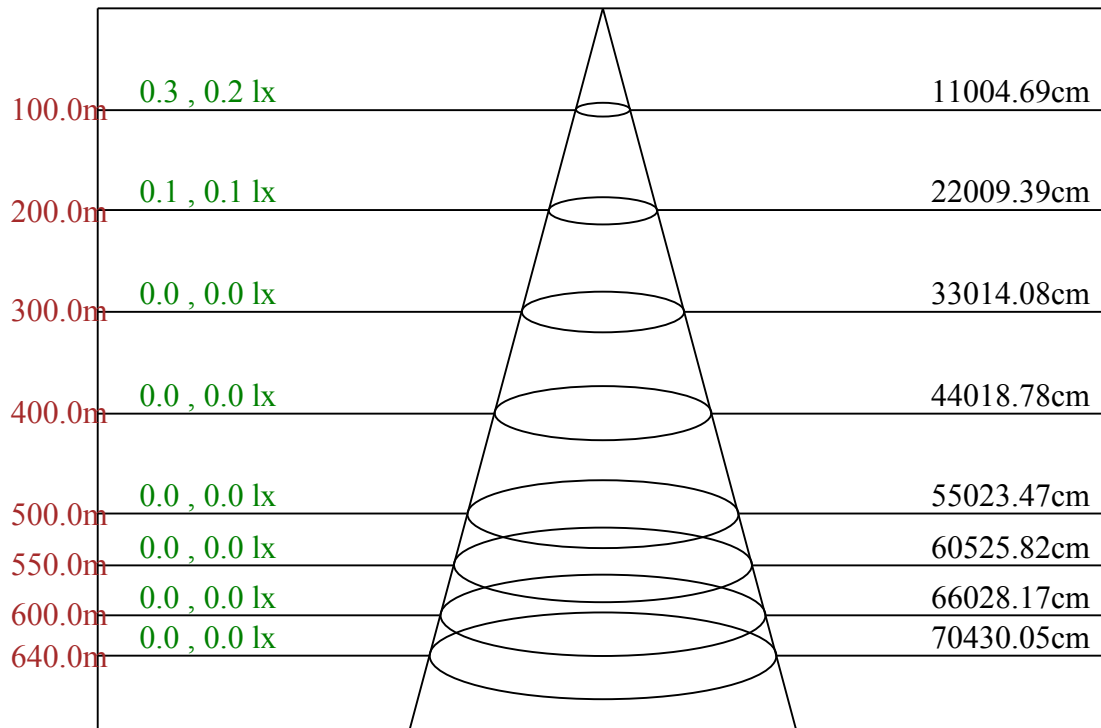
C90/C270:

