



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

Nata

Client:

LumCAT: 2-1284-N

Luminaire: 92.70.125.00

Report No: nata-0100

Test No: GC2018060415

LampCAT: NICHIA NTCWS024B-V3

Lamp flux(lm): 1044.0

Number of Lamps: 1

Length(mm): 57

Phm Type: C

Voltage(V): 36.4000

Current(A): 0.2900

Power (W): 10.5560

PF: 0.0000

Ballast type: DC

Width(mm): 57

Height(mm): 0

Photometric Results

Lumens(lm): 838.65, Efficiency(%): 80.33% , Luminous Efficacy(lm/W): 79.45

Central intensity(cd): 3306.275, Maximum intensity(cd): 3306.275

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=20.0

[C90/270]Total=20.0

Field angle(10%Imax): [C0/180]Total=59.0

[C90/270]Total=59.0

Maximum s/h(1/2): C0_180=0.34 C90_270=0.34

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 80.62%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.951%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3306.274	3.164	3.164	.303%	.377%
2.0	3230.159	24.723	27.887	2.368%	3.325%
4.0	2988.461	45.719	73.606	4.379%	8.777%
6.0	2618.826	60.035	133.642	5.751%	15.935%
8.0	2136.601	65.214	198.856	6.247%	23.712%
10.0	1655.202	63.036	261.892	6.038%	31.228%
12.0	1314.265	59.928	321.819	5.740%	38.374%
14.0	1070.000	56.771	378.59	5.438%	45.143%
16.0	898.789	54.333	432.923	5.204%	51.622%
18.0	754.066	51.104	484.027	4.895%	57.715%
20.0	637.271	47.801	531.829	4.579%	63.415%
22.0	548.458	45.059	576.888	4.316%	68.788%
24.0	477.752	42.617	619.505	4.082%	73.869%
26.0	422.709	40.640	660.144	3.893%	78.715%
28.0	373.172	38.422	698.566	3.680%	83.297%
30.0	316.182	34.671	733.238	3.321%	87.431%
32.0	226.984	26.380	759.618	2.527%	90.577%
34.0	120.704	14.803	774.421	1.418%	92.342%
36.0	53.425	6.887	781.308	.660%	93.163%
38.0	33.116	4.471	785.779	.428%	93.696%
40.0	25.422	3.584	789.363	.343%	94.123%
42.0	21.444	3.147	792.51	.301%	94.499%
44.0	18.939	2.885	795.395	.276%	94.843%
46.0	17.267	2.724	798.119	.261%	95.167%
48.0	16.187	2.638	800.758	.253%	95.482%
50.0	15.602	2.621	803.379	.251%	95.795%
52.0	15.278	2.640	806.019	.253%	96.109%
54.0	14.851	2.635	808.654	.252%	96.424%
56.0	14.122	2.568	811.222	.246%	96.730%
58.0	13.227	2.460	813.682	.236%	97.023%
60.0	12.312	2.338	816.02	.224%	97.302%
62.0	11.410	2.210	818.23	.212%	97.565%
64.0	10.612	2.092	820.322	.200%	97.815%
66.0	9.924	1.988	822.31	.190%	98.052%
68.0	9.497	1.931	824.241	.185%	98.282%
70.0	8.616	1.776	826.017	.170%	98.494%
72.0	7.839	1.635	827.652	.157%	98.689%
74.0	7.653	1.613	829.265	.155%	98.881%

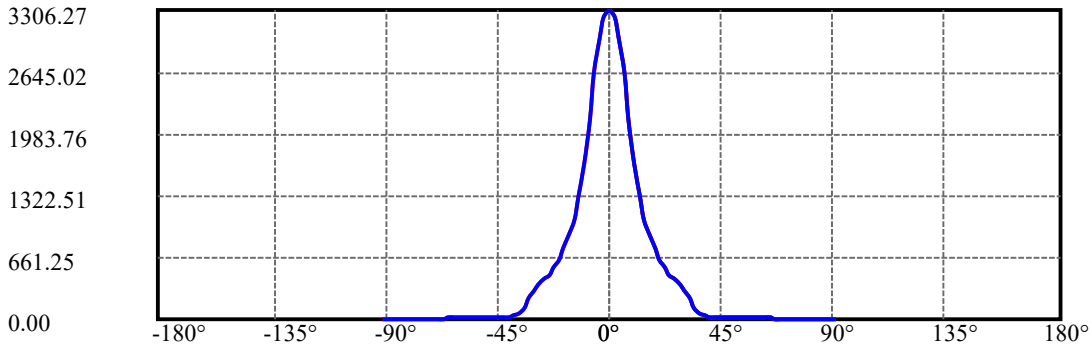
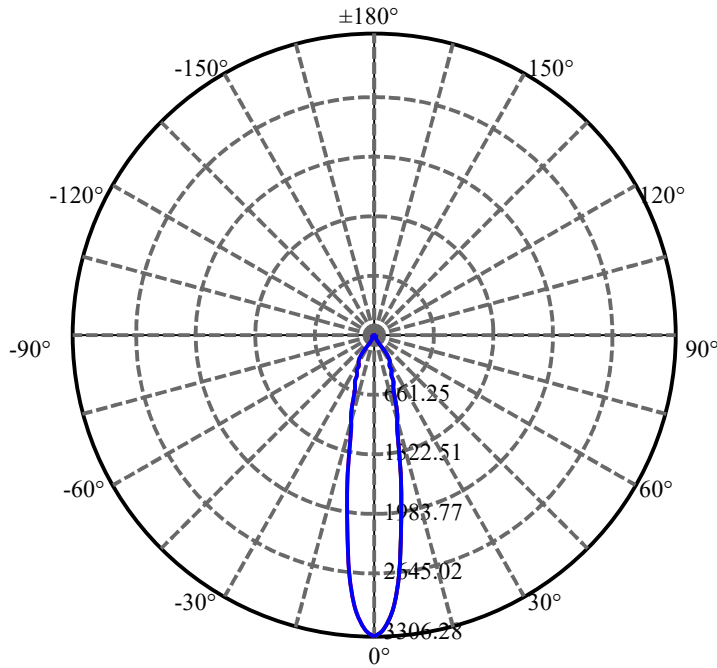
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.302	1.554	830.819	.149%	99.067%
78.0	6.848	1.469	832.288	.141%	99.242%
80.0	6.290	1.359	833.647	.130%	99.404%
82.0	5.987	1.300	834.947	.125%	99.559%
84.0	5.671	1.237	836.184	.118%	99.706%
86.0	5.265	1.152	837.336	.110%	99.844%
88.0	4.067	0.891	838.227	.085%	99.950%
90.0	3.833	0.420	838.647	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	733.24	70.23%	87.43%
0-40	789.36	75.61%	94.12%
0-60	816.02	78.16%	97.30%
0-90	838.23	80.29%	99.95%
0-120	838.23	80.29%	99.95%
0-180	838.65	80.33%	100.00%
60-90	24.55	2.35%	2.93%
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%
0-26.56	670.92	64.26%	80.00%

