



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

Nata

Client:

LumCAT: 3-1882-L

Luminaire: 92.70.129.00

Report No: NT2018011014

Test No: GC2018011014

LampCAT: CREE CXA1820

Lamp flux(lm): 2182.0

Number of Lamps: 1

Length(mm): 74

Phm Type: C

Voltage(V): 37.1000

Current(A): 0.6500

Power (W): 24.1150

PF: 0.0000

Ballast type: DC

Width(mm): 74

Height(mm): 0

Photometric Results

Lumens(lm): 2144.05, Efficiency(%): 98.26% , Luminous Efficacy(lm/W): 88.91

Central intensity(cd): 10836.610, Maximum intensity(cd): 10836.610

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.2

[C90/270]Total=22.2

Field angle(10%Imax): [C0/180]Total=39.0

[C90/270]Total=39.0

Maximum s/h(1/2): C0_180=0.38 C90_270=0.38

Maximum s/h(1/4): C0_180=0.36 C90_270=0.36

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 101.14%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.793%

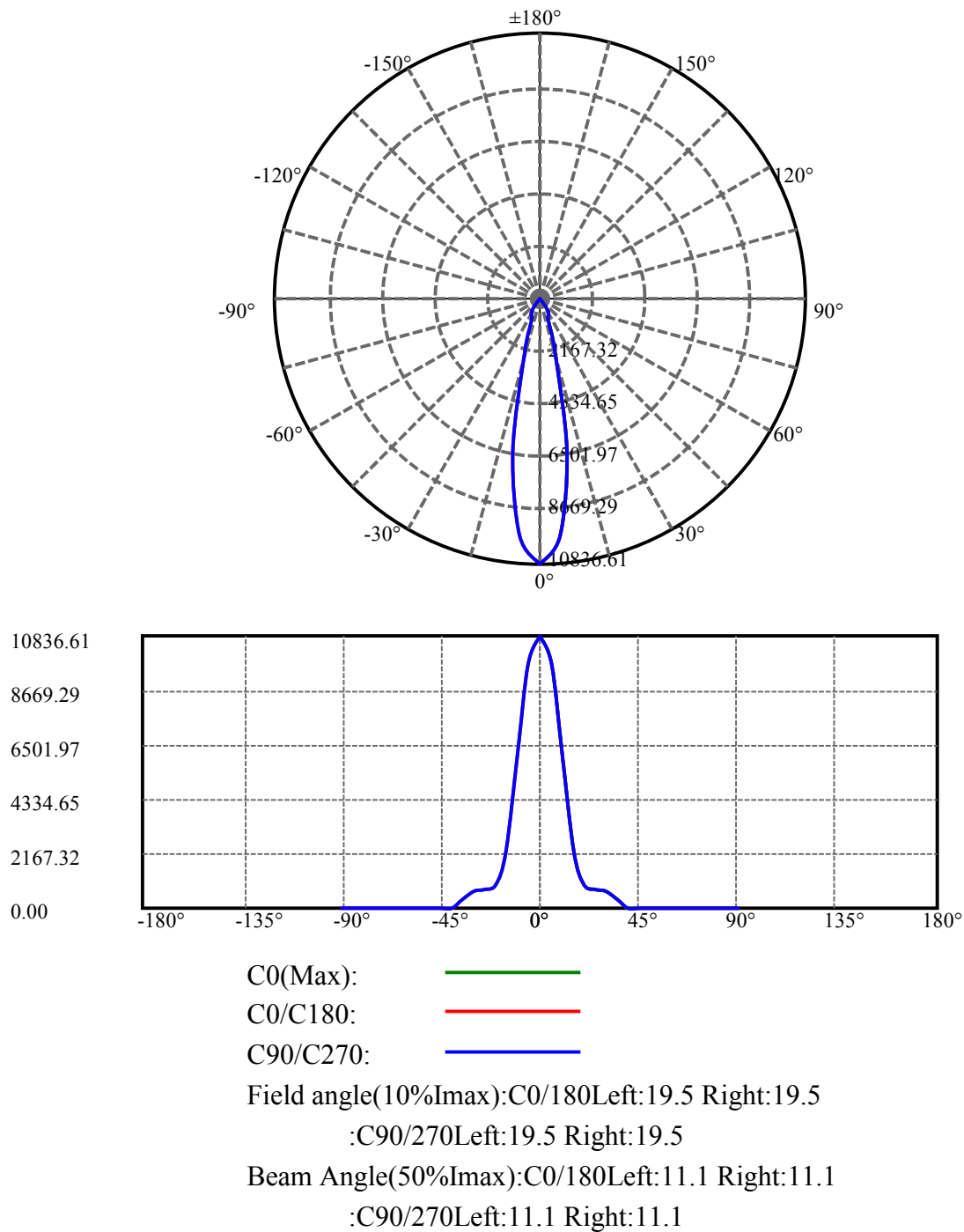
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10836.614	64.805	64.805	2.970%	3.023%
5.0	9725.575	464.623	529.428	21.293%	24.693%
10.0	6292.602	598.949	1128.377	27.450%	52.628%
15.0	2270.746	322.147	1450.524	14.764%	67.653%
20.0	964.113	180.746	1631.271	8.284%	76.084%
25.0	747.969	173.269	1804.54	7.941%	84.165%
30.0	662.611	181.601	1986.141	8.323%	92.635%
35.0	305.281	95.980	2082.12	4.399%	97.111%
40.0	25.491	8.981	2091.102	.412%	97.530%
45.0	15.381	5.962	2097.064	.273%	97.808%
50.0	13.654	5.733	2102.797	.263%	98.076%
55.0	12.477	5.602	2108.399	.257%	98.337%
60.0	11.727	5.567	2113.966	.255%	98.597%
65.0	11.156	5.542	2119.508	.254%	98.855%
70.0	10.653	5.487	2124.995	.251%	99.111%
75.0	10.296	5.451	2130.446	.250%	99.365%
80.0	10.096	5.450	2135.896	.250%	99.620%
85.0	9.986	5.453	2141.349	.250%	99.874%
90.0	9.862	2.703	2144.052	.124%	100.000%

