
Nata

Client:

LumCAT: 2-1794-N

Luminaire: 92.70.135.00

Report No: nata-0100

Test No: GC2018053003

LampCAT: NICHIA NFCWD084B-V3

Lamp flux(lm): 2155.2

Number of Lamps: 1

Length(mm): 69

Phm Type: C

Voltage(V): 34.2000

Current(A): 0.5000

Power (W): 17.1000

PF: 0.0000

Ballast type: DC

Width(mm): 69

Height(mm): 0

Photometric Results

Lumens(lm): 1856.82, Efficiency(%): 86.16% , Luminous Efficacy(lm/W): 108.59

Central intensity(cd): 6351.995, Maximum intensity(cd): 6351.995

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=27.0

[C90/270]Total=27.0

Field angle(10%Imax): [C0/180]Total=56.8

[C90/270]Total=56.8

Maximum s/h(1/2): C0_180=0.45 C90_270=0.45

Maximum s/h(1/4): C0_180=0.47 C90_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.84%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.370%

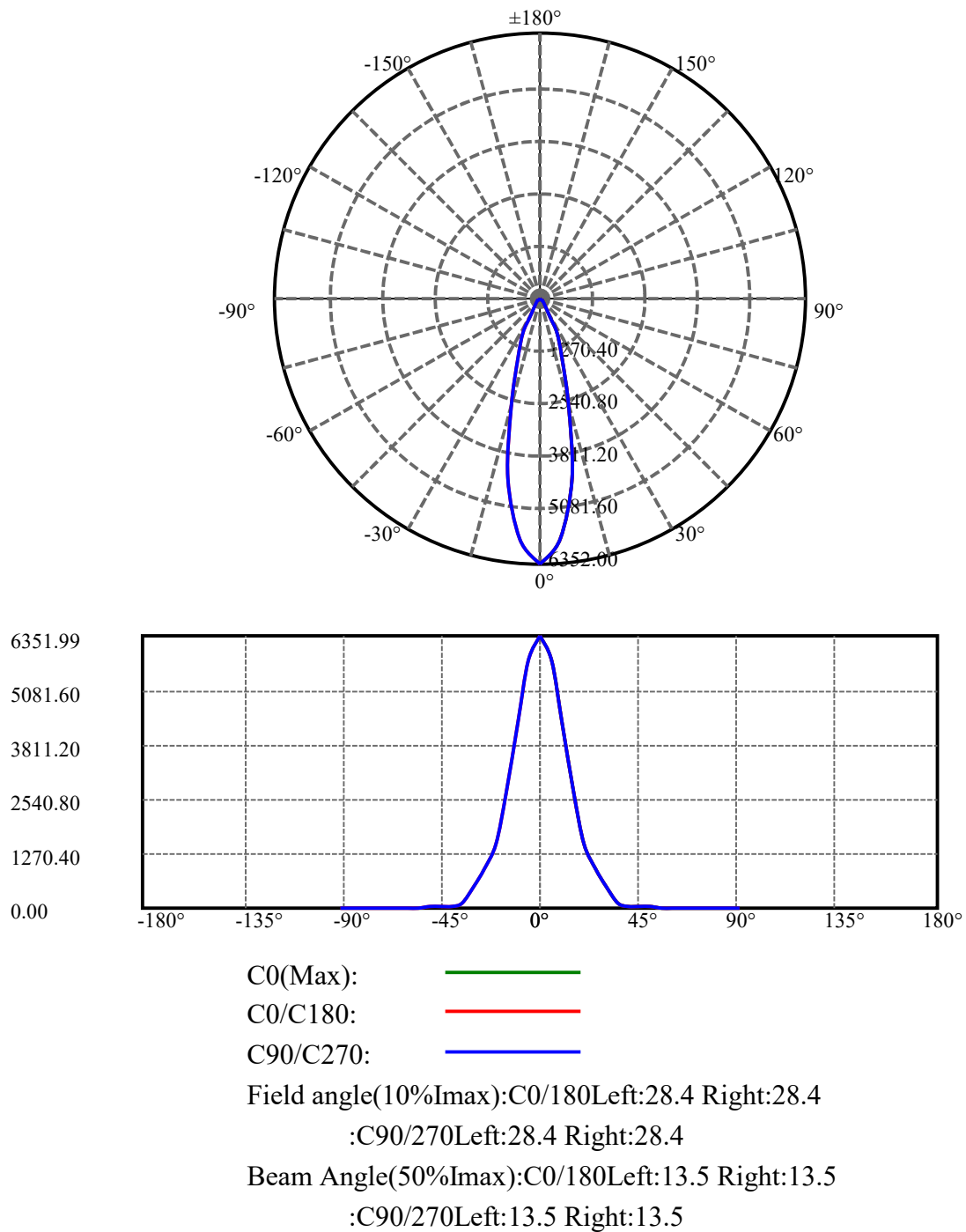
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6351.995	37.986	37.986	1.763%	2.046%
5.0	5758.487	275.102	313.088	12.765%	16.862%
10.0	4347.047	413.765	726.853	19.199%	39.145%
15.0	2683.518	380.706	1107.56	17.665%	59.648%
20.0	1506.495	282.429	1389.988	13.105%	74.859%
25.0	911.177	211.077	1601.065	9.794%	86.226%
30.0	506.760	138.887	1739.952	6.444%	93.706%
35.0	114.861	36.112	1776.064	1.676%	95.651%
40.0	39.689	13.984	1790.048	.649%	96.404%
45.0	27.473	10.648	1800.696	.494%	96.978%
50.0	20.921	8.785	1809.481	.408%	97.451%
55.0	17.384	7.806	1817.287	.362%	97.871%
60.0	14.796	7.024	1824.311	.326%	98.249%
65.0	12.794	6.356	1830.666	.295%	98.592%
70.0	11.699	6.026	1836.693	.280%	98.916%
75.0	10.832	5.735	1842.428	.266%	99.225%
80.0	12.457	6.724	1849.152	.312%	99.587%
85.0	9.903	5.408	1854.56	.251%	99.878%
90.0	8.238	2.258	1856.817	.105%	100.000%