ZONAL LUMEN SUMMARY

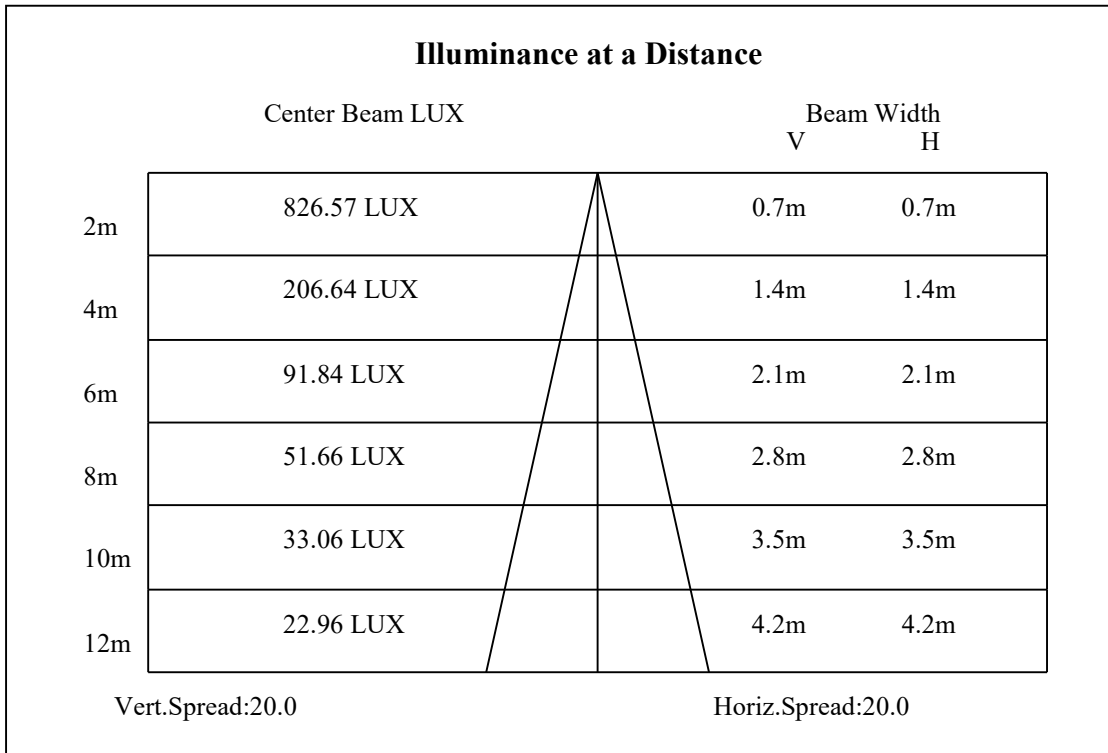
0-10	261.89
10-20	269.94
20-30	201.41
30-40	56.13
40-50	14.02
50-60	12.64
60-70	10.00
70-80	7.63
80-90	4.58
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