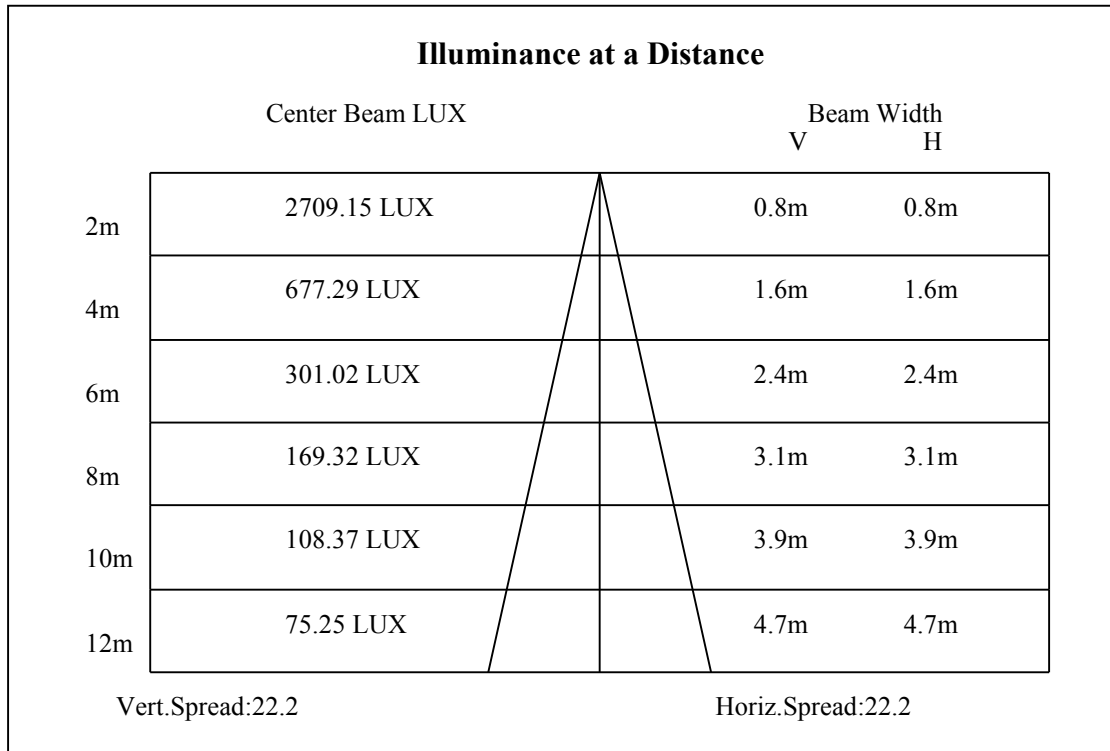
ZONAL LUMEN SUMMARY

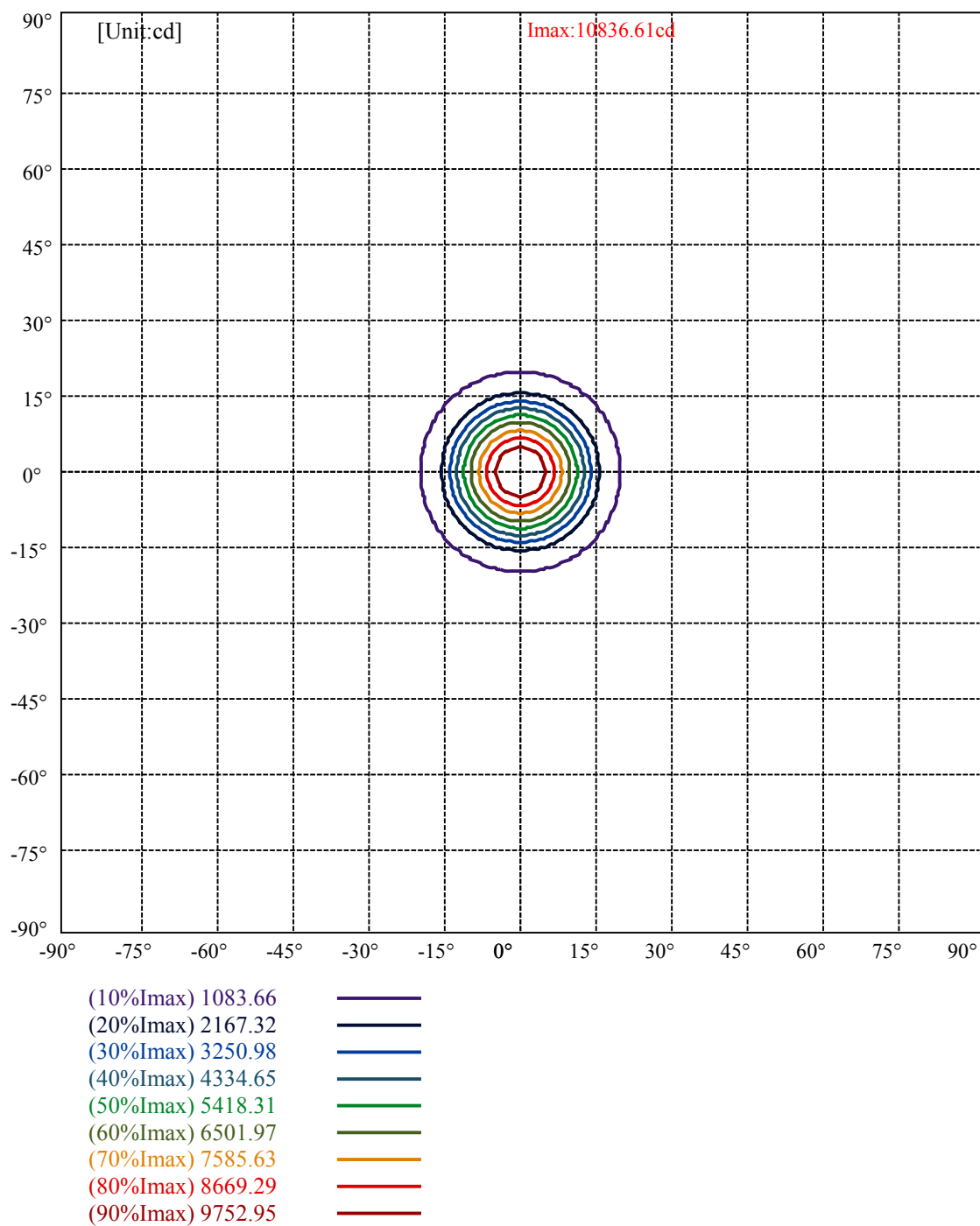
Zone	Lumens	%Lamp	%Fixt
0-30	1986.14	91.02%	92.63%
0-40	2091.10	95.83%	97.53%
0-60	2113.97	96.88%	98.60%
0-90	2141.35	98.14%	99.87%
0-120	2141.35	98.14%	99.87%
0-180	2144.05	98.26%	100.00%