Field angle(10%Imax):C0/180Left:40.3 Right:40.3

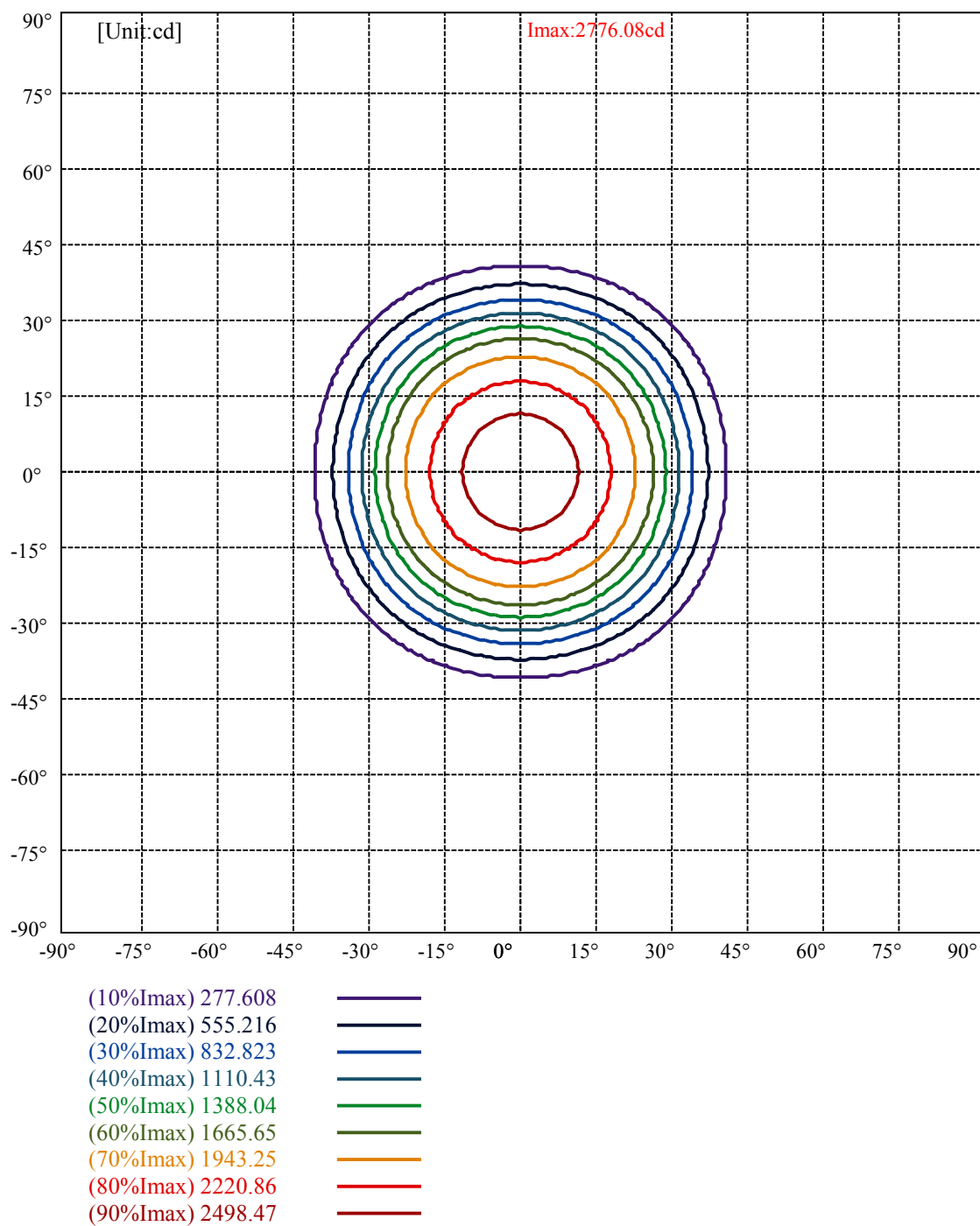
:C90/270Left:40.3 Right:40.3

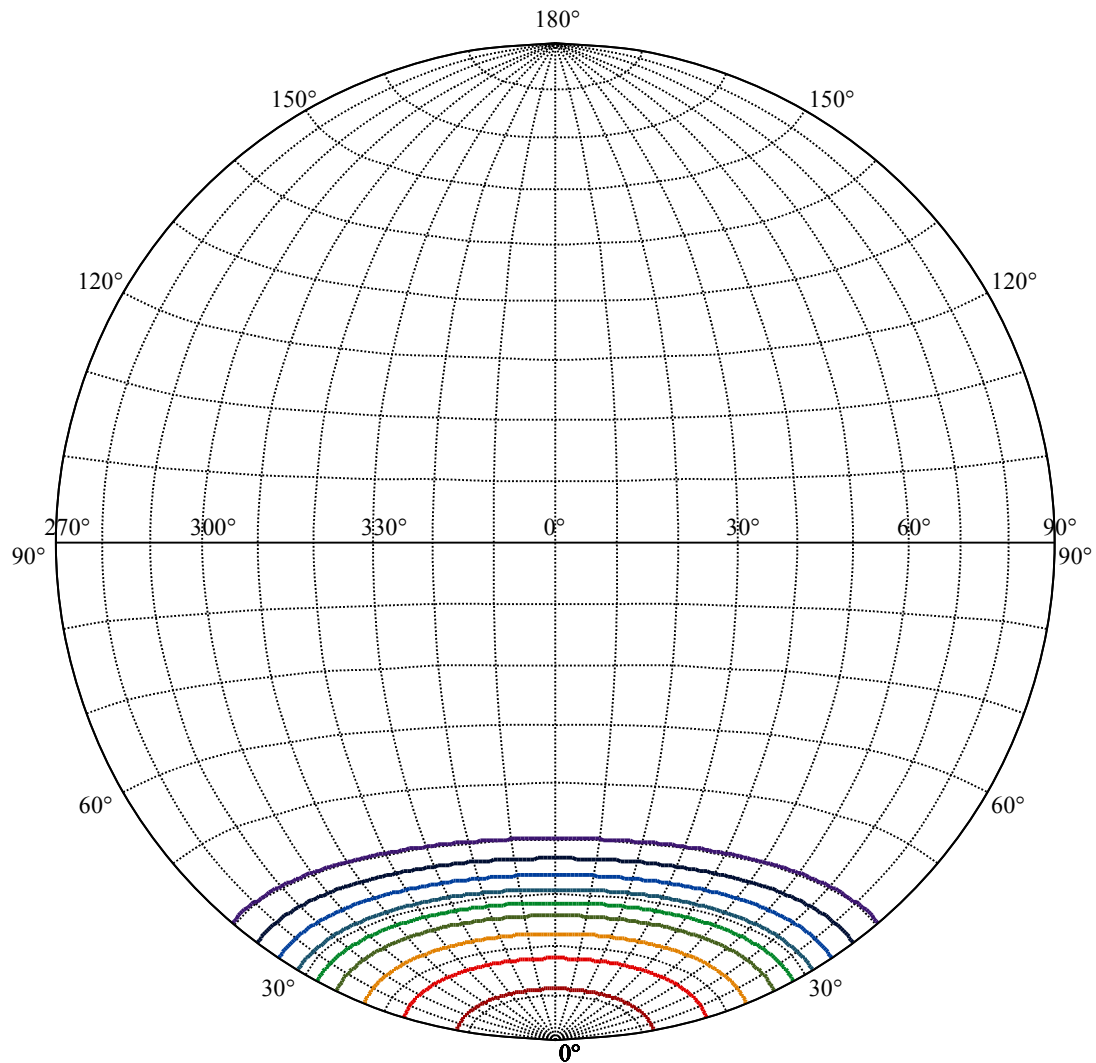
Beam Angle(50%Imax):C0/180Left:28.5 Right:28.5