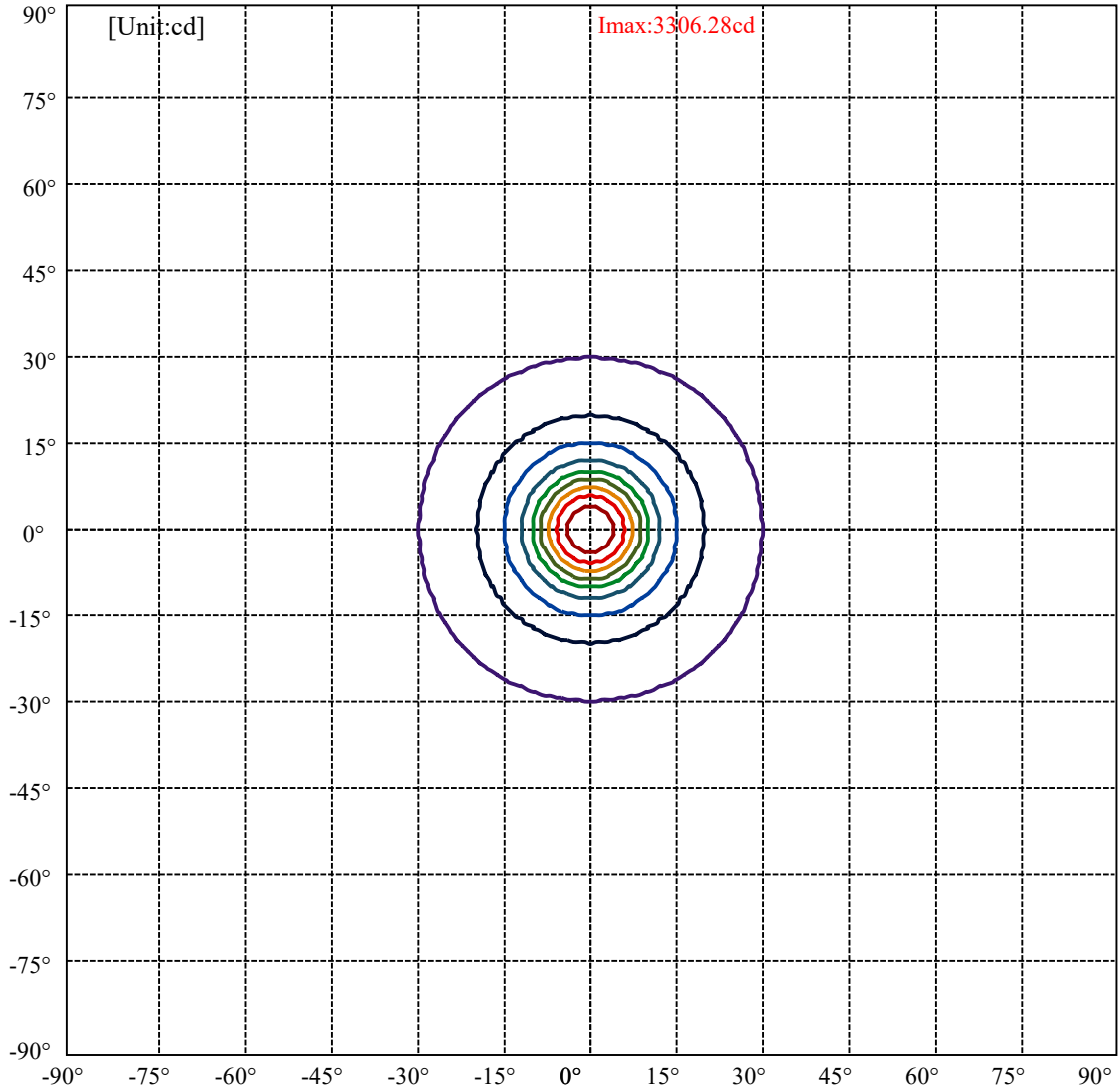


C0(Max): —————
C0/C180: —————
C90/C270: —————

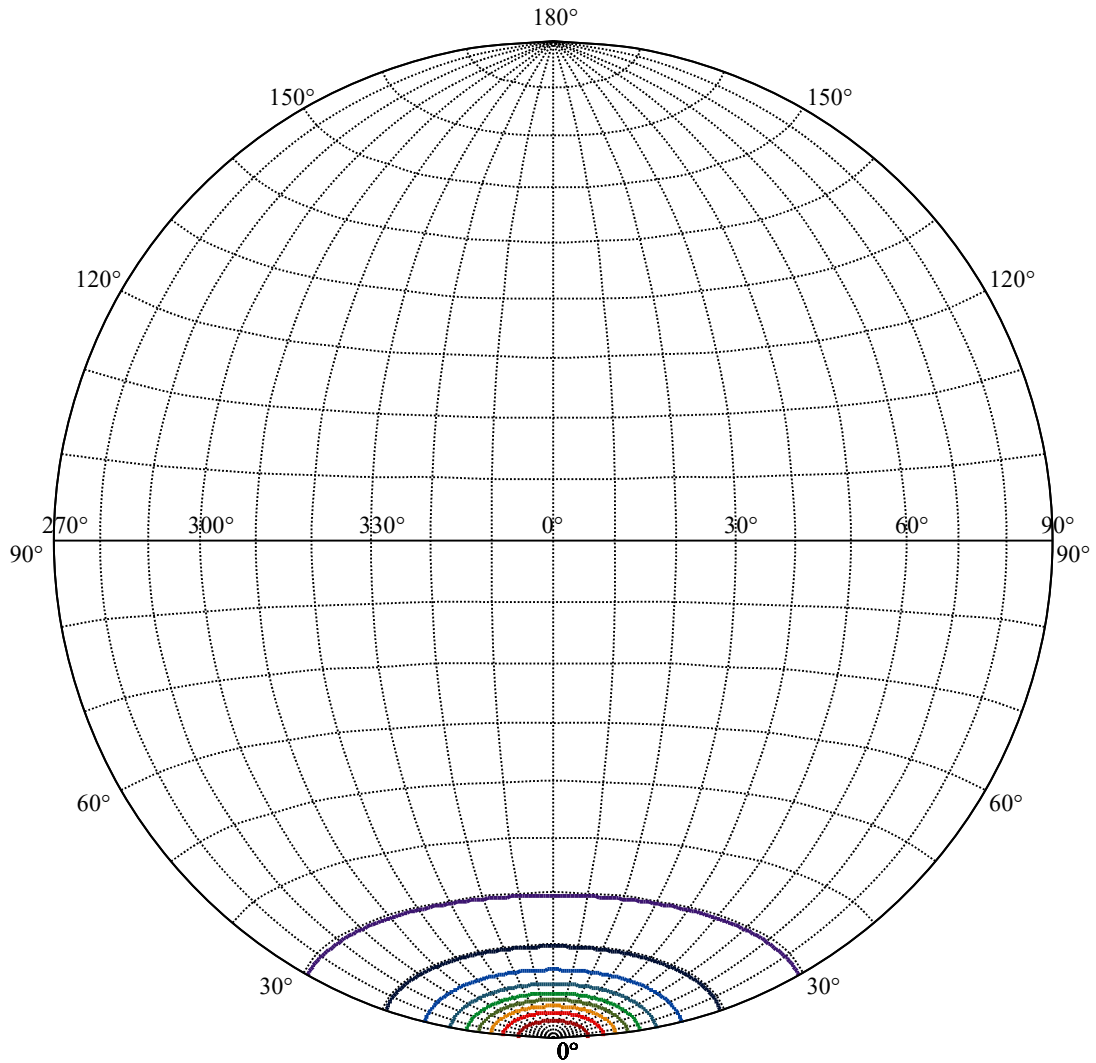
Field angle(10%Imax):C0/180Left:29.5 Right:29.5
:C90/270Left:29.5 Right:29.5

