
Nata

Client:

LumCAT: 1407-N

Luminaire: 92.70.046.00

Report No: NT2018040602

Test No: nata-0100

LampCAT: CREE CXA1512

Lamp flux(lm): 1248.0

Number of Lamps: 1

Length(mm): 39

Phm Type: C

Voltage(V): 35.5000

Current(A): 0.3500

Power (W): 12.4250

PF: 0.0000

Ballast type: DC

Width(mm): 39

Height(mm): 0

Photometric Results

Lumens(lm): 1042.45, Efficiency(%): 83.53% , Luminous Efficacy(lm/W): 83.90

Central intensity(cd): 1267.398, Maximum intensity(cd): 1267.398

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=46.0

[C90/270]Total=46.0

Field angle(10%Imax): [C0/180]Total=92.4

[C90/270]Total=92.4

Maximum s/h(1/2): C0_180=0.70 C90_270=0.70

Maximum s/h(1/4): C0_180=0.78 C90_270=0.78

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.06%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.272%

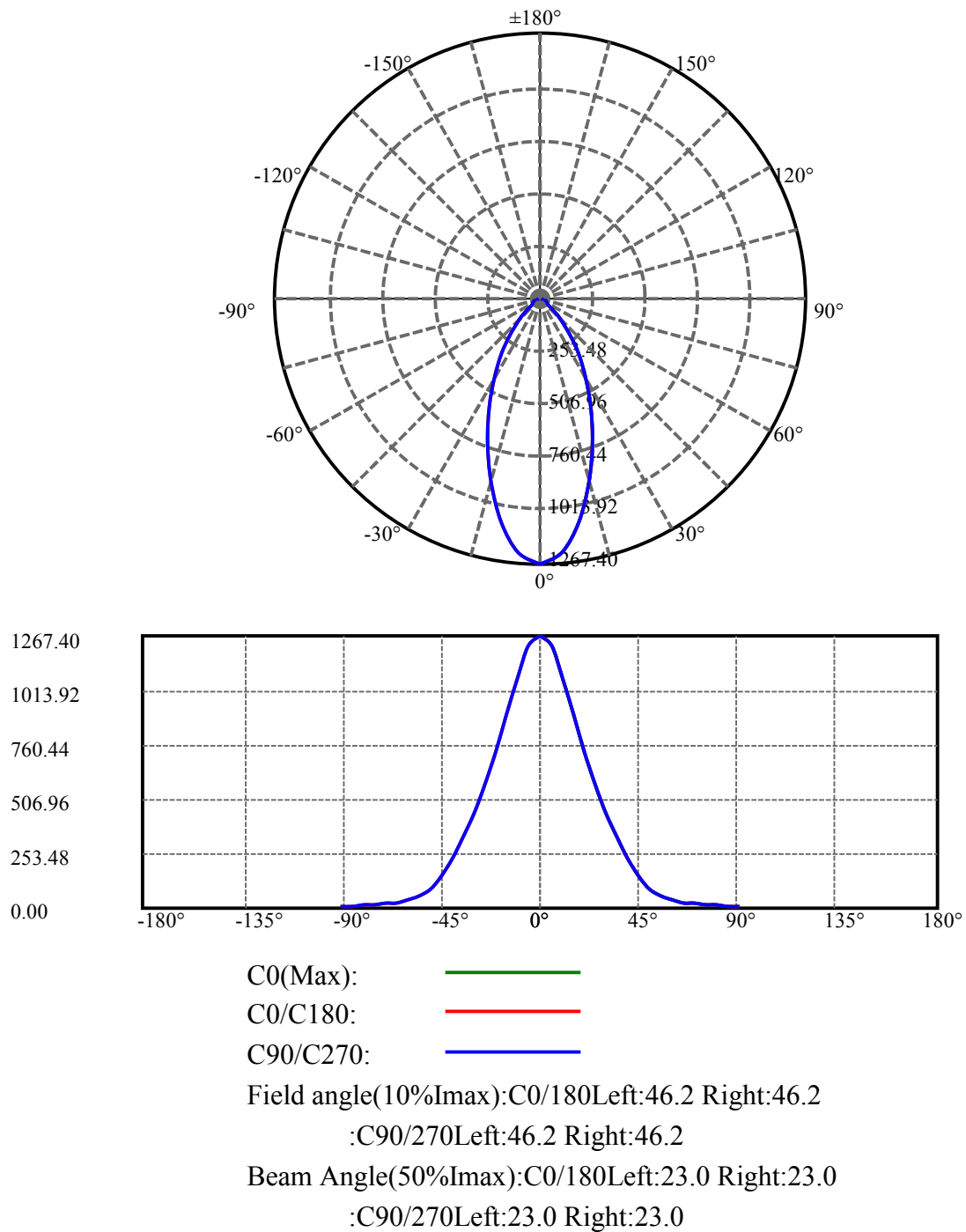
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1267.398	7.579	7.579	.607%	.727%
5.0	1216.609	58.121	65.701	4.657%	6.303%
10.0	1079.608	102.760	168.461	8.234%	16.160%
15.0	901.239	127.857	296.318	10.245%	28.425%
20.0	730.302	136.913	433.231	10.971%	41.559%
25.0	567.205	131.395	564.626	10.528%	54.164%
30.0	439.639	120.491	685.117	9.655%	65.722%
35.0	325.748	102.415	787.532	8.206%	75.546%
40.0	229.392	80.823	868.355	6.476%	83.300%
45.0	139.024	53.885	922.24	4.318%	88.469%
50.0	86.115	36.160	958.399	2.897%	91.937%
55.0	52.964	23.781	982.181	1.906%	94.219%
60.0	36.351	17.256	999.436	1.383%	95.874%
65.0	25.904	12.869	1012.305	1.031%	97.109%
70.0	19.751	10.174	1022.479	.815%	98.084%
75.0	15.739	8.333	1030.812	.668%	98.884%
80.0	12.112	6.538	1037.35	.524%	99.511%
85.0	7.233	3.950	1041.3	.316%	99.890%
90.0	4.184	1.147	1042.447	.092%	100.000%