:C90/270Left:28.5 Right:28.5



Max , Ave Beam angle of C0 plane 57.64





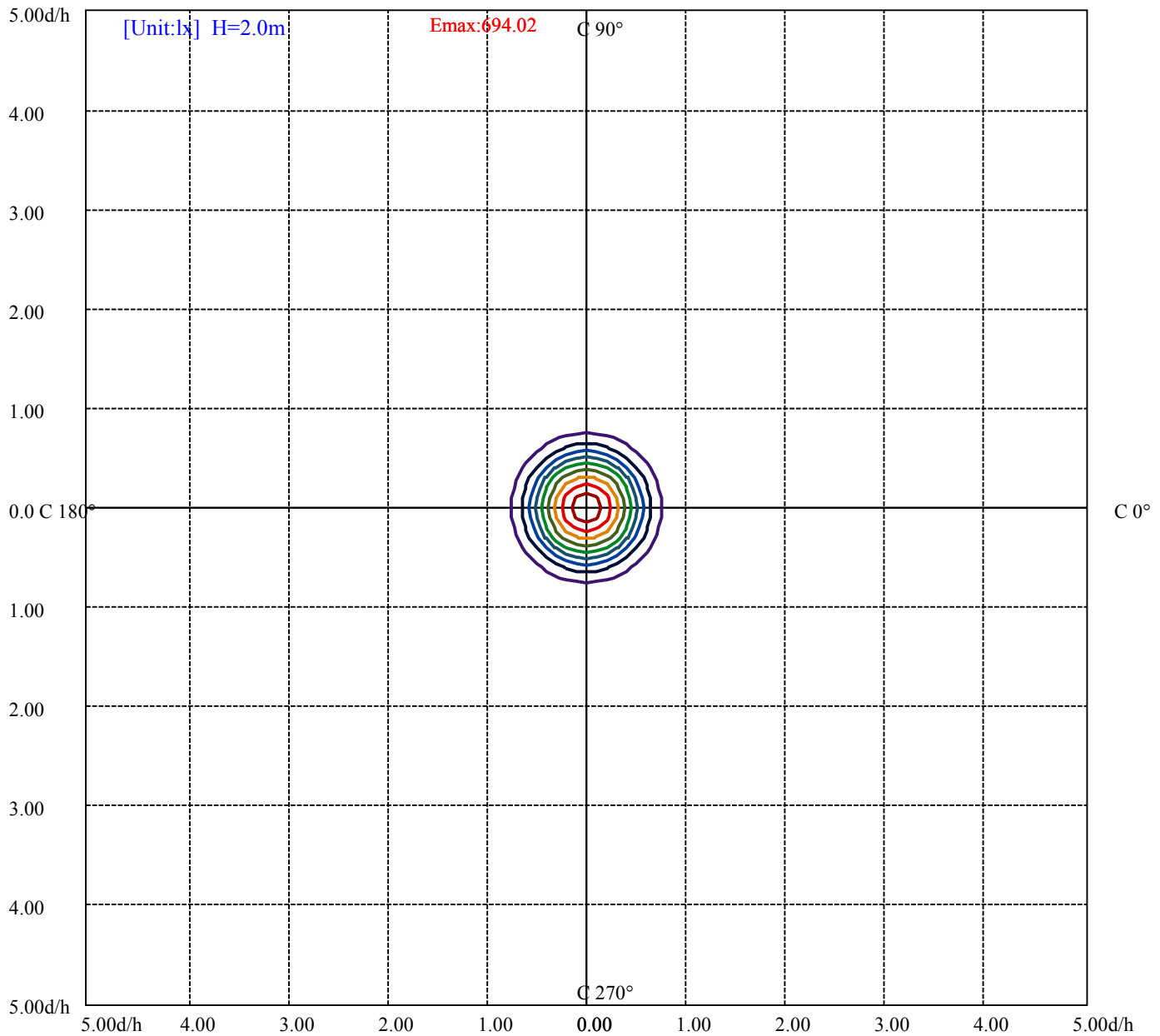
House

[Unit:cd]