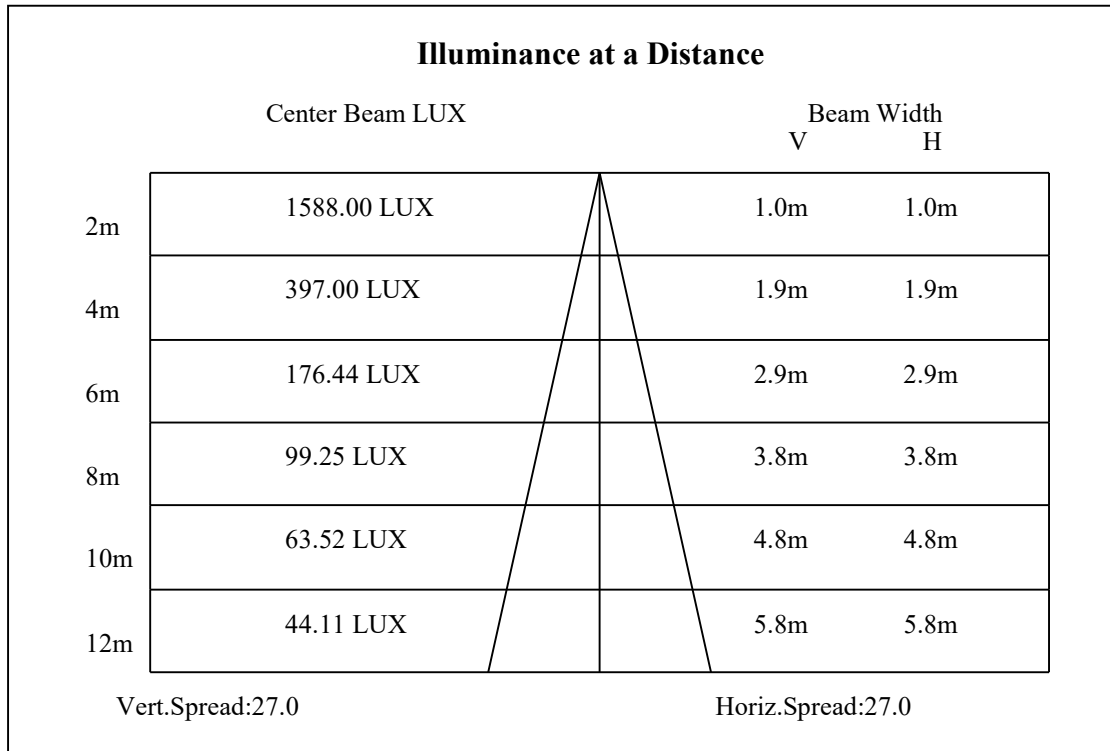
ZONAL LUMEN SUMMARY

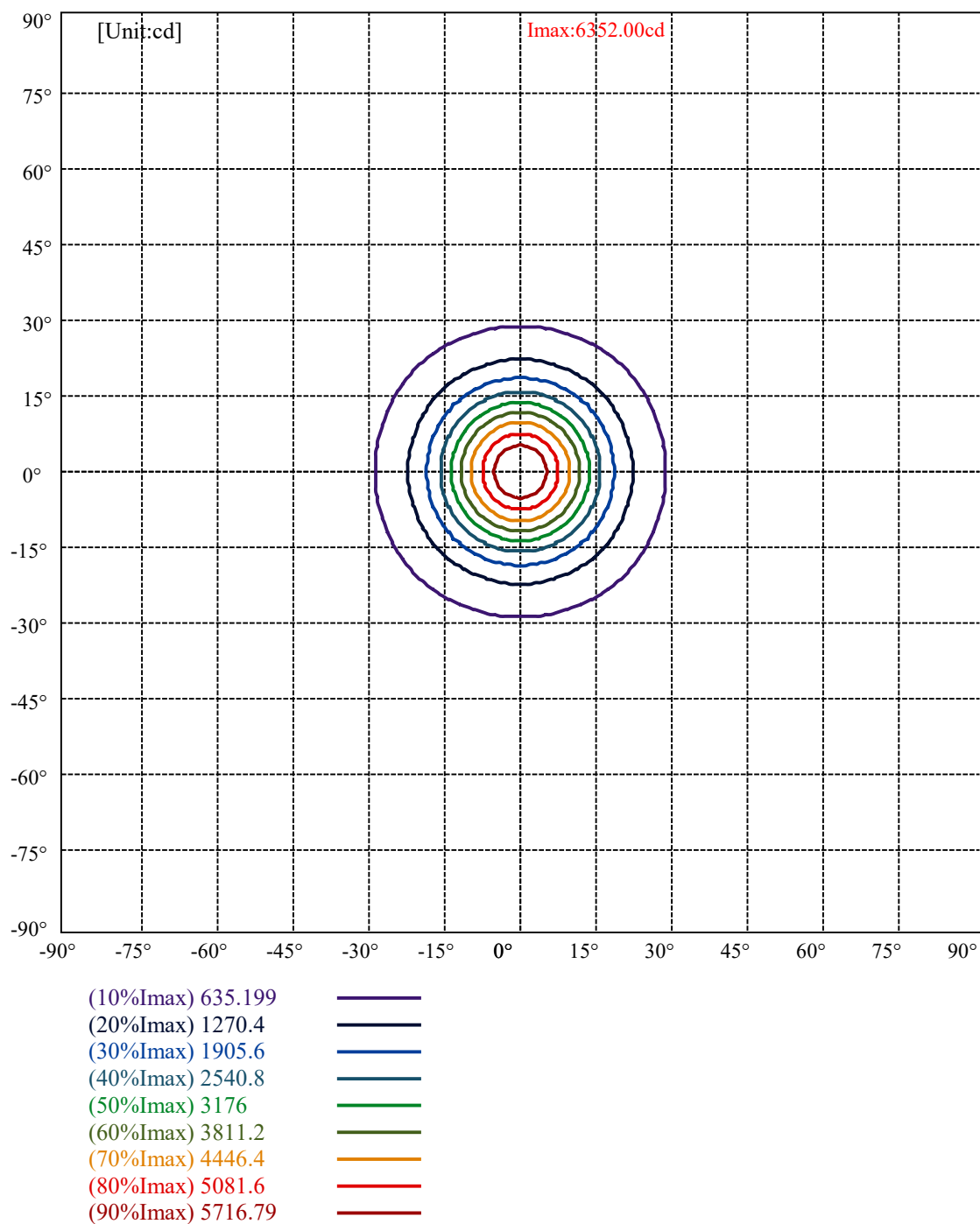
Zone	Lumens	%Lamp	%Fixt
0-30	1739.95	80.73%	93.71%
0-40	1790.05	83.06%	96.40%
0-60	1824.31	84.65%	98.25%
0-90	1854.56	86.05%	99.88%
0-120	1854.56	86.05%	99.88%
0-180	1856.82	86.16%	100.00%
60-90	37.27	1.73%	2.01%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.26	1485.45	68.93%	80.00%