60-90	32.95	1.51%	1.54%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.42	1715.24	78.61%	80.00%

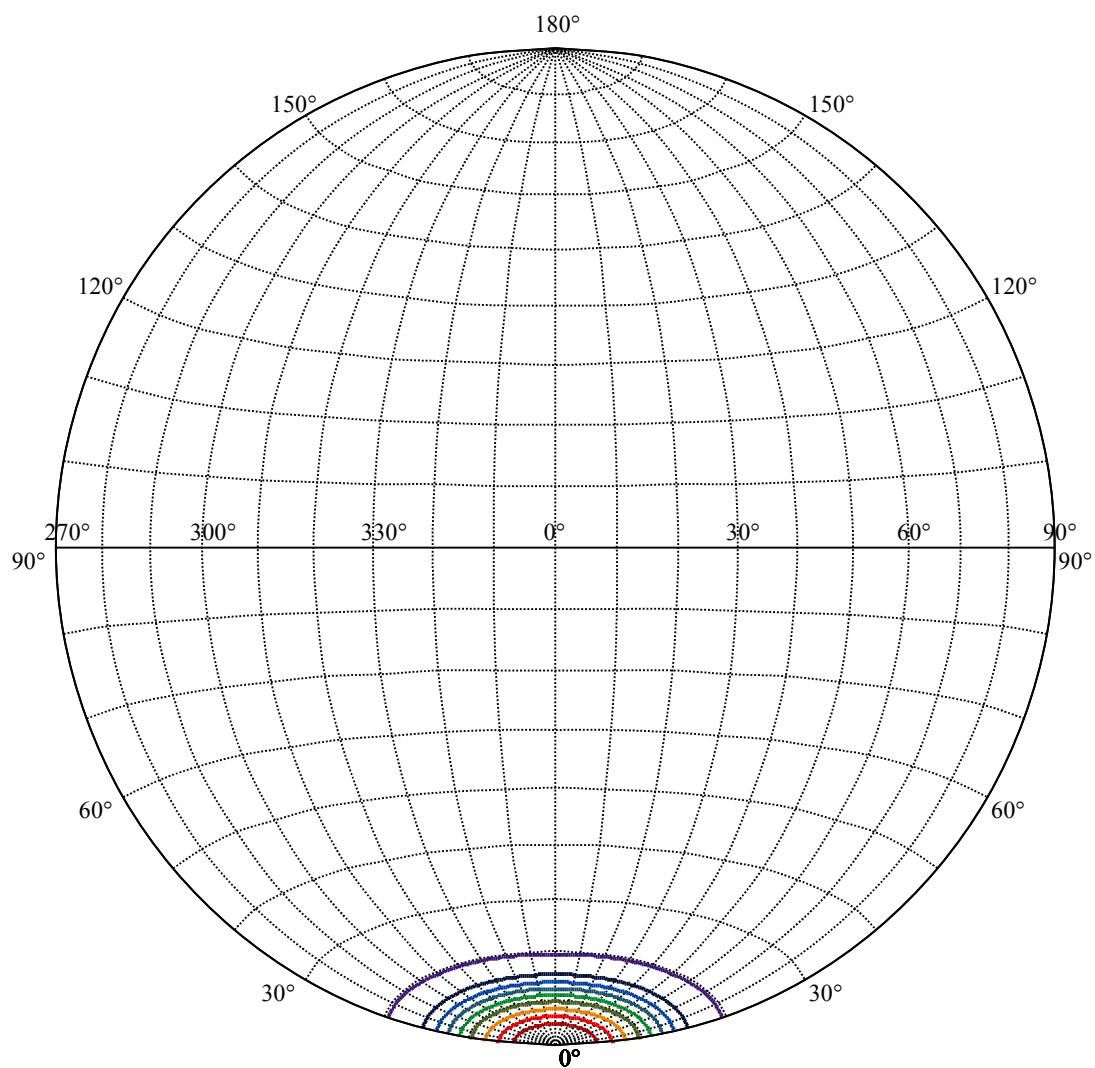
ZONAL LUMEN SUMMARY

0-10	1128.38
10-20	502.89
20-30	354.87
30-40	104.96
40-50	11.69
50-60	11.17
60-70	11.03
70-80	10.90
80-90	5.45
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