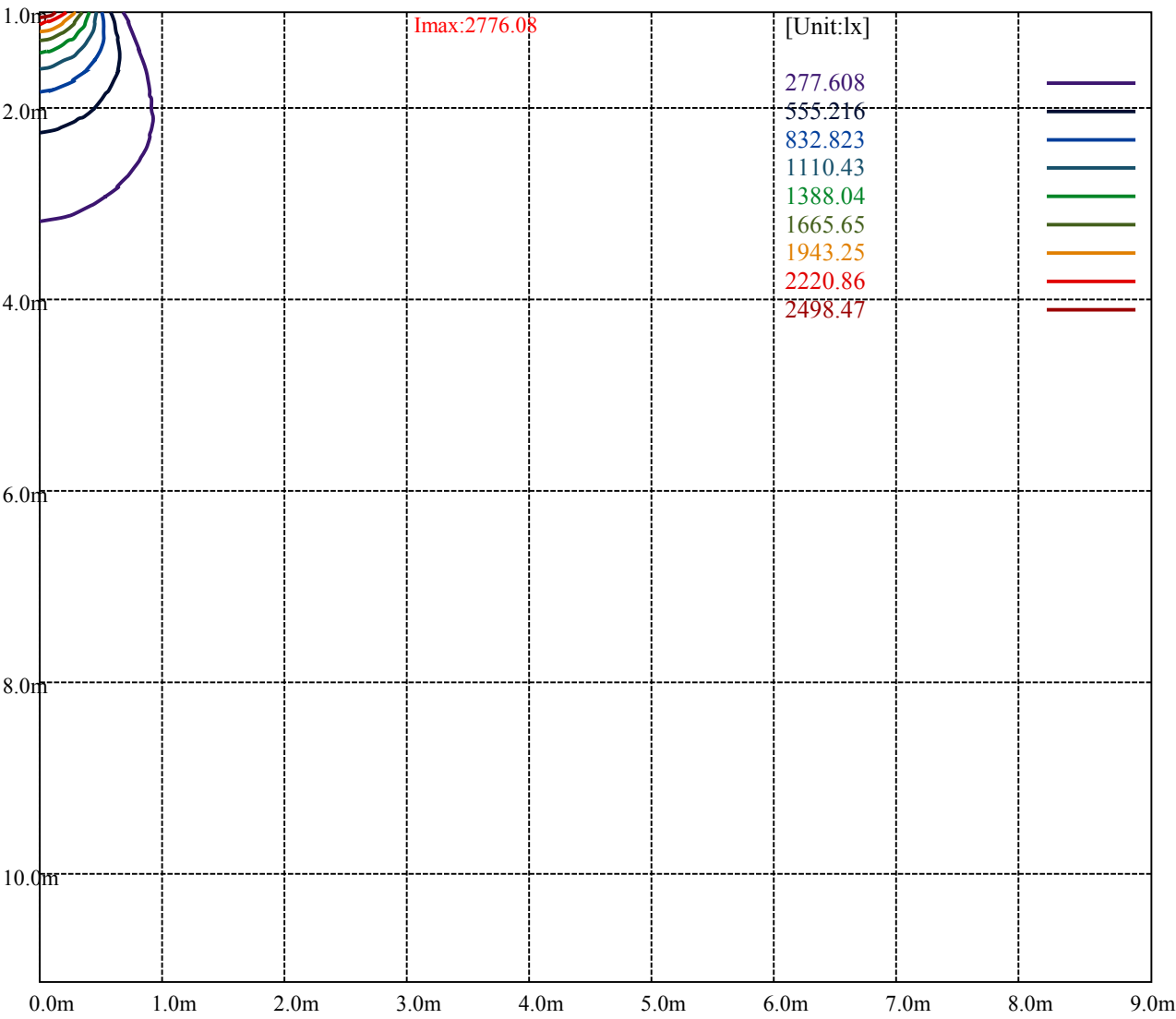
Road

Imax:2776.08

(10%Imax)	277.608	—
(20%Imax)	555.216	—
(30%Imax)	832.823	—
(40%Imax)	1110.43	—
(50%Imax)	1388.04	—
(60%Imax)	1665.65	—
(70%Imax)	1943.25	—
(80%Imax)	2220.86	—
(90%Imax)	2498.47	—



(10%Emax) 69.402	—
(20%Emax) 138.8038	—