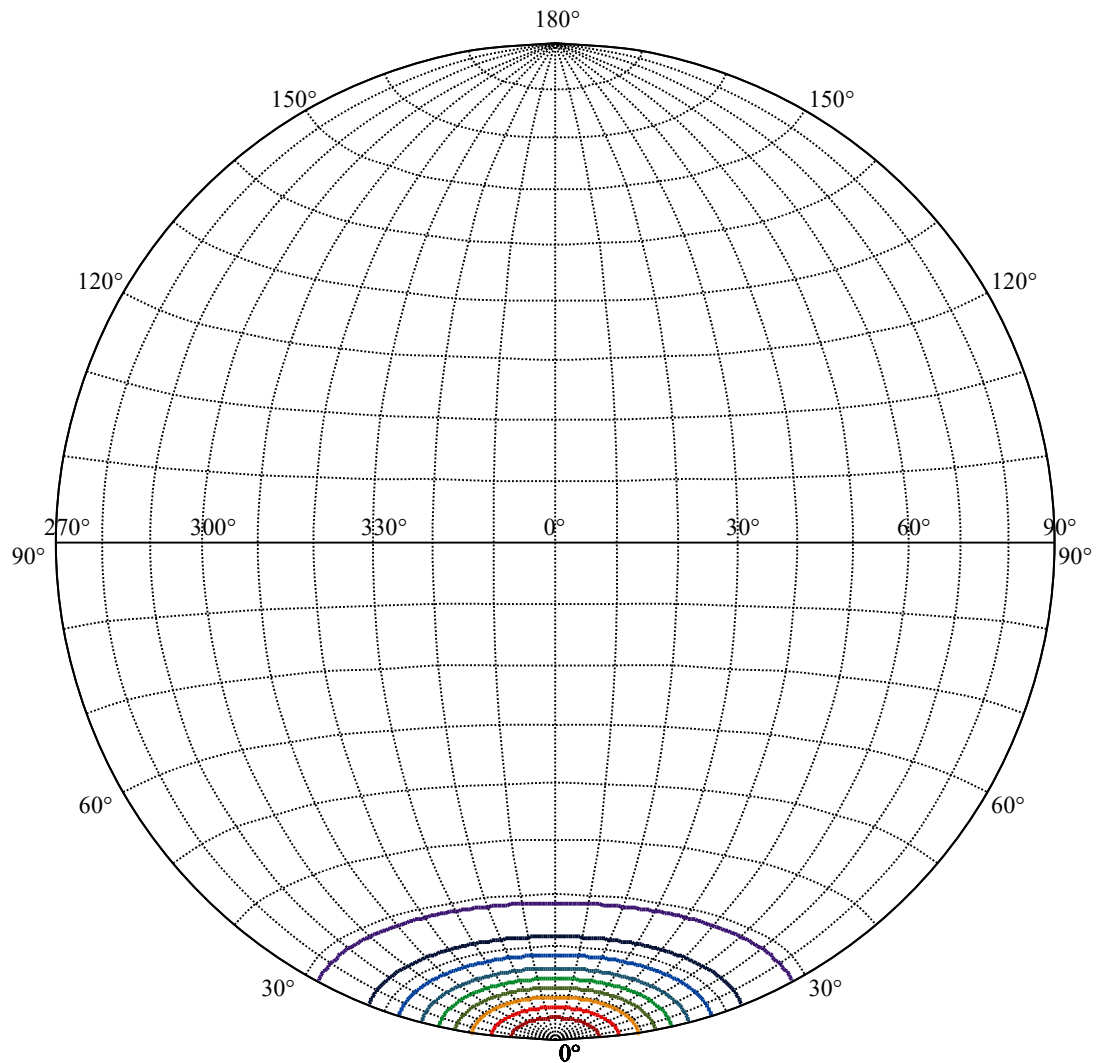
ZONAL LUMEN SUMMARY

0-10	726.85
10-20	663.13
20-30	349.96
30-40	50.10
40-50	19.43
50-60	14.83
60-70	12.38