Beam Angle(50%Imax):C0/180Left:10.0 Right:10.0
:C90/270Left:10.0 Right:10.0





(10%Imax) 330.627	—
(20%Imax) 661.255	—
(30%Imax) 991.882	—
(40%Imax) 1322.51	—
(50%Imax) 1653.14	—
(60%Imax) 1983.76	—
(70%Imax) 2314.39	—
(80%Imax) 2645.02	—
(90%Imax) 2975.65	—



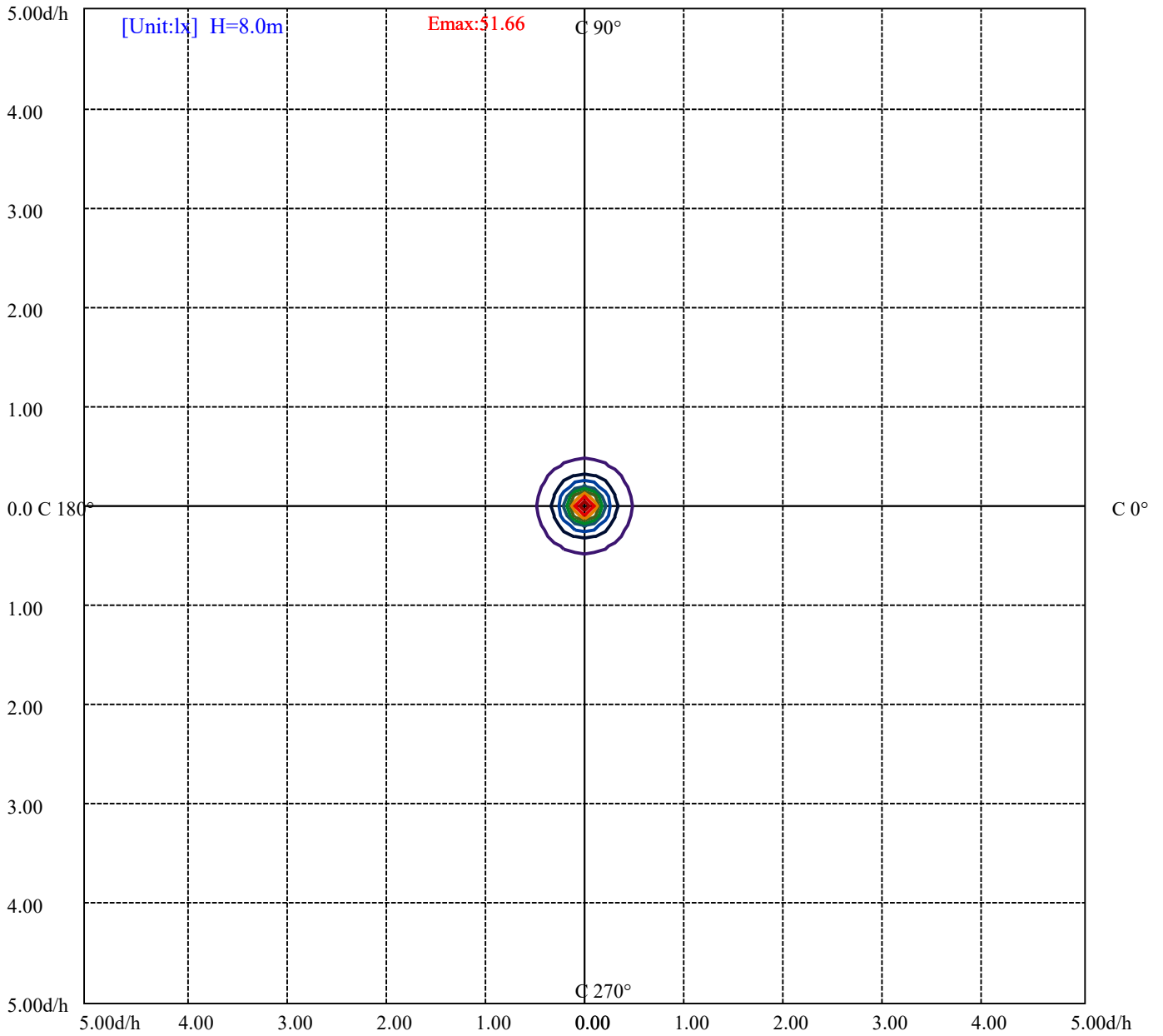
House

[Unit:cd]