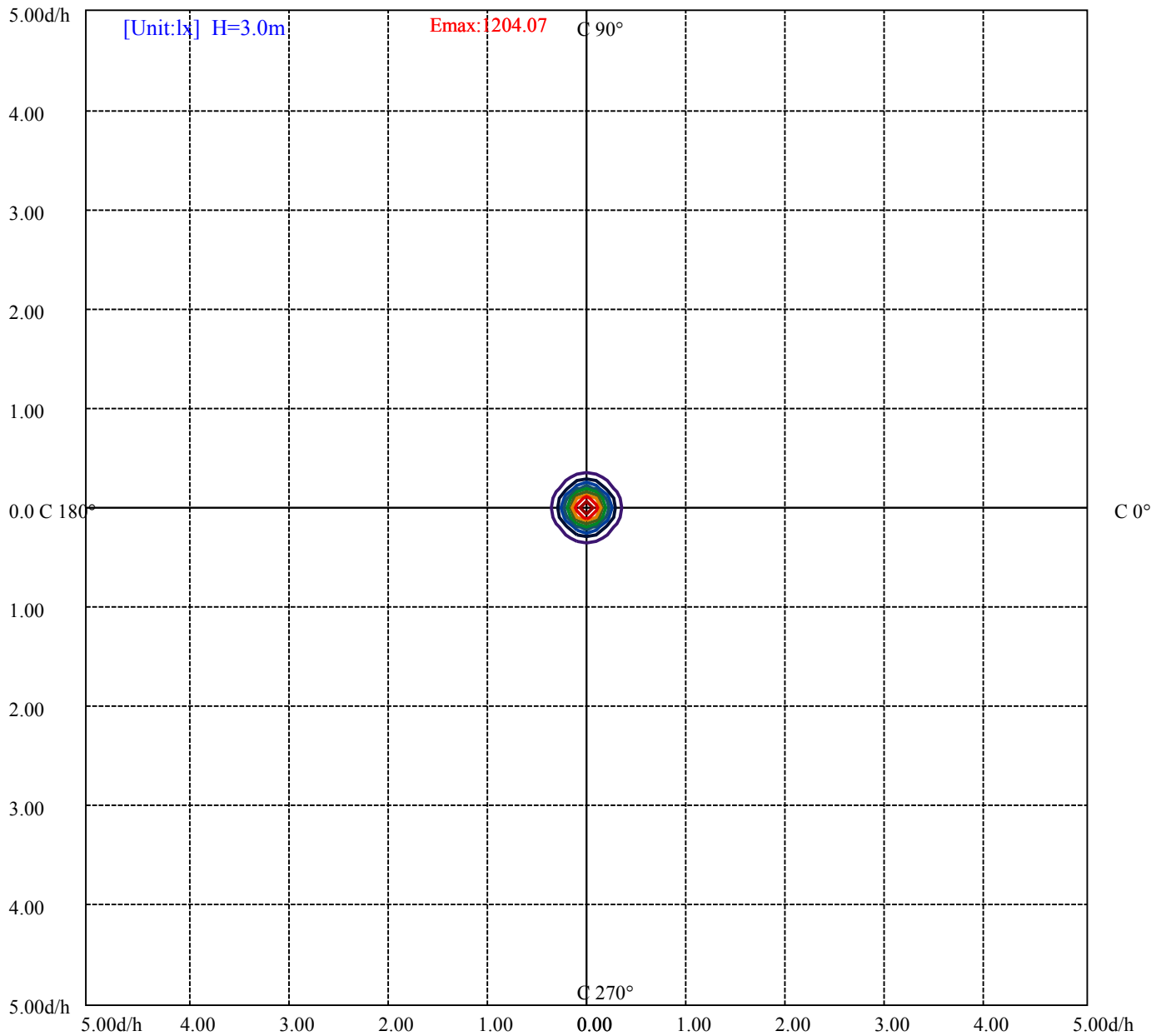
House

[Unit:cd]