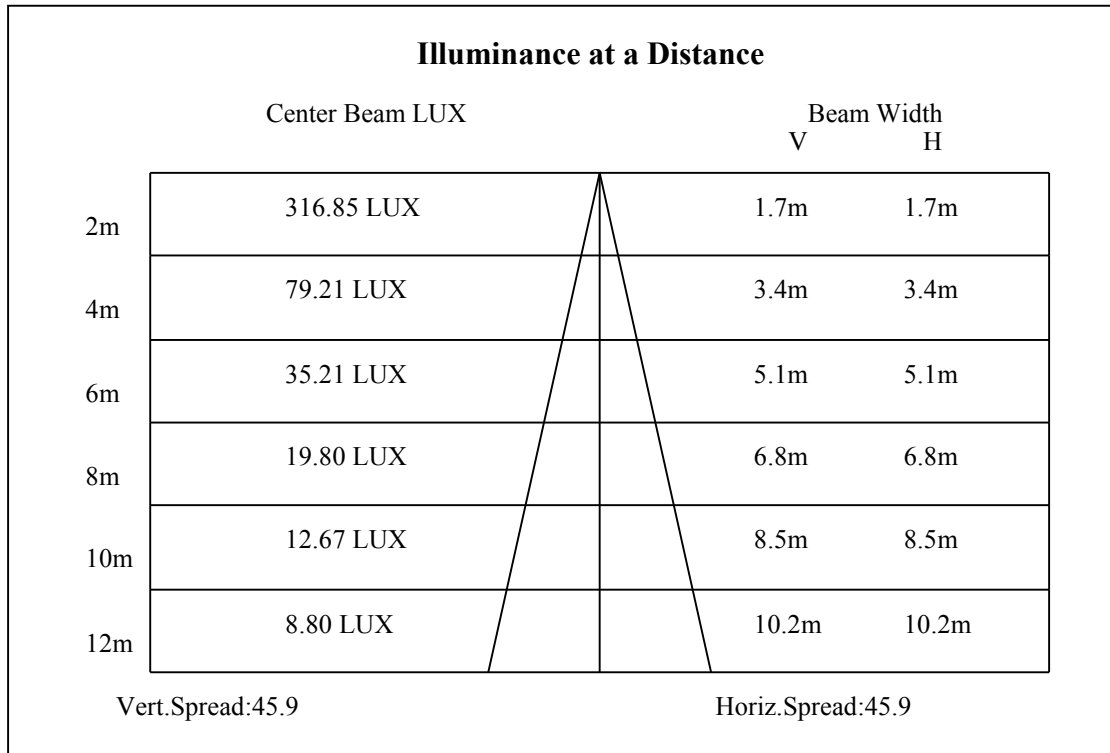
ZONAL LUMEN SUMMARY

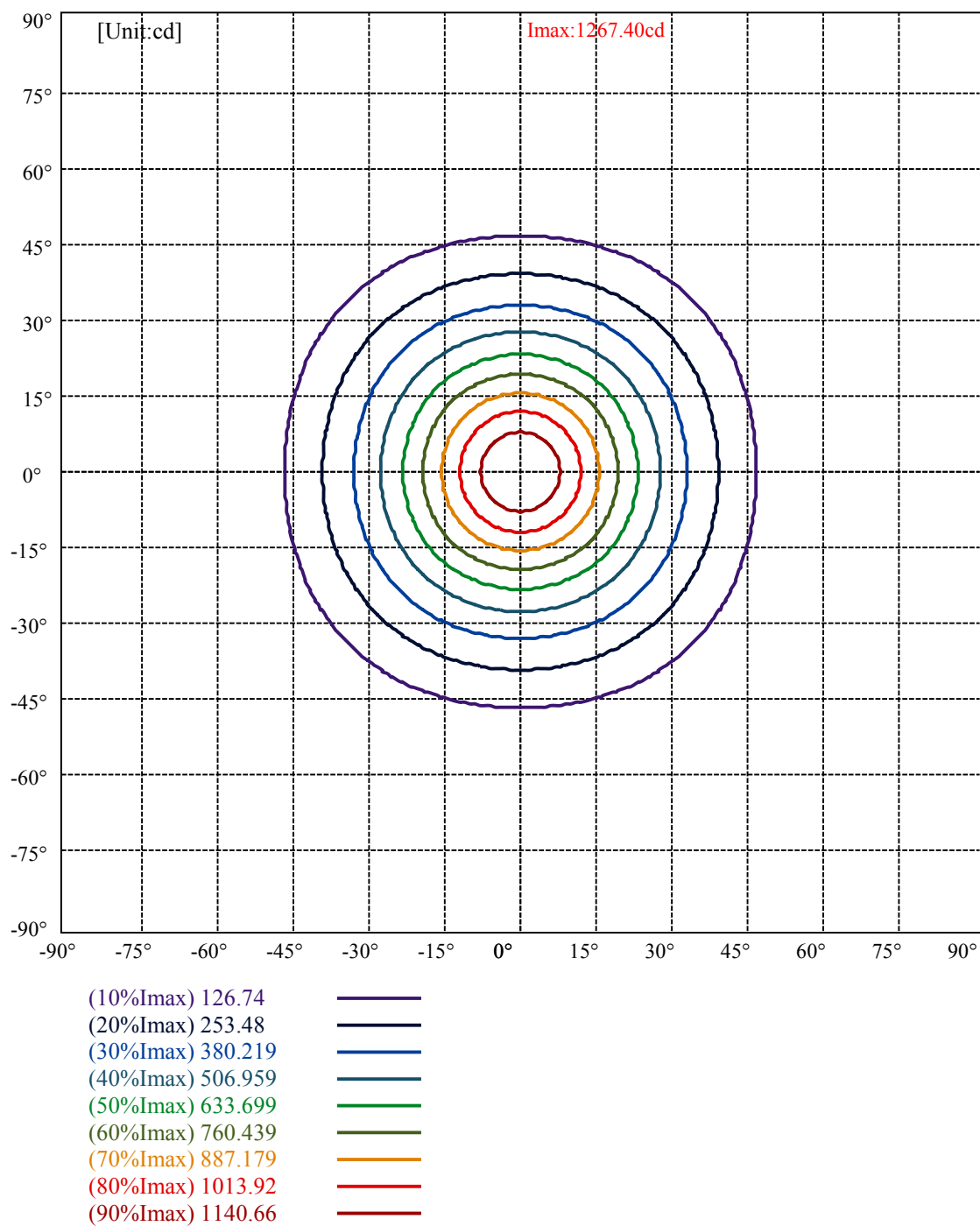
Zone	Lumens	%Lamp	%Fixt
0-30	685.12	54.90%	65.72%
0-40	868.36	69.58%	83.30%
0-60	999.44	80.08%	95.87%
0-90	1041.30	83.44%	99.89%
0-120	1041.30	83.44%	99.89%
0-180	1042.45	83.53%	100.00%
60-90	59.12	4.74%	5.67%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.87	833.96	66.82%	80.00%