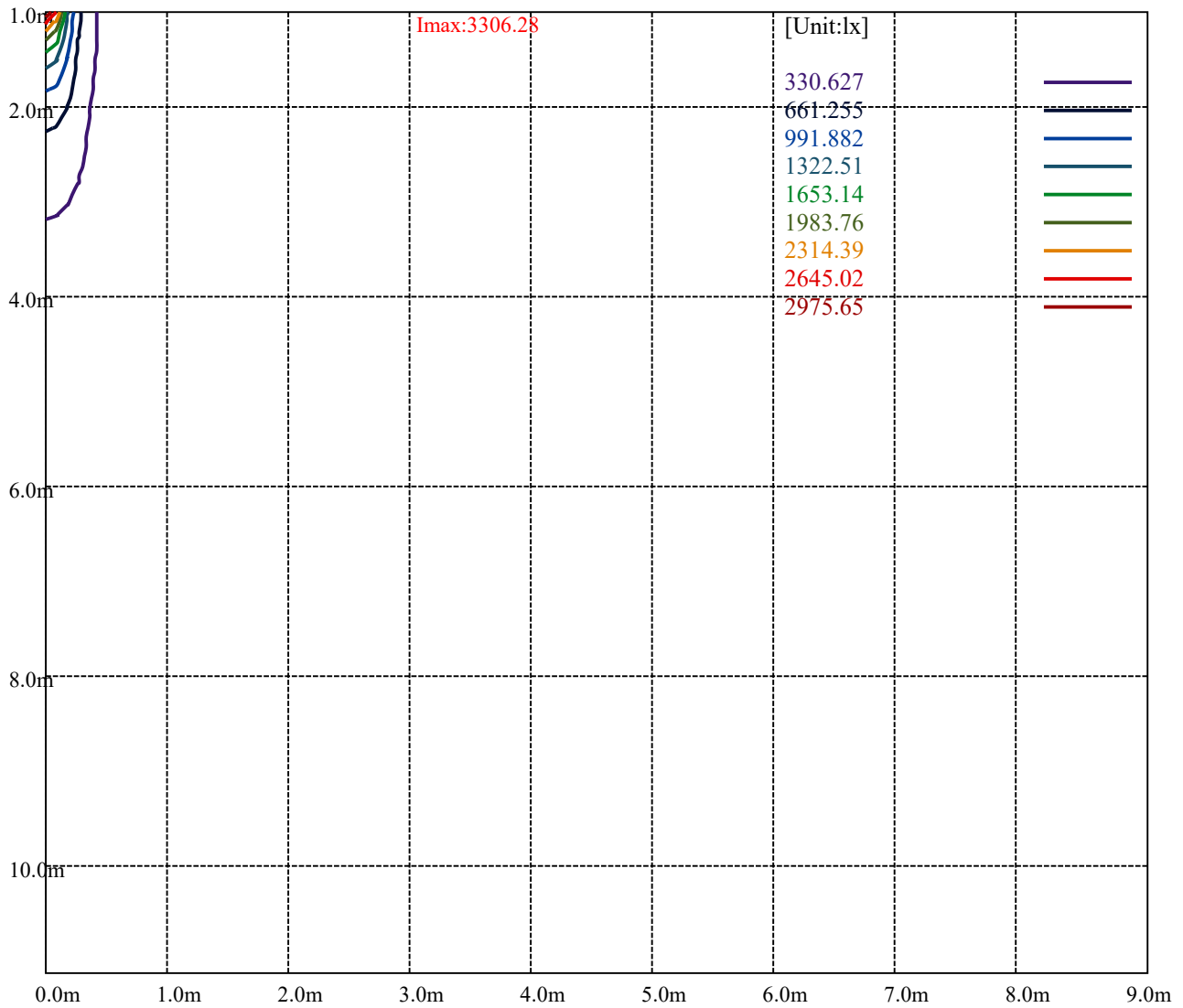
Road

I_{max}:3306.28

(10%I _{max}) 330.627	—
(20%I _{max}) 661.255	—
(30%I _{max}) 991.882	—
(40%I _{max}) 1322.51	—
(50%I _{max}) 1653.14	—
(60%I _{max}) 1983.76	—
(70%I _{max}) 2314.39	—
(80%I _{max}) 2645.02	—
(90%I _{max}) 2975.65	—



- (10%E_{max}) 5.166047
- (20%E_{max}) 10.33209
- (30%E_{max}) 15.49814
- (40%E_{max}) 20.66422
- (50%E_{max}) 25.83016
- (60%E_{max}) 30.99625
- (70%E_{max}) 36.16234
- (80%E_{max}) 41.32844
- (90%E_{max}) 46.49437



Luminance Table

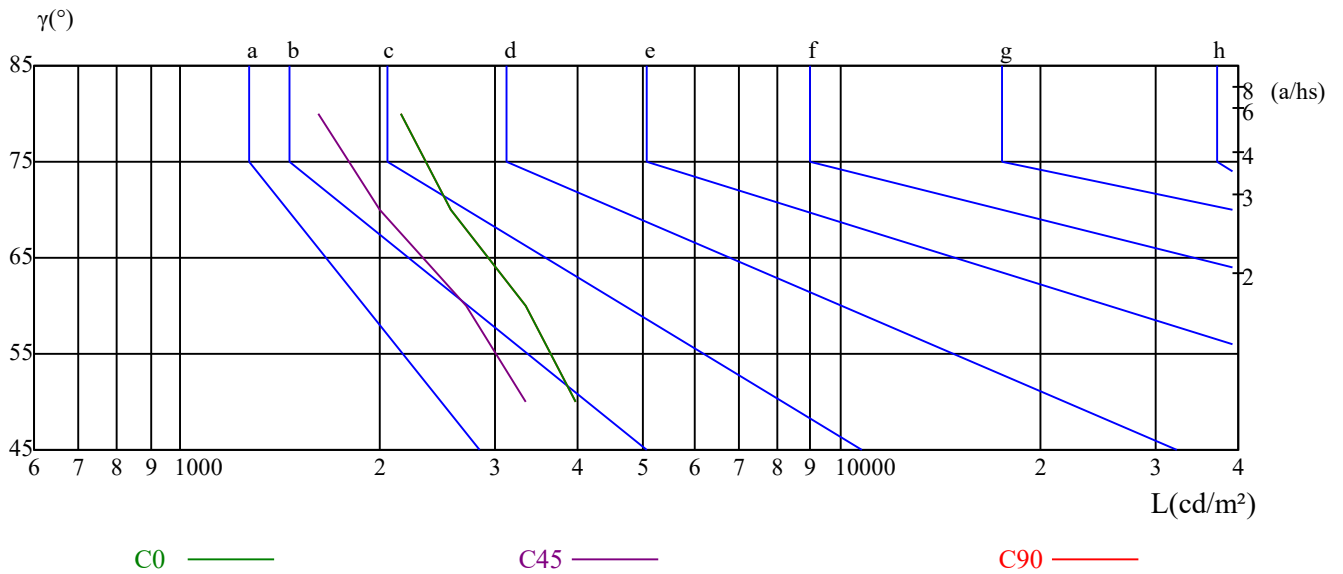
γ	45	50	55	60	65	70	75	80	85
C0	0	3978	0	3330	0	2564	0	2153	0
C45	0	3332	0	2702	0	2007	0	1614	0
C90	0	3978	0	3330	0	2564	0	2153	0