(30%Emax) 208.2057	—
(40%Emax) 277.6075	—
(50%Emax) 347.01	—
(60%Emax) 416.4125	—
(70%Emax) 485.8125	—
(80%Emax) 555.215	—
(90%Emax) 624.6175	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

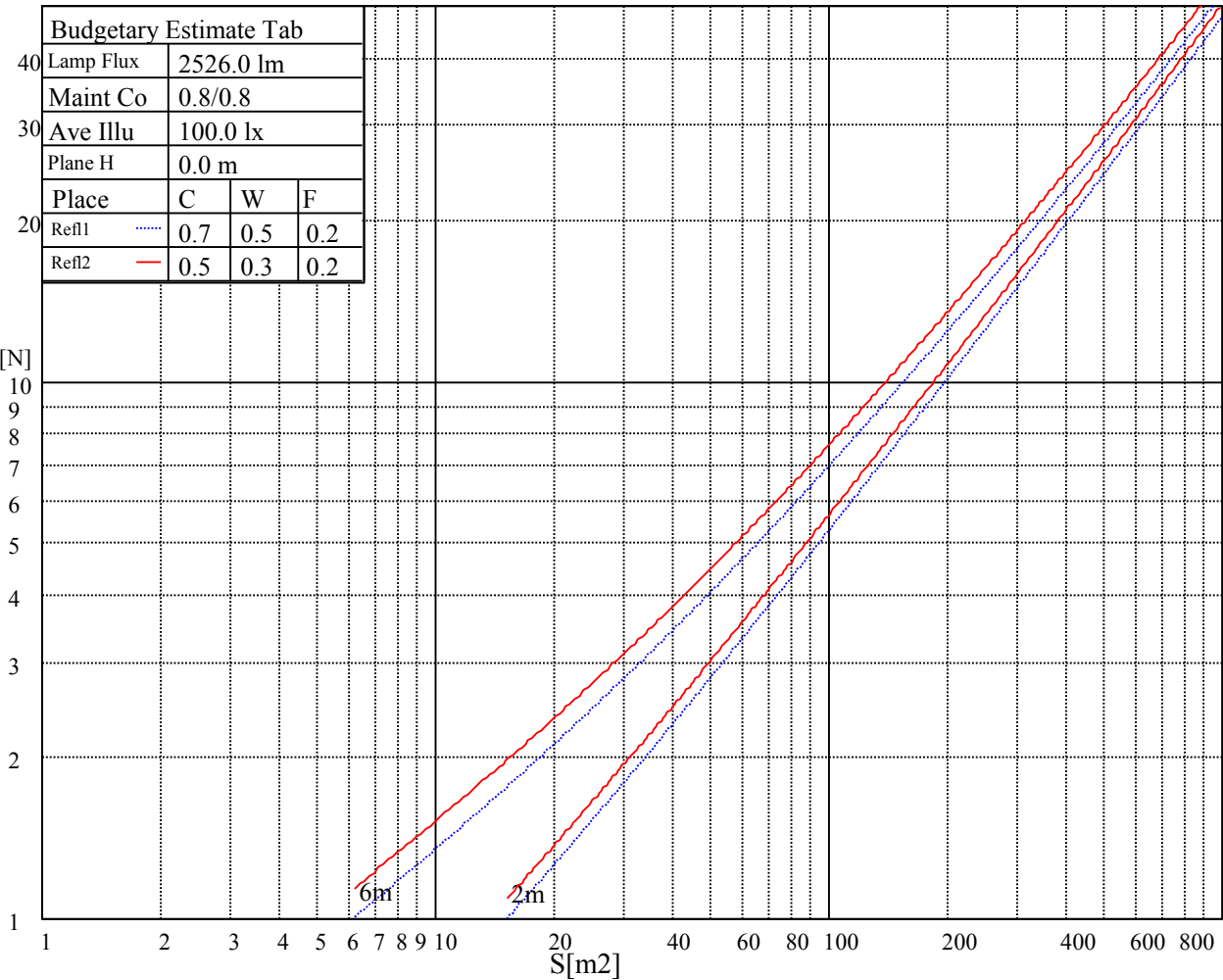
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