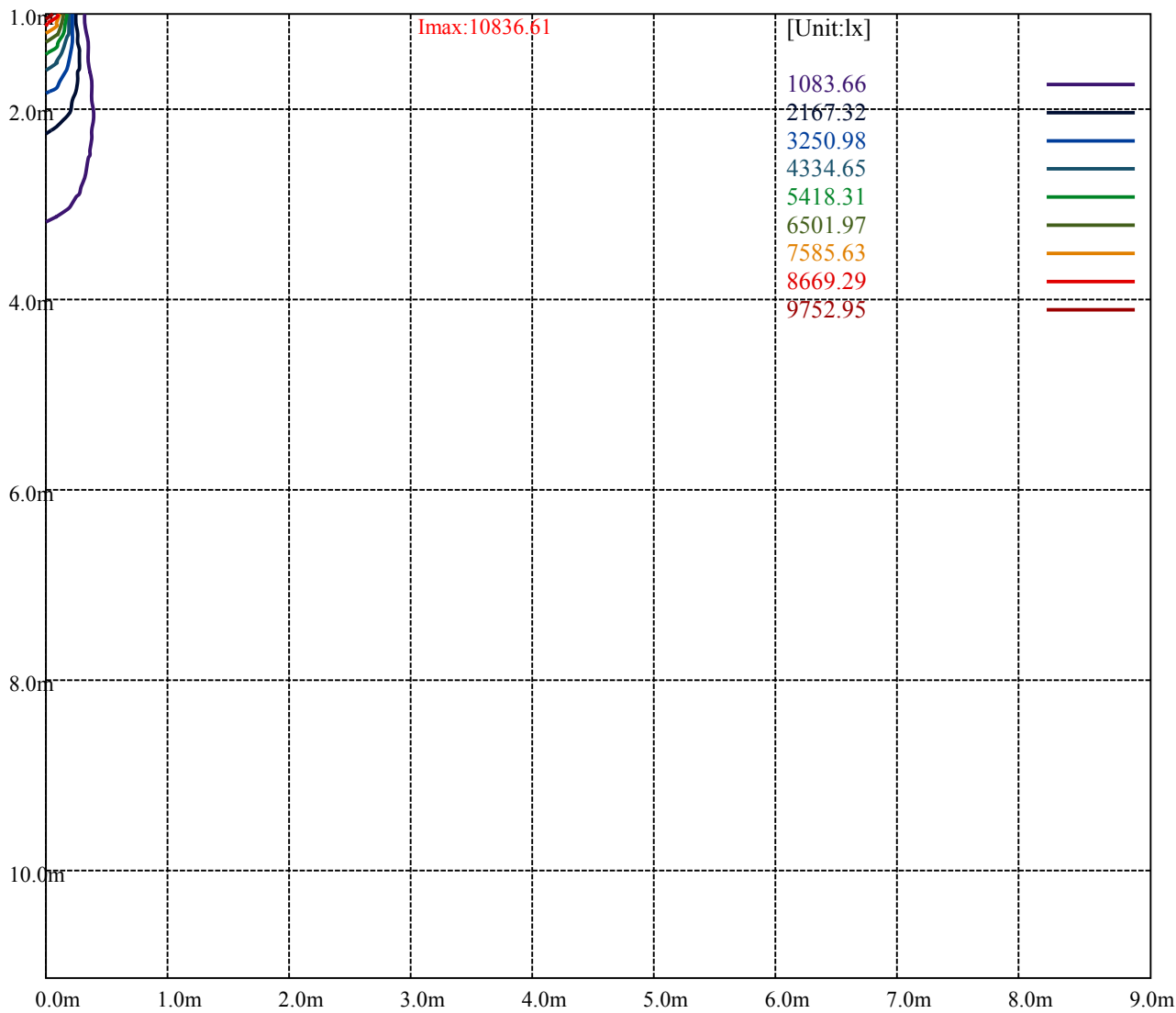
Road

Imax:10836.61

(10%Imax)	1083.66	—
(20%Imax)	2167.32	—
(30%Imax)	3250.98	—
(40%Imax)	4334.65	—
(50%Imax)	5418.31	—
(60%Imax)	6501.97	—
(70%Imax)	7585.63	—
(80%Imax)	8669.29	—
(90%Imax)	9752.95	—



(10%Emax)	120.4067	—
(20%Emax)	240.8133	—
(30%Emax)	361.2189	—
(40%Emax)	481.6255	—
(50%Emax)	602.0322	—
(60%Emax)	722.4389	—
(70%Emax)	842.8455	—
(80%Emax)	963.2511	—
(90%Emax)	1083.658	—



Luminance Table

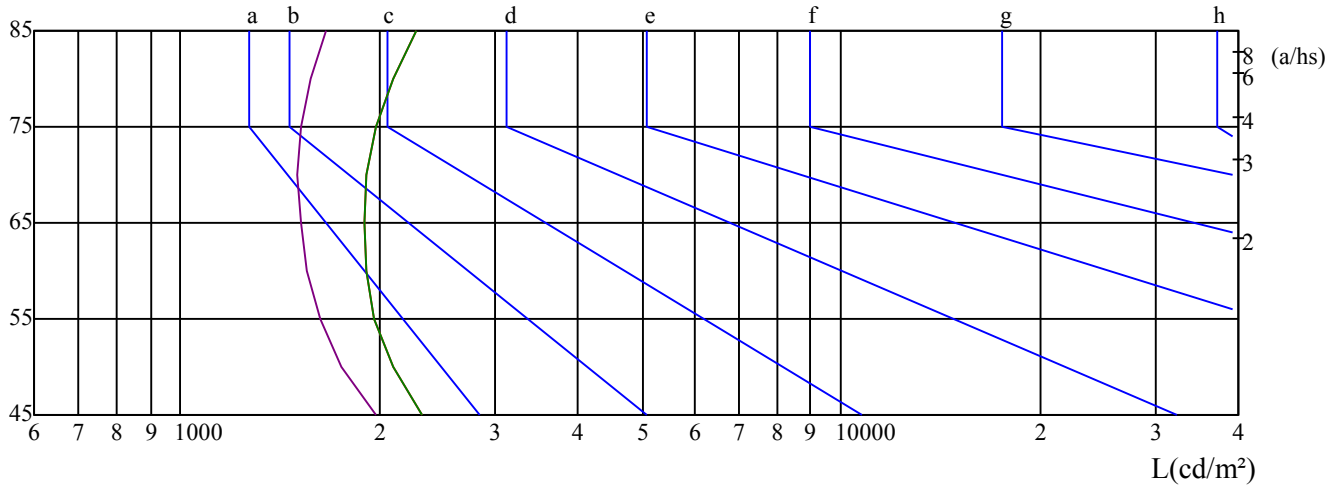
γ	45	50	55	60	65	70	75	80	85
C0	2315	2093	1964	1912	1901	1917	1978	2098	2278
C45	1973	1758	1624	1555	1520	1504	1520	1574	1664
C90	2315	2093	1964	1912	1901	1917	1978	2098	2278