70-80	12.46
80-90	5.41
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









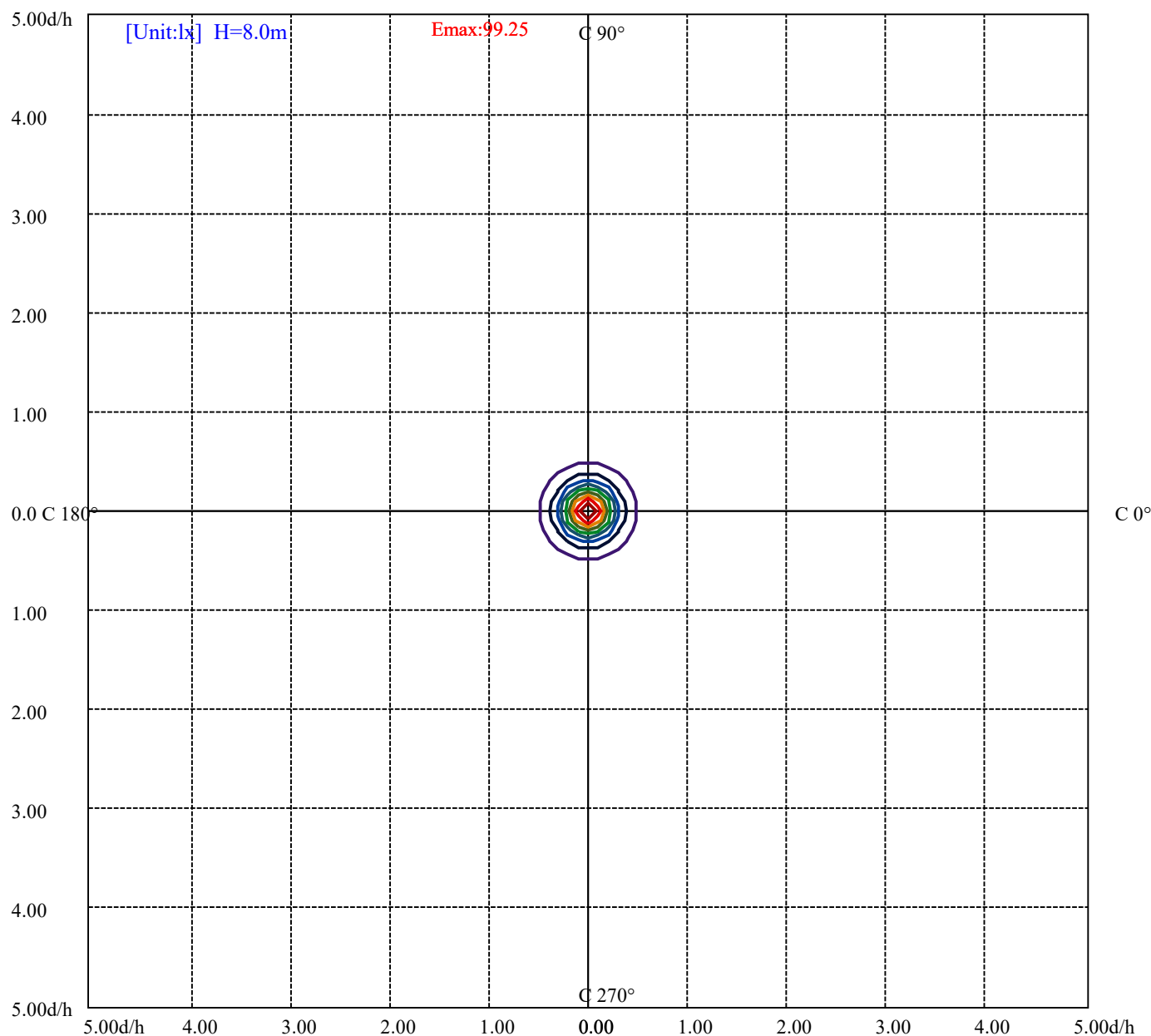
House

[Unit:cd]