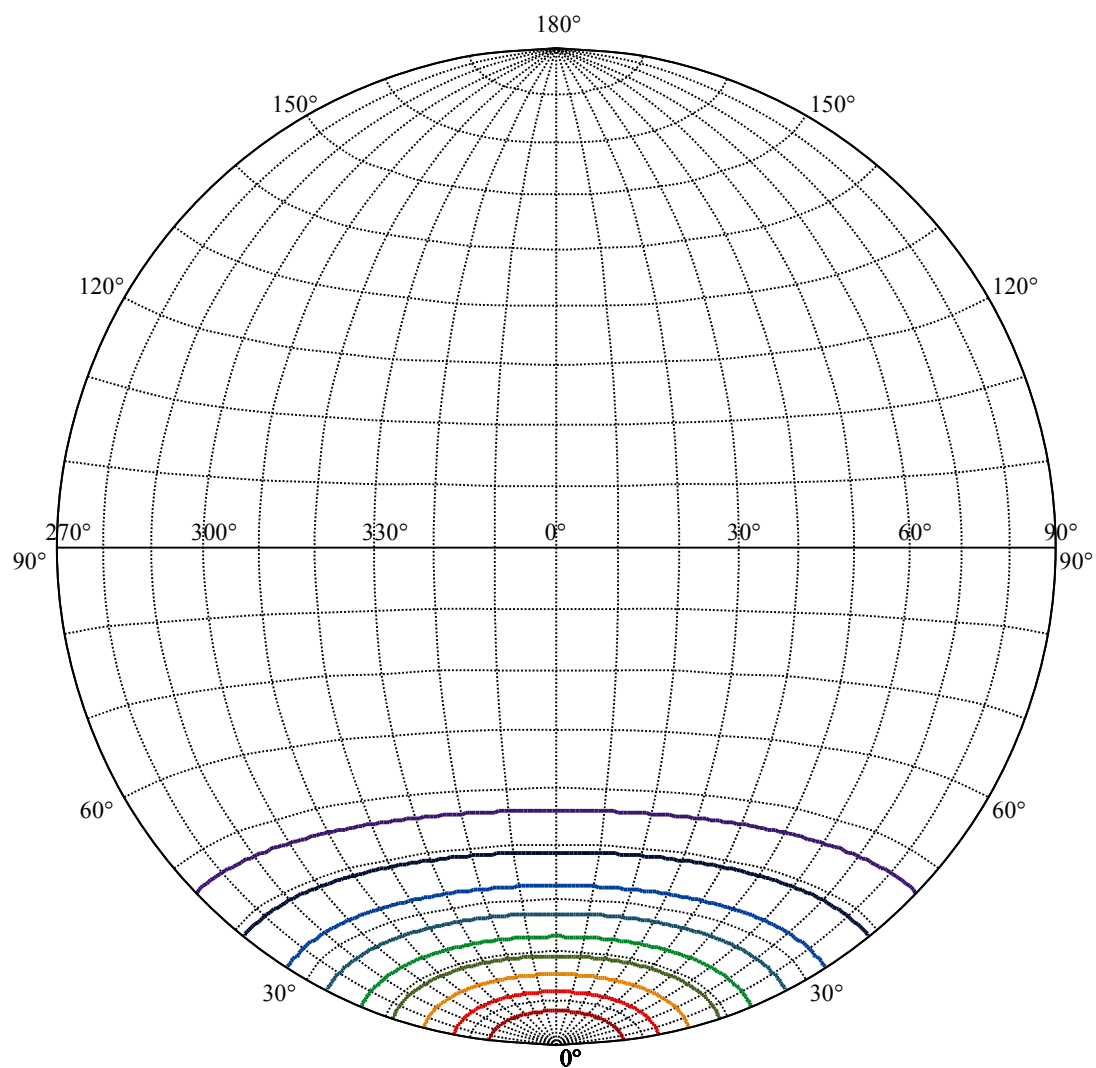
ZONAL LUMEN SUMMARY

0-10	168.46
10-20	264.77
20-30	251.89
30-40	183.24
40-50	90.04
50-60	41.04
60-70	23.04
70-80	14.87
80-90	3.95
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:1267.40