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4820	4820	4820	7264	7264	7264	20923	20923	20923

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

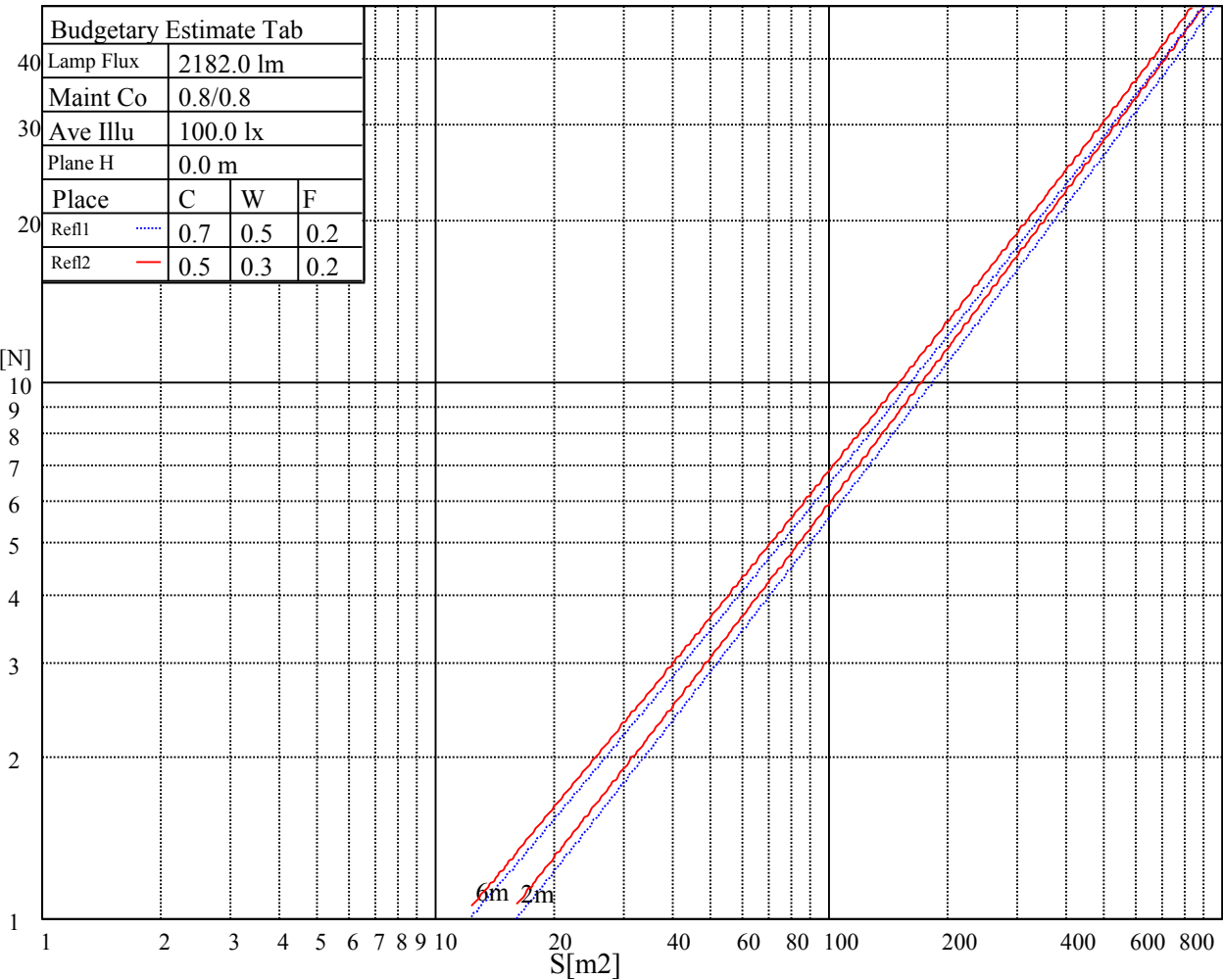
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