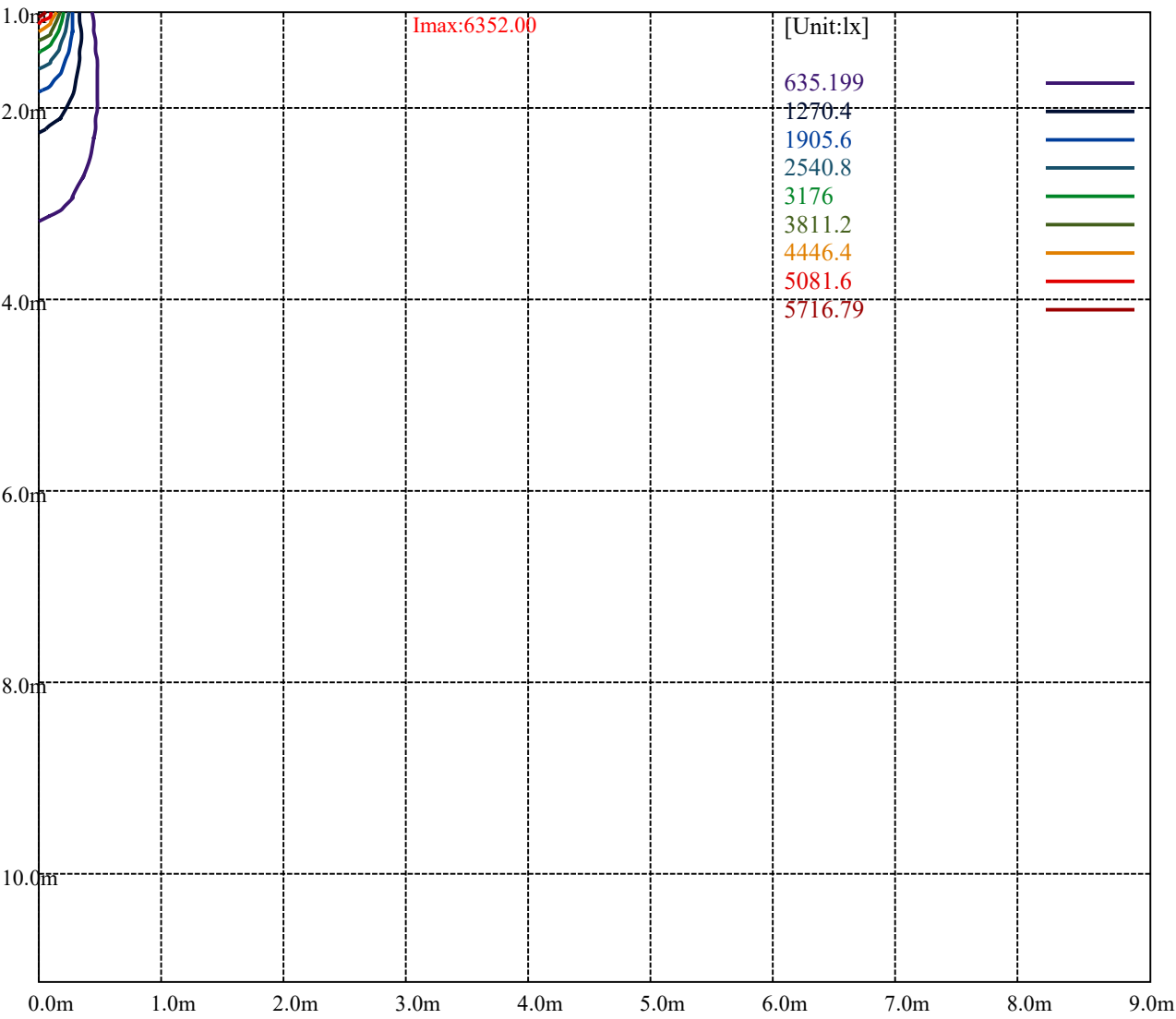
Road

I_{max}:6352.00

(10%I _{max})	635.199	—
(20%I _{max})	1270.4	—
(30%I _{max})	1905.6	—
(40%I _{max})	2540.8	—
(50%I _{max})	3176	—
(60%I _{max})	3811.2	—
(70%I _{max})	4446.4	—
(80%I _{max})	5081.6	—
(90%I _{max})	5716.79	—



(10%Emax) 9.924969	—
(20%Emax) 19.85	—
(30%Emax) 29.77484	—
(40%Emax) 39.69984	—
(50%Emax) 49.62484	—
(60%Emax) 59.54984	—
(70%Emax) 69.47469	—
(80%Emax) 79.39969	—
(90%Emax) 89.32468	—