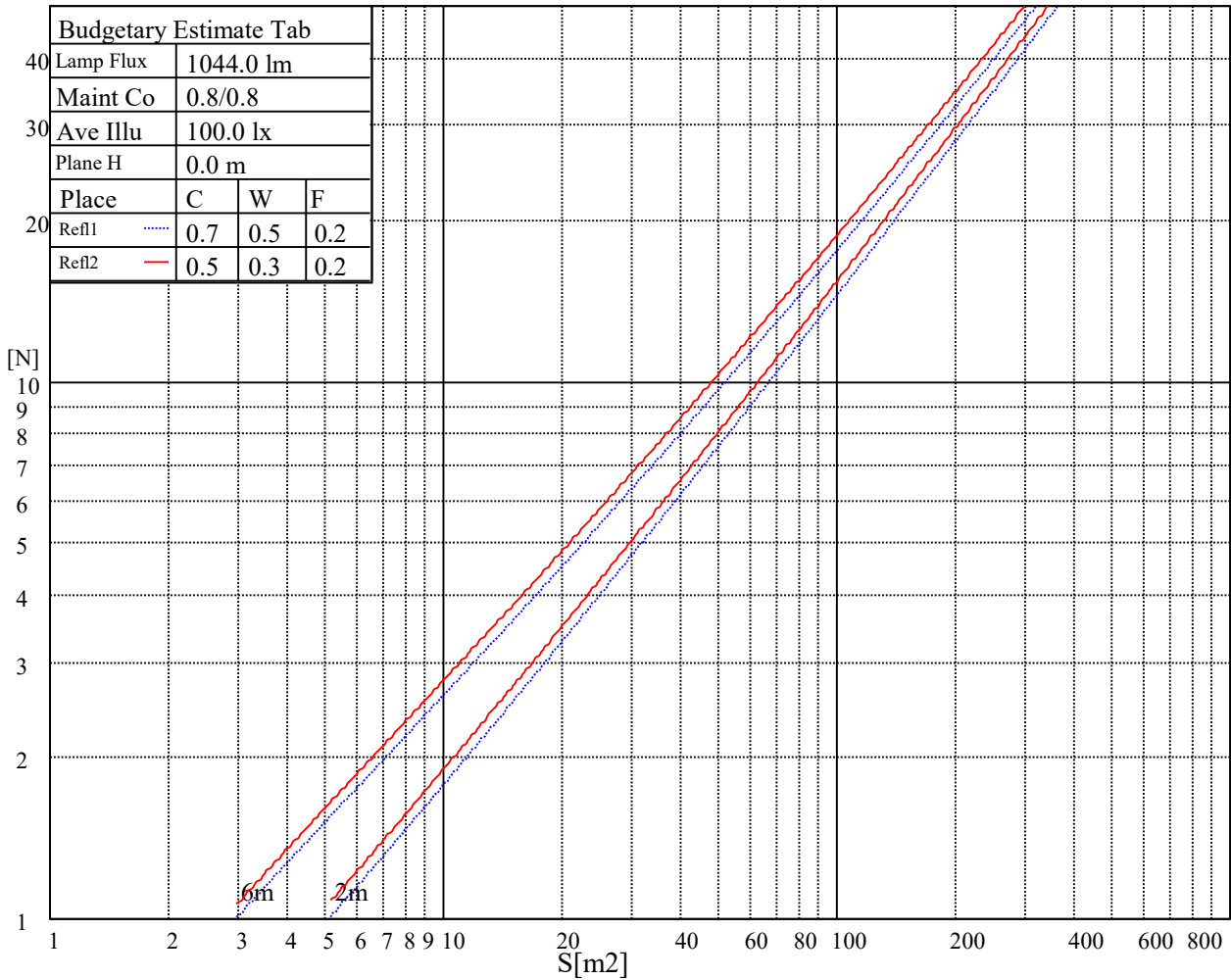
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5979	5979	5979	6564	6564	6564	16016	16016	16016