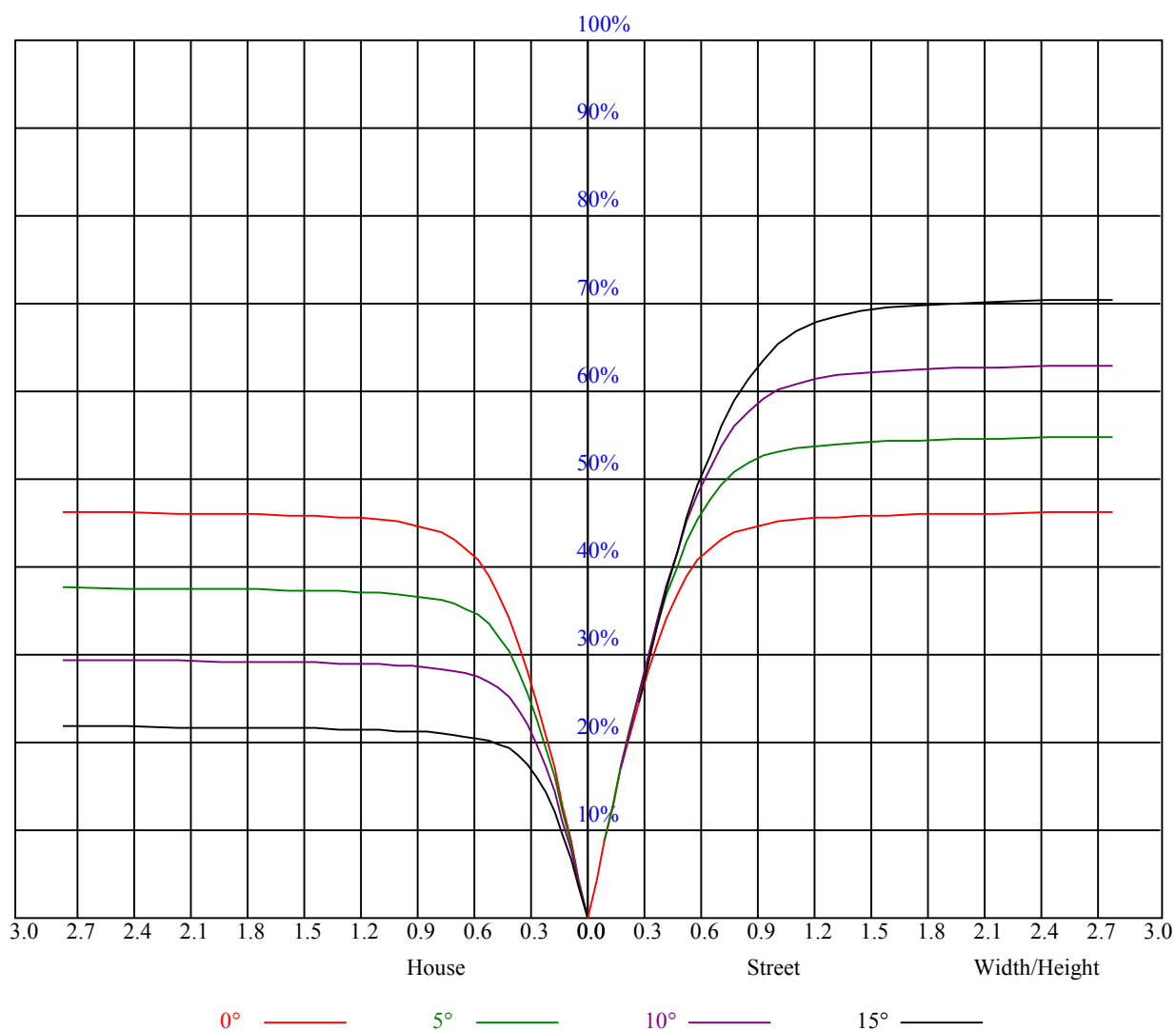
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.03	1.01	0.98	1.01	0.99	0.97	0.97	0.96	0.94	0.94	0.92	0.91	0.91	0.90	0.88	0.87
2	0.96	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.82	0.81
3	0.89	0.84	0.81	0.88	0.84	0.80	0.85	0.82	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.75
4	0.83	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.71	0.70
5	0.78	0.72	0.68	0.77	0.72	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.65
6	0.73	0.68	0.64	0.72	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.62	0.69	0.65	0.62	0.61
7	0.69	0.63	0.59	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.57
8	0.65	0.59	0.55	0.64	0.59	0.55	0.63	0.59	0.55	0.62	0.58	0.55	0.62	0.58	0.55	0.53
9	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
10	0.58	0.53	0.49	0.58	0.52	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.47