Luminance Table

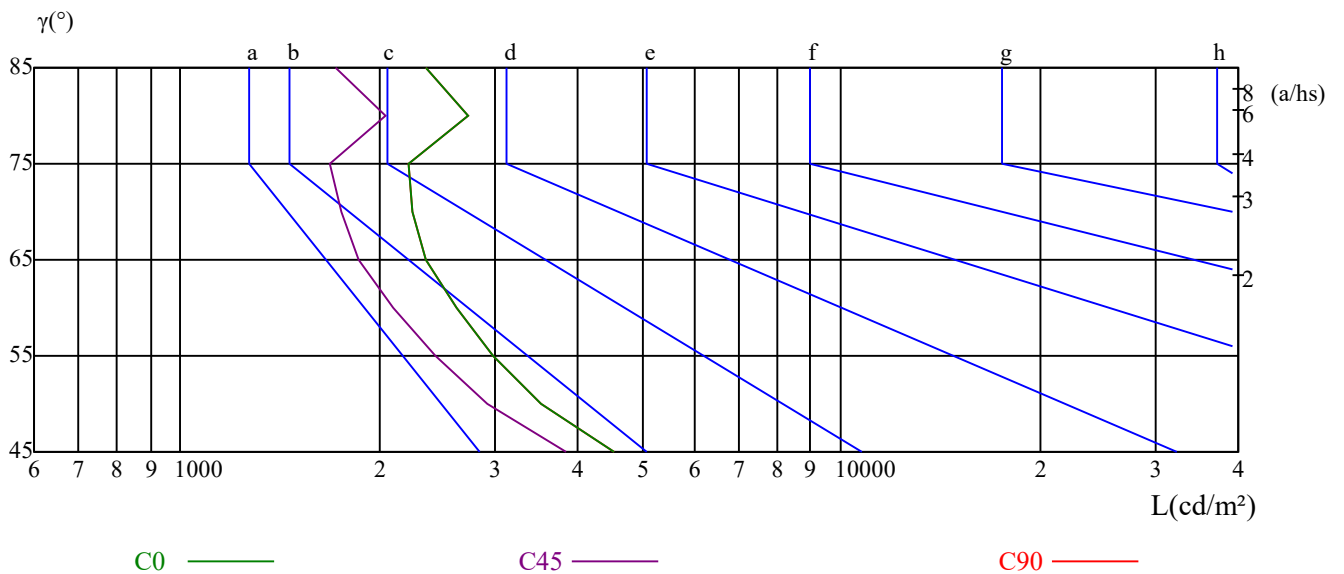
γ	45	50	55	60	65	70	75	80	85
C0	4541	3506	2977	2611	2347	2252	2212	2729	2360
C45	3836	2917	2439	2105	1861	1754	1688	2038	1719
C90	4541	3506	2977	2611	2347	2252	2212	2729	2360

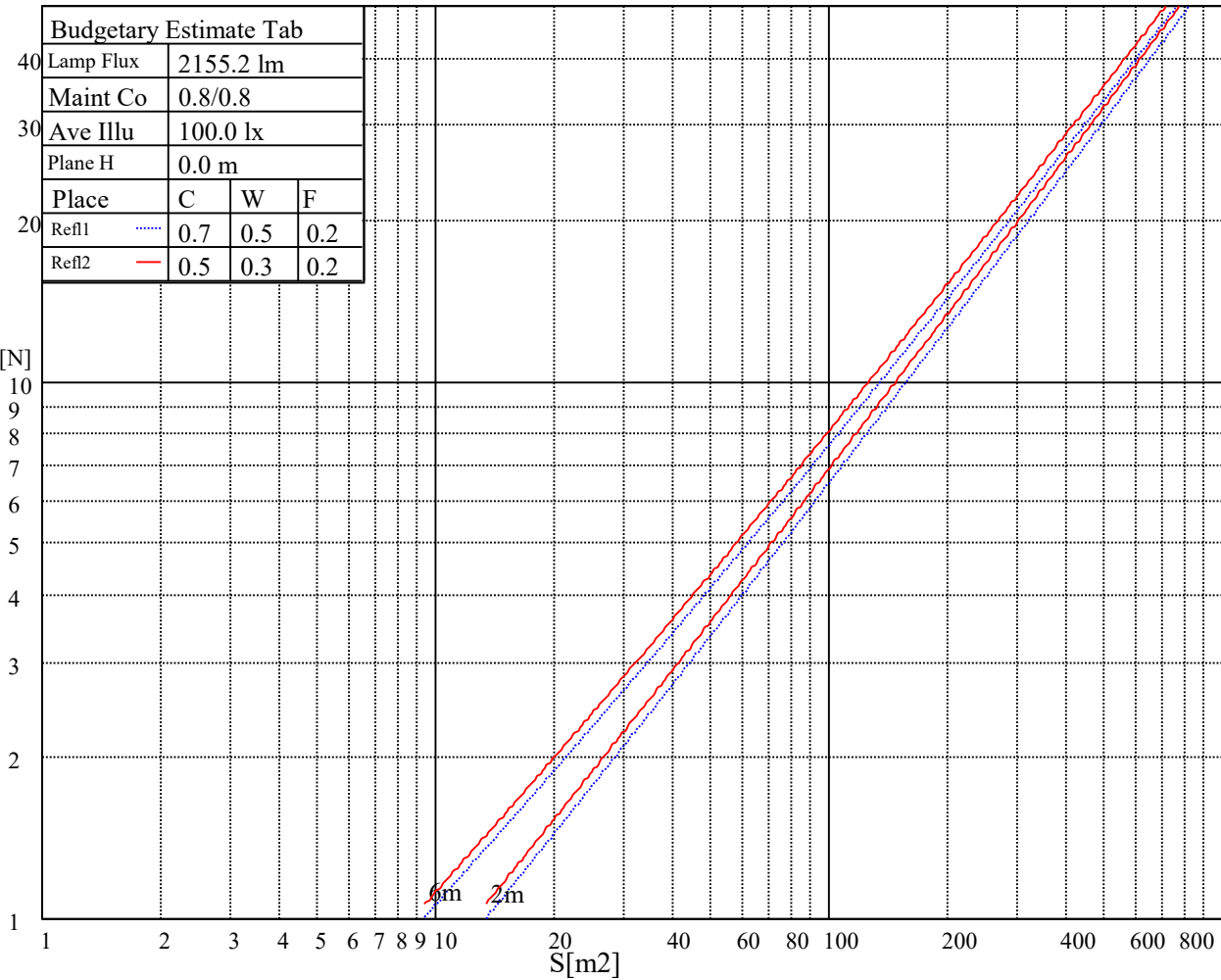
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6358	6358	6358	8791	8791	8791	23866	23866	23866