Glare Table

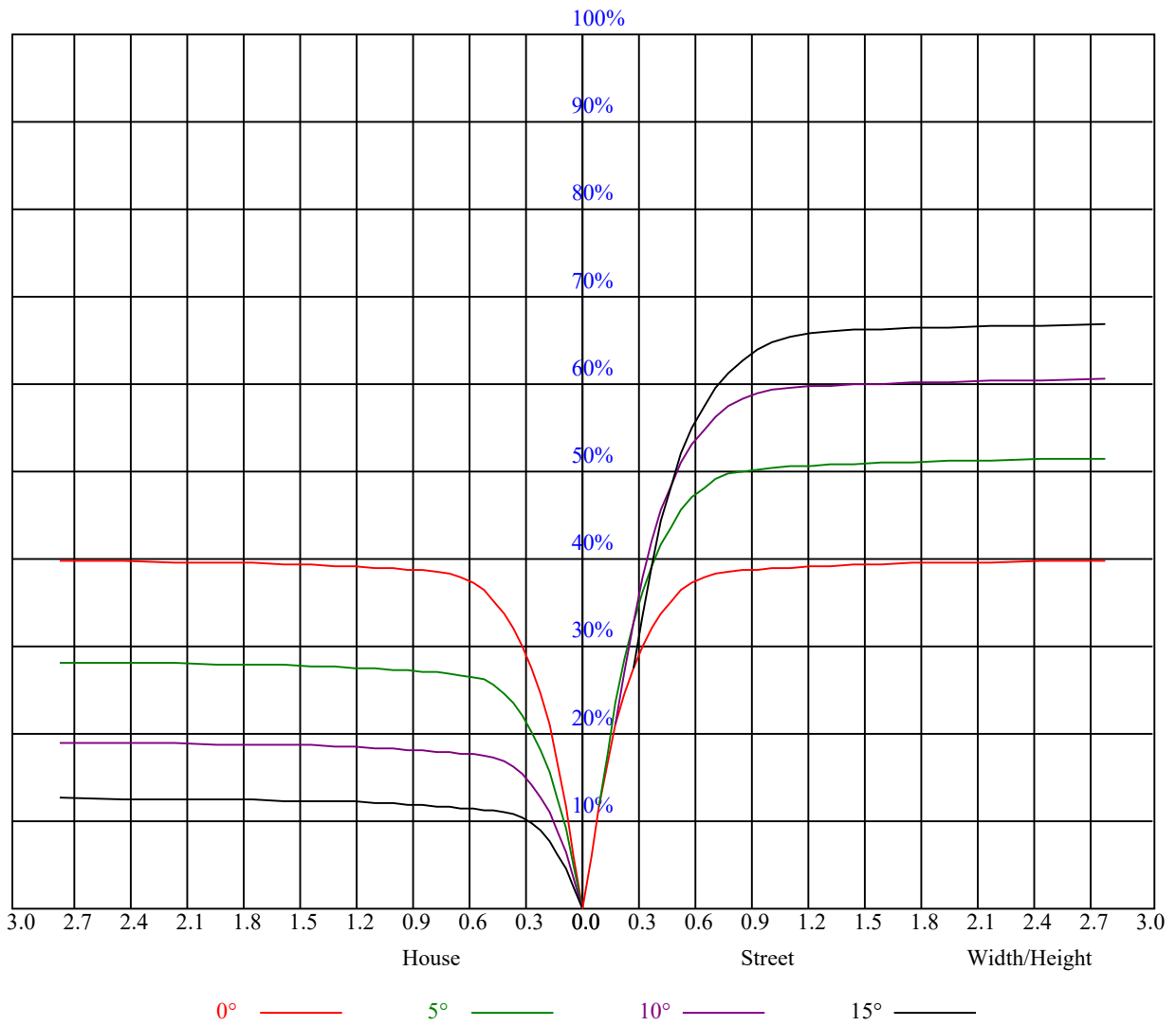
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

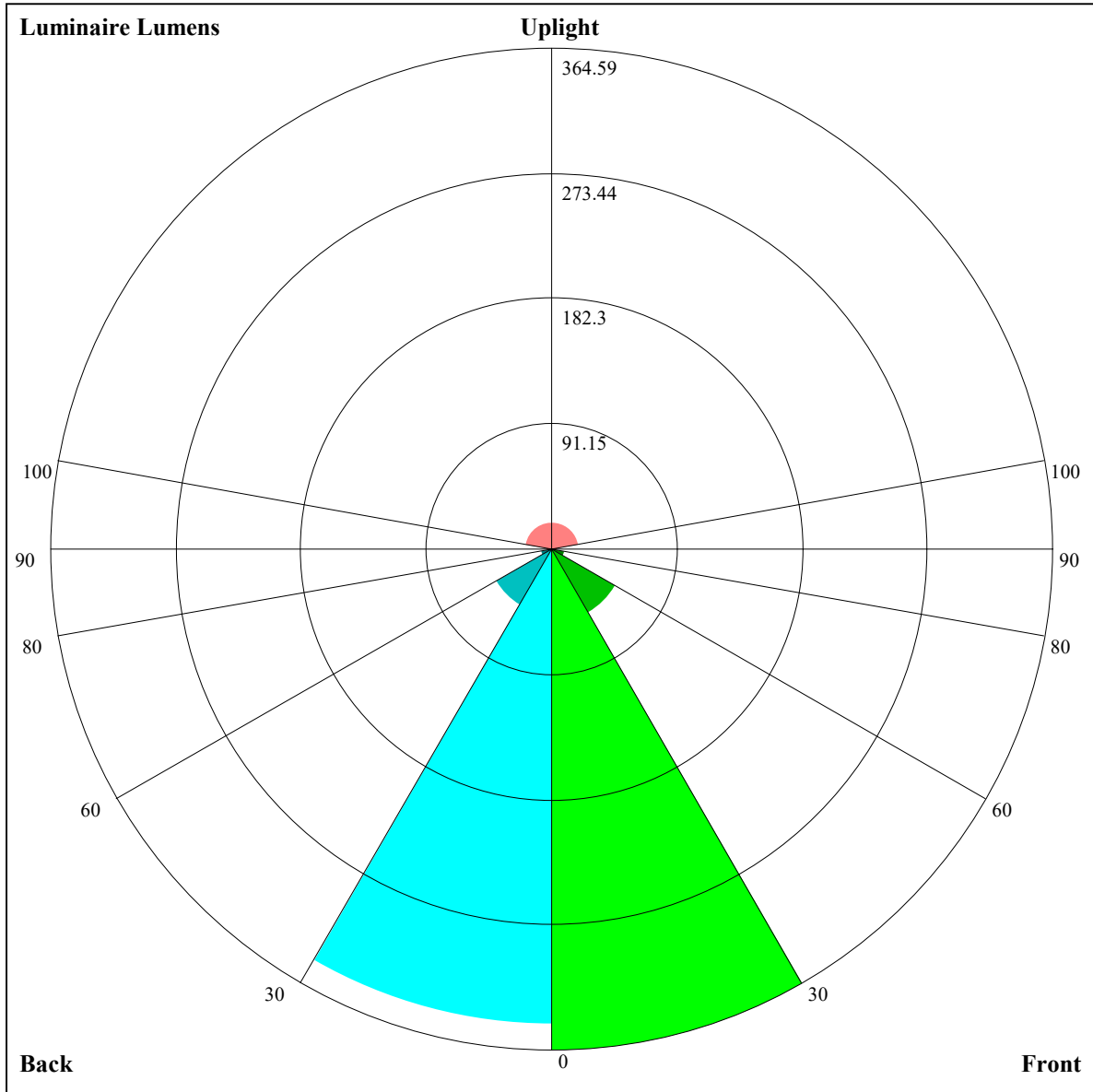
Luminance Limiting Curve





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	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.81
1	0.90	0.88	0.86	0.88	0.86	0.85	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.78	0.77	0.76
2	0.84	0.82	0.79	0.83	0.80	0.78	0.81	0.78	0.76	0.78	0.76	0.75	0.76	0.75	0.73	0.72
3	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.73	0.71	0.70	0.69
4	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.72	0.70	0.68	0.71	0.69	0.67	0.66
5	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.68	0.66	0.64	0.63
6	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.61
7	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
8	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
9	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.54
10	0.60	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.53