(10%Imax) 126.74

(20%Imax) 253.48

(30%Imax) 380.219

(40%Imax) 506.959

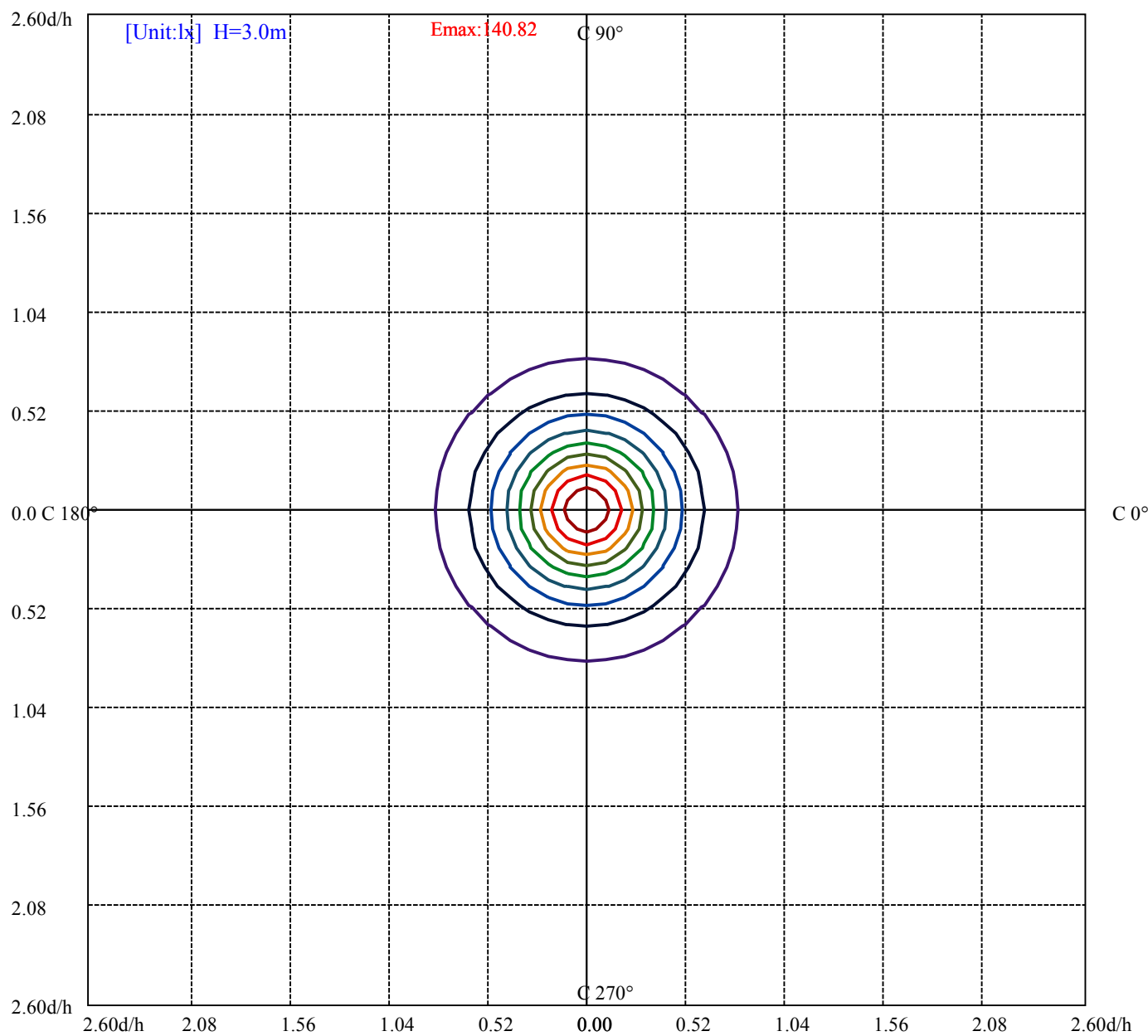
(50%Imax) 633.699

(60%Imax) 760.439

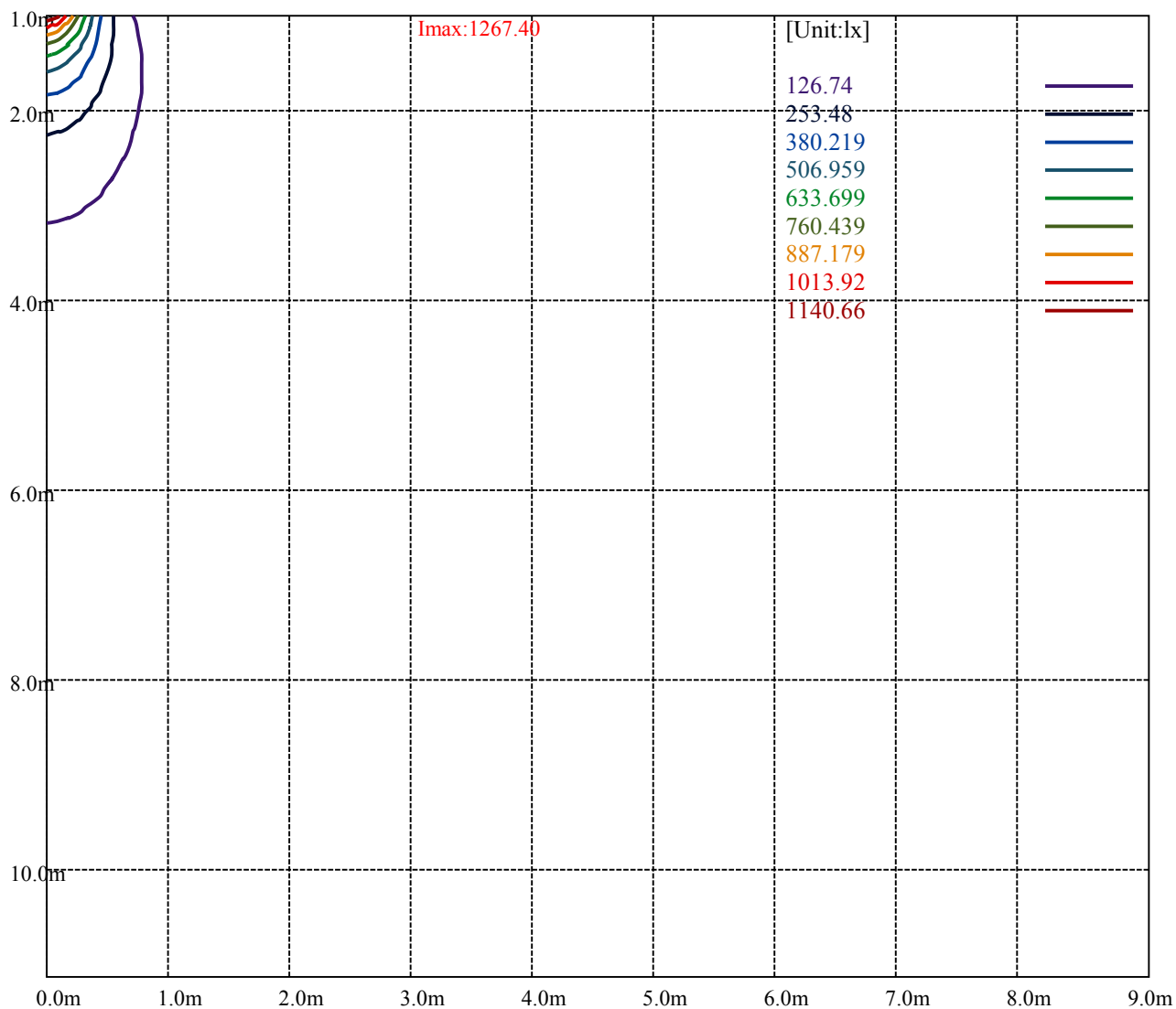
(70%Imax) 887.179

(80%Imax) 1013.92