Glare Table

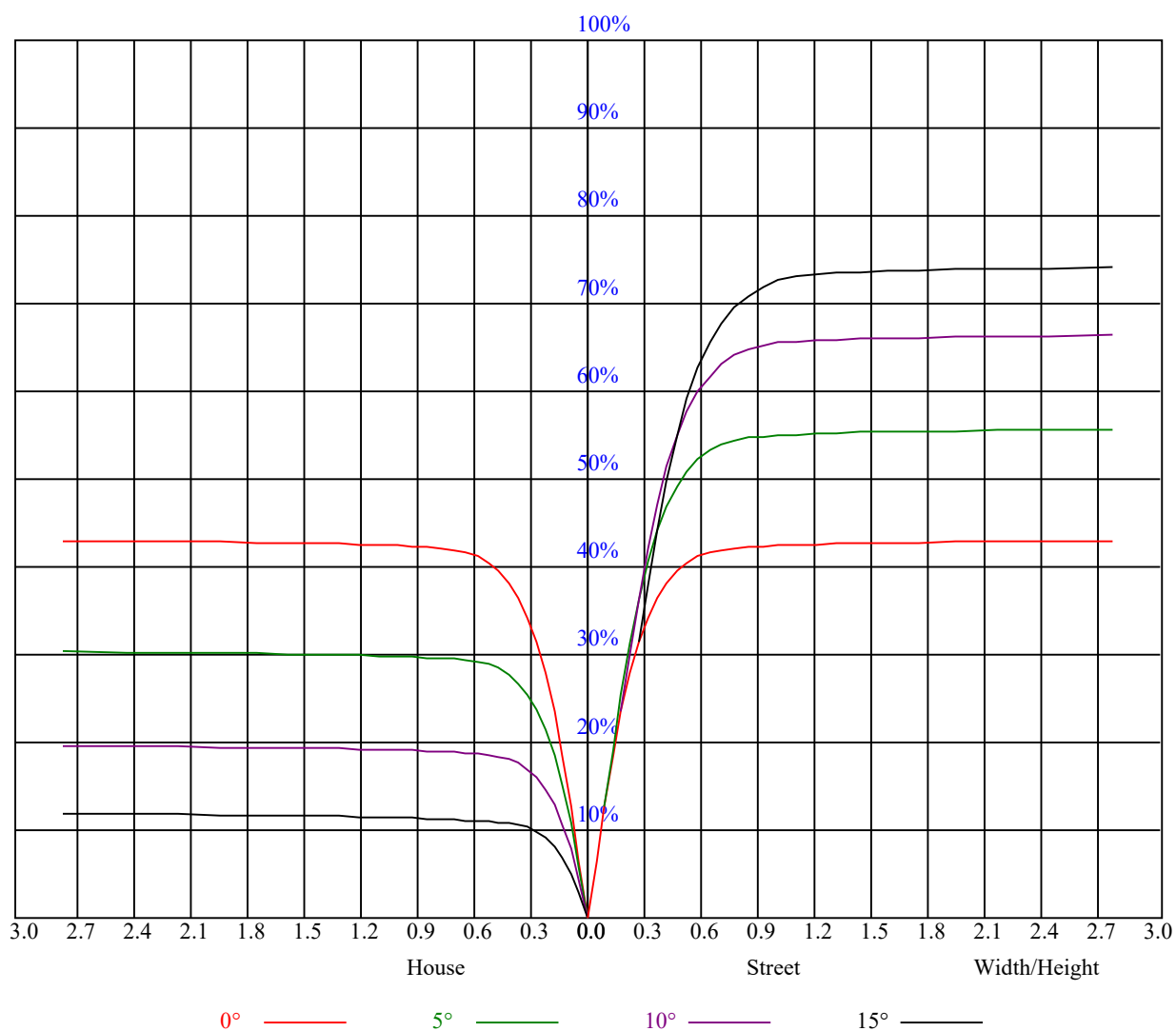
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