Luminaire Lumens:

FL=364.59,FM=53.12,FH=9.22,FVH=2.85

BL=345.74,BM=47.37,BH=8.95,BVH=2.81

UL=4.18,UH=19.9

BUG Rating:B1-U2-G0

Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	3298.43	3282.46	3090.32	2797.42	2350.36	1877.42	1490.93	1199.13	1000.37
45.0	3306.69	3263.74	3033.06	2657.57	2225.93	1756.85	1392.38	1131.96	947.52
90.0	3305.59	3181.71	2914.14	2538.10	2007.36	1519.56	1217.30	978.96	829.53
135.0	3314.40	3226.86	2993.97	2583.80	2131.78	1609.30	1273.45	1063.14	889.71
180.0	3298.43	3160.24	2905.33	2480.29	1945.14	1516.25	1237.67	1027.13	875.95
225.0	3306.69	3205.93	2915.79	2505.62	1999.65	1538.83	1239.32	1011.83	844.18
270.0	3305.59	3262.09	3029.75	2673.54	2229.23	1706.20	1309.24	1059.84	867.69
315.0	3314.40	3258.24	3025.35	2714.28	2203.36	1717.21	1353.84	1088.02	935.35
360.0	3298.43	3282.46	3090.32	2797.42	2350.36	1877.42	1490.93	1199.13	1000.37
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	836.31	697.01	600.67	519.73	458.62	404.11	356.77	281.89	156.69
45.0	788.41	668.38	573.69	498.26	443.20	384.84	329.24	280.79	147.33
90.0	694.21	584.37	500.96	436.65	382.04	338.65	271.48	174.64	93.93
135.0	752.07	639.20	547.26	474.59	421.73	373.28	314.92	220.34	103.89
180.0	730.87	612.78	536.14	471.45	415.68	375.59	299.62	178.16	93.32
225.0	722.78	623.02	539.66	474.37	419.92	367.01	310.13	205.53	106.15
270.0	726.19	610.02	519.73	447.06	400.26	353.46	311.07	234.54	133.57
315.0	781.69	663.37	569.56	499.91	440.23	388.42	336.23	239.99	130.76
360.0	836.31	697.01	600.67	519.73	458.62	404.11	356.77	281.89	156.69
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	70.91	38.04	27.03	21.75	18.94	16.79	15.47	14.87	14.65
45.0	66.34	36.23	26.48	21.80	19.10	17.23	16.41	15.80	15.58
90.0	41.62	30.39	24.94	21.58	19.10	17.78	16.68	16.30	15.91
135.0	43.00	28.74	22.85	19.77	17.95	16.57	15.75	15.42	15.36
180.0	41.57	29.62	23.40	19.99	17.56	16.08	15.03	14.59	14.31
225.0	48.06	31.77	24.89	21.47	18.94	17.12	15.86	15.09	14.65
270.0	61.72	36.45	28.08	23.67	21.25	19.55	18.28	17.18	16.30
315.0	54.18	33.69	25.71	21.53	18.66	17.01	16.02	15.58	15.47
360.0	70.91	38.04	27.03	21.75	18.94	16.79	15.47	14.87	14.65
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	14.48	13.93	13.16	12.28	11.67	10.96	10.24	9.80	9.63
45.0	15.25	14.42	13.49	12.66	11.78	11.01	10.30	9.91	9.36
90.0	15.25	14.48	13.49	12.61	11.67	11.07	10.41	10.02	9.14
135.0	15.20	14.48	13.60	12.66	11.84	11.07	10.41	10.08	9.30
180.0	13.87	13.27	12.55	11.89	11.12	10.35	9.80	9.63	8.09
225.0	14.09	13.32	12.33	11.34	10.35	9.63	9.08	8.70	7.43
270.0	15.47	14.53	13.54	12.39	11.29	10.24	9.47	8.75	7.98
315.0	15.20	14.53	13.65	12.66	11.56	10.57	9.69	9.08	7.98
360.0	14.48	13.93	13.16	12.28	11.67	10.96	10.24	9.80	9.63
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	8.15	7.76	7.43	7.21	6.83	6.44	6.17	5.84	4.40
45.0	8.86	9.36	7.98	6.55	6.17	5.84	5.40	5.01	4.13
90.0	8.81	9.14	9.58	8.70	7.16	6.77	6.33	6.17	3.85
135.0	8.53	8.20	7.93	7.98	6.99	6.61	6.28	5.89	4.02
180.0	7.27	6.83	6.44	6.11	5.89	5.84	5.56	4.57	4.07
225.0	6.94	6.66	6.39	6.11	5.84	5.62	5.29	4.73	3.96
270.0	6.88	6.39	6.06	5.73	5.40	5.01	4.84	4.57	3.91
315.0	7.27	6.88	6.61	6.39	6.06	5.78	5.51	5.34	4.18
360.0	8.15	7.76	7.43	7.21	6.83	6.44	6.17	5.84	4.40

Intensity data(cd)

C/ γ (°)	90.0
0.0	4.07
45.0	3.80
90.0	3.69
135.0	3.85
180.0	3.85
225.0	3.80
270.0	3.69
315.0	3.91
360.0	4.07