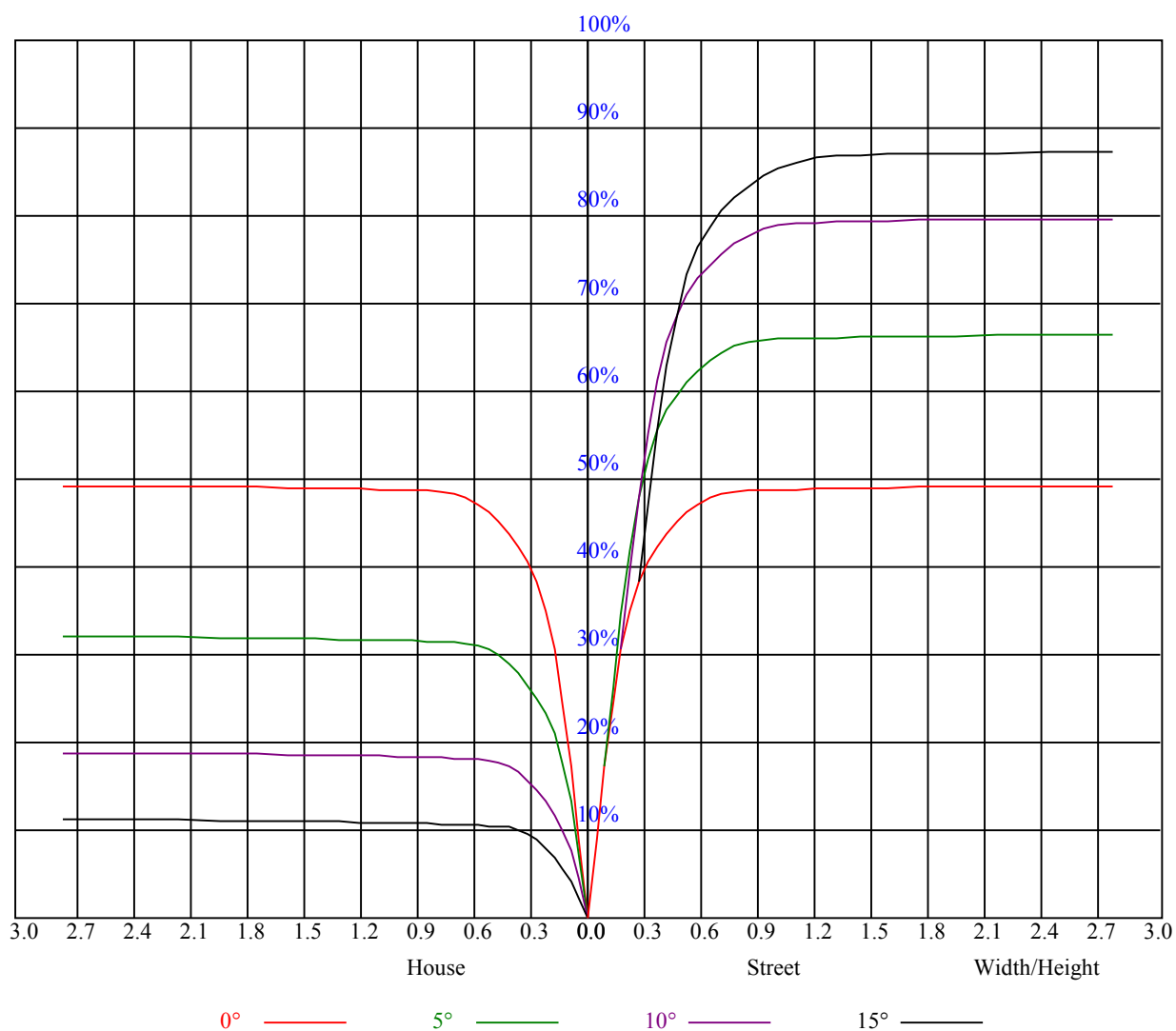
C0 ———

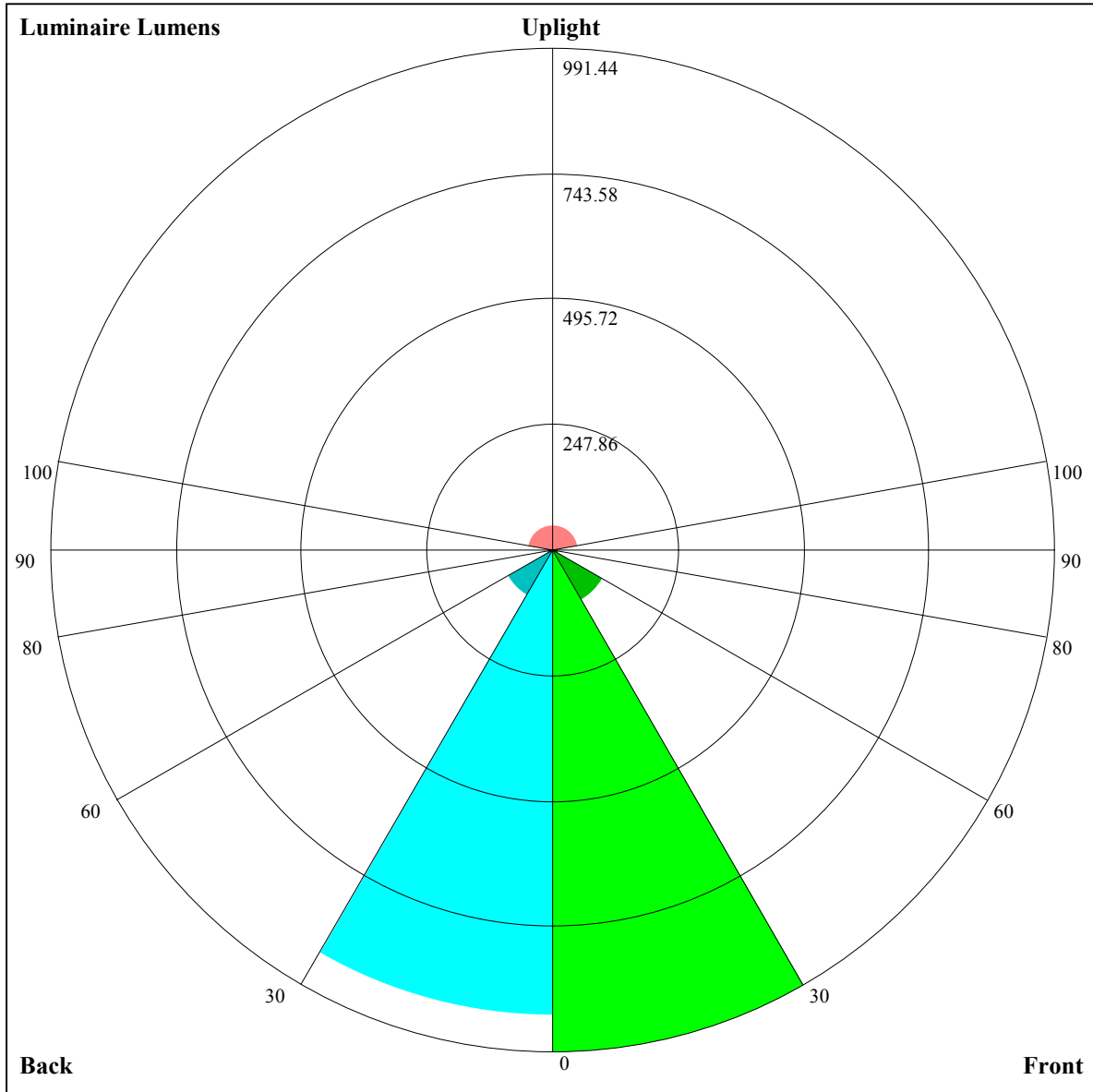
C45 ———

C90 ———



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	1.20	1.20	1.20	1.18	1.18	1.18	1.12	1.12	1.12	1.08	1.08	1.08	1.03	1.03	1.03	1.01
1	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	1.00	1.00	0.98	0.97	0.96	0.95	0.94	0.92
2	1.05	1.01	0.98	1.03	1.00	0.97	1.00	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.89
3	1.01	0.96	0.93	0.99	0.95	0.92	0.97	0.93	0.91	0.94	0.91	0.89	0.92	0.90	0.88	0.86
4	0.97	0.92	0.89	0.96	0.92	0.88	0.94	0.90	0.87	0.92	0.89	0.86	0.90	0.87	0.85	0.84
5	0.93	0.89	0.86	0.93	0.88	0.85	0.91	0.87	0.84	0.89	0.86	0.84	0.88	0.85	0.83	0.82
6	0.91	0.86	0.83	0.90	0.86	0.82	0.88	0.85	0.82	0.87	0.84	0.81	0.86	0.83	0.81	0.80
7	0.88	0.83	0.80	0.87	0.83	0.80	0.86	0.82	0.80	0.85	0.82	0.79	0.84	0.81	0.79	0.78
8	0.86	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.80	0.78	0.82	0.79	0.77	0.76
9	0.83	0.79	0.76	0.83	0.79	0.76	0.82	0.79	0.76	0.81	0.78	0.76	0.81	0.78	0.76	0.75
10	0.82	0.77	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.73





Luminaire Lumens:

FL=991.44,FM=115.14,FH=10.97,FVH=5.44

BL=917.92,BM=104.44,BH=10.94,BVH=5.44

UL=10.76,UH=51.2

BUG Rating:B2-U2-G0

Intensity data(cd)										Appendix Page: 15 Total:15	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	10819.13	10140.29	7383.06	2996.17	1049.93	784.00	697.56	410.17	29.84		