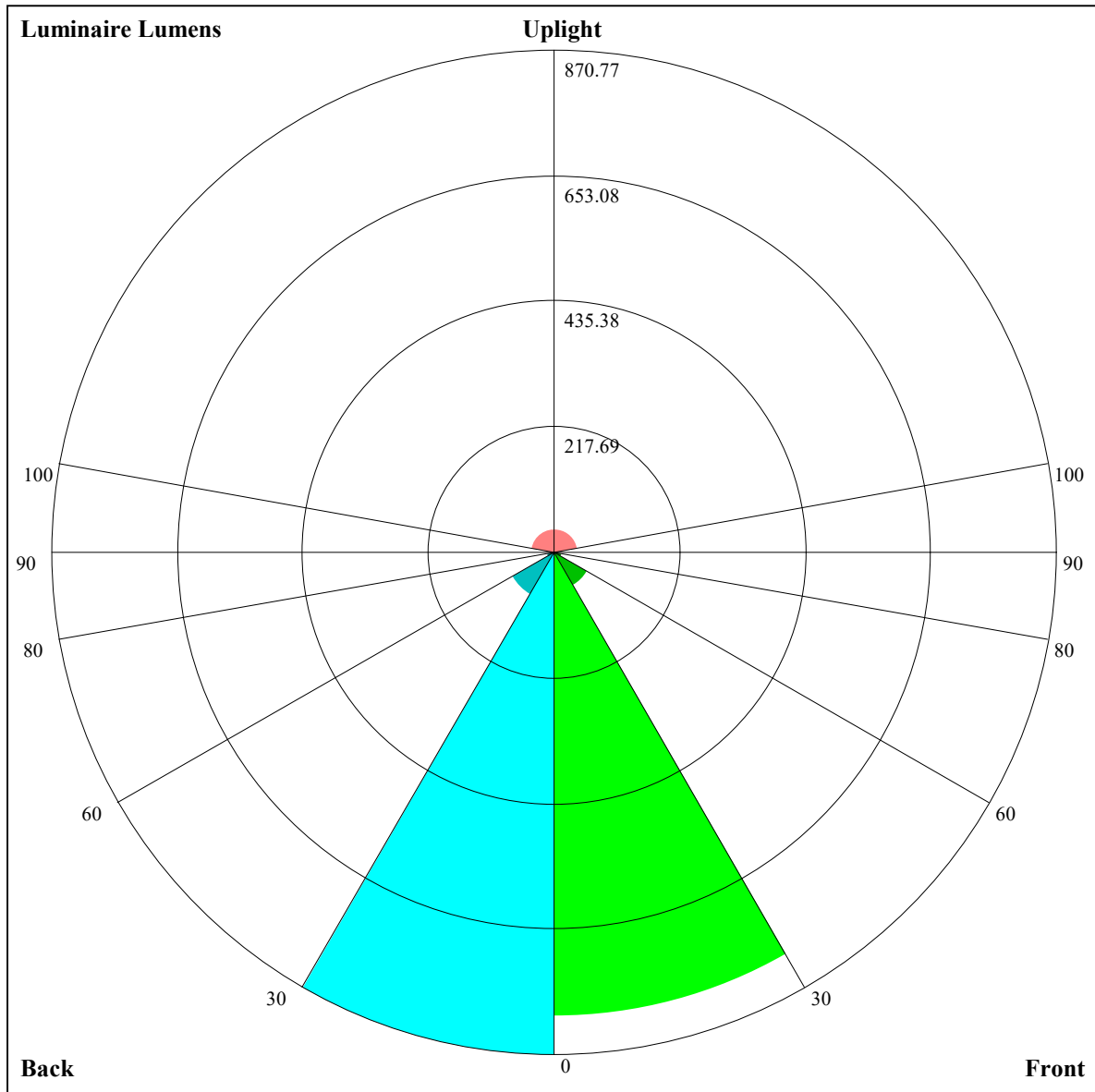
Luminance Limiting Curve





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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.93	0.93	0.93	0.90	0.90	0.90	0.88
1	0.96	0.94	0.92	0.94	0.92	0.90	0.91	0.89	0.88	0.88	0.86	0.85	0.85	0.83	0.82	0.81
2	0.92	0.88	0.85	0.90	0.87	0.84	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.79	0.78
3	0.87	0.84	0.81	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.80	0.78	0.76	0.75
4	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.78	0.75	0.74	0.72
5	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	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	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.66
8	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
9	0.71	0.67	0.64	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.63
10	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61





Luminaire Lumens:

FL=803.65,FM=67.48,FH=12.72,FVH=5.78

BL=870.77,BM=84.3,BH=12.44,BVH=5.41

UL=8.99,UH=42.77

BUG Rating:B2-U2-G0

Nata 2-1794-N

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	6357.91	5524.91	4145.20	2471.48	1392.93	855.58	439.35	68.38	37.66		
45.0	6383.24	5914.71	4482.69	2765.48	1567.46	939.26	534.60	92.71	39.70		
90.0	6363.97	5848.64	4400.66	2706.02	1594.98	931.77	533.44	116.61	39.48		
135.0	6302.31	6102.45	4889.01	3317.70	1815.76	1016.34	682.15	289.05	47.13		
180.0	6357.91	5952.70	4679.24	2936.16	1661.60	971.97	592.52	143.37	42.12		
225.0	6383.24	5663.65	4187.59	2587.65	1470.01	888.34	479.32	79.45	38.48		
270.0	6365.07	5704.94	4228.33	2513.88	1458.44	896.87	456.97	73.50	37.66		
315.0	6302.31	5355.89	3763.66	2169.77	1090.78	789.29	335.73	55.83	35.29		
360.0	6357.91	5524.91	4145.20	2471.48	1392.93	855.58	439.35	68.38	37.66		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	25.88	20.10	16.96	14.53	12.61	11.56	10.63	10.08	9.63		
45.0	27.20	20.65	17.23	14.87	12.83	11.84	10.90	10.13	9.69		
90.0	27.25	20.92	16.96	14.48	12.39	11.34	10.46	9.74	9.08		
135.0	31.88	22.57	18.22	15.09	12.88	11.45	10.52	9.80	9.03		
180.0	28.68	21.58	17.56	14.92	12.61	11.45	10.52	9.80	9.25		
225.0	27.03	20.70	17.40	14.92	13.05	11.89	10.96	10.74	10.19		
270.0	26.54	20.98	17.67	15.20	13.27	12.33	11.56	18.94	11.51		
315.0	25.33	19.88	17.07	14.37	12.72	11.73	11.12	20.43	10.85		
360.0	25.88	20.10	16.96	14.53	12.61	11.56	10.63	10.08	9.63		
C/γ(°)	90.0										
0.0	8.04										
45.0	8.31										
90.0	8.31										
135.0	8.26										
180.0	8.20										
225.0	8.31										
270.0	8.31										
315.0	8.15										
360.0	8.04										