Intensity data(cd)										Appendix Page: 14 Total:14	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	2780.44	2709.56	2554.31	2351.81	2073.94	1796.06	1267.31	715.50	313.31		
45.0	2773.69	2685.94	2558.25	2363.06	2144.81	1805.63	1294.88	694.13	289.69		
90.0	2777.06	2680.31	2534.06	2339.44	2094.19	1737.00	1116.56	646.09	248.29		
135.0	2773.13	2715.19	2611.69	2448.56	2228.06	1919.81	1465.31	829.13	344.25		
180.0	2780.44	2718.56	2605.50	2411.44	2172.38	1836.56	1107.11	738.39	298.80		
225.0	2773.69	2691.56	2539.13	2345.63	2120.06	1784.81	1112.68	668.42	256.11		
270.0	2777.06	2705.63	2517.75	2284.31	2034.00	1733.06	1248.75	691.88	286.31		
315.0	2773.13	2676.38	2512.69	2260.69	1980.56	1652.63	1107.17	579.09	253.07		
360.0	2780.44	2709.56	2554.31	2351.81	2073.94	1796.06	1267.31	715.50	313.31		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	179.44	102.99	58.11	34.65	20.19	14.91	12.38	11.70	11.31		
45.0	137.25	75.99	46.69	30.83	20.64	16.20	13.78	12.38	11.03		
90.0	114.64	61.37	39.49	29.42	21.94	18.73	16.31	14.06	10.86		
135.0	163.86	89.16	46.01	26.66	16.99	14.29	11.87	11.19	10.74		
180.0	168.86	95.01	52.48	30.71	19.58	14.57	12.15	11.53	10.97		
225.0	122.74	68.85	42.02	27.84	19.63	15.13	12.60	11.76	10.97		
270.0	120.77	65.98	41.01	30.49	24.19	20.19	16.76	14.40	11.14		
315.0	135.45	78.08	46.13	29.48	19.35	14.68	12.60	11.48	10.97		
360.0	179.44	102.99	58.11	34.65	20.19	14.91	12.38	11.70	11.31		
C/ γ (°)	90.0										
0.0	9.90										
45.0	10.07										
90.0	10.01										
135.0	9.90										
180.0	9.90										
225.0	10.13										
270.0	10.07										
315.0	9.90										
360.0	9.90										