45.0	10873.09	9562.20	5892.69	1923.67	909.53	746.01	677.19	280.79	26.81		
90.0	10750.86	8927.95	4617.03	1078.66	835.04	708.85	589.71	138.80	16.85		
135.0	10903.37	9350.78	5664.75	1844.94	879.25	717.94	649.67	286.84	18.39		
180.0	10819.13	9227.45	5145.57	1352.19	857.83	708.52	625.39	172.99	17.73		
225.0	10873.09	9967.41	6507.12	2546.91	985.18	754.33	678.96	321.42	26.32		
270.0	10750.86	10491.55	7963.91	3575.91	1177.11	796.67	695.36	473.49	44.38		
315.0	10903.37	10136.98	7166.69	2847.52	1019.04	767.43	687.05	357.76	23.62		
360.0	10819.13	10140.29	7383.06	2996.17	1049.93	784.00	697.56	410.17	29.84		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	14.81	12.94	11.95	11.40	11.01	10.57	10.30	10.13	10.02		
45.0	19.38	16.74	14.65	13.21	12.00	11.18	10.52	10.08	9.91		
90.0	13.32	12.22	11.51	11.12	10.63	10.30	10.13	9.97	9.91		
135.0	13.65	12.33	11.56	11.12	10.79	10.46	10.24	10.13	10.02		
180.0	13.71	12.44	11.56	11.12	10.74	10.41	10.19	10.08	10.02		
225.0	19.38	16.96	14.81	13.27	12.17	11.23	10.57	10.19	9.97		
270.0	14.59	12.94	11.95	11.29	10.96	10.52	10.19	10.08	9.97		
315.0	14.20	12.66	11.84	11.29	10.96	10.57	10.24	10.13	10.08		
360.0	14.81	12.94	11.95	11.40	11.01	10.57	10.30	10.13	10.02		
C/ γ (°)	90.0										
0.0	9.97										
45.0	9.74										
90.0	9.86										
135.0	9.86										
180.0	9.91										
225.0	9.74										
270.0	9.91										
315.0	9.91										
360.0	9.97										