(90%Imax) 1140.66



(10%Emax) 14.08222	—
(20%Emax) 28.16433	—
(30%Emax) 42.24656	—
(40%Emax) 56.32878	—
(50%Emax) 70.41089	—
(60%Emax) 84.49311	—
(70%Emax) 98.57533	—
(80%Emax) 112.6578	—
(90%Emax) 126.74	—



Luminance Table

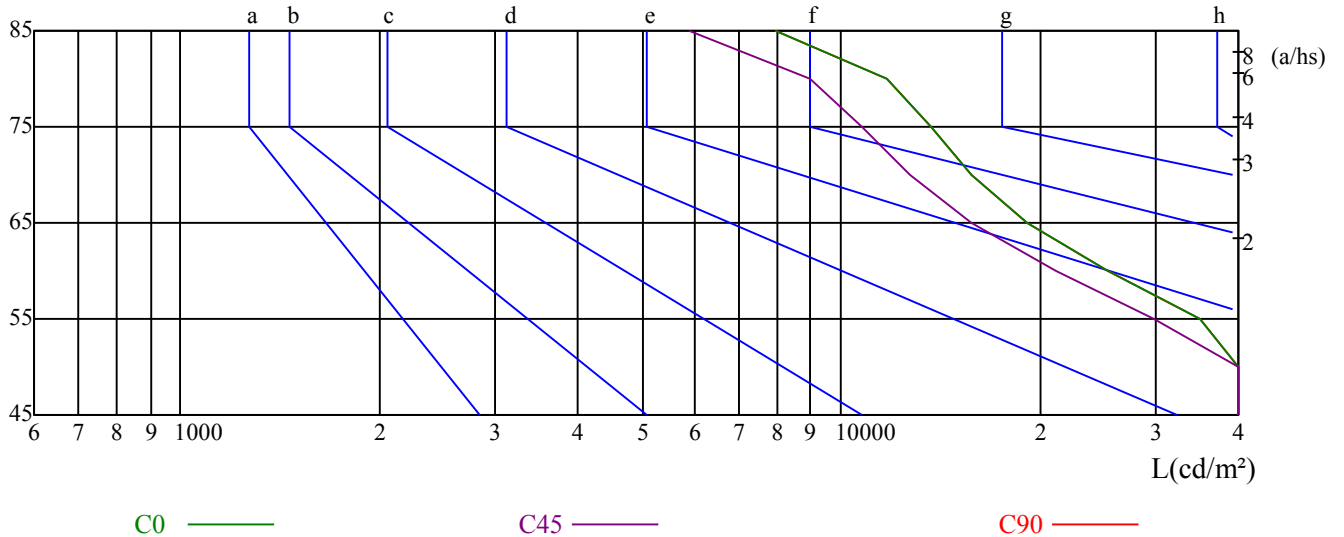
γ	45	50	55	60	65	70	75	80	85
C0	85445	54670	35044	25314	19192	15761	13721	11734	7952
C45	74925	47246	29822	21186	15771	12687	10786	8969	5874
C90	85445	54670	35044	25314	19192	15761	13721	11734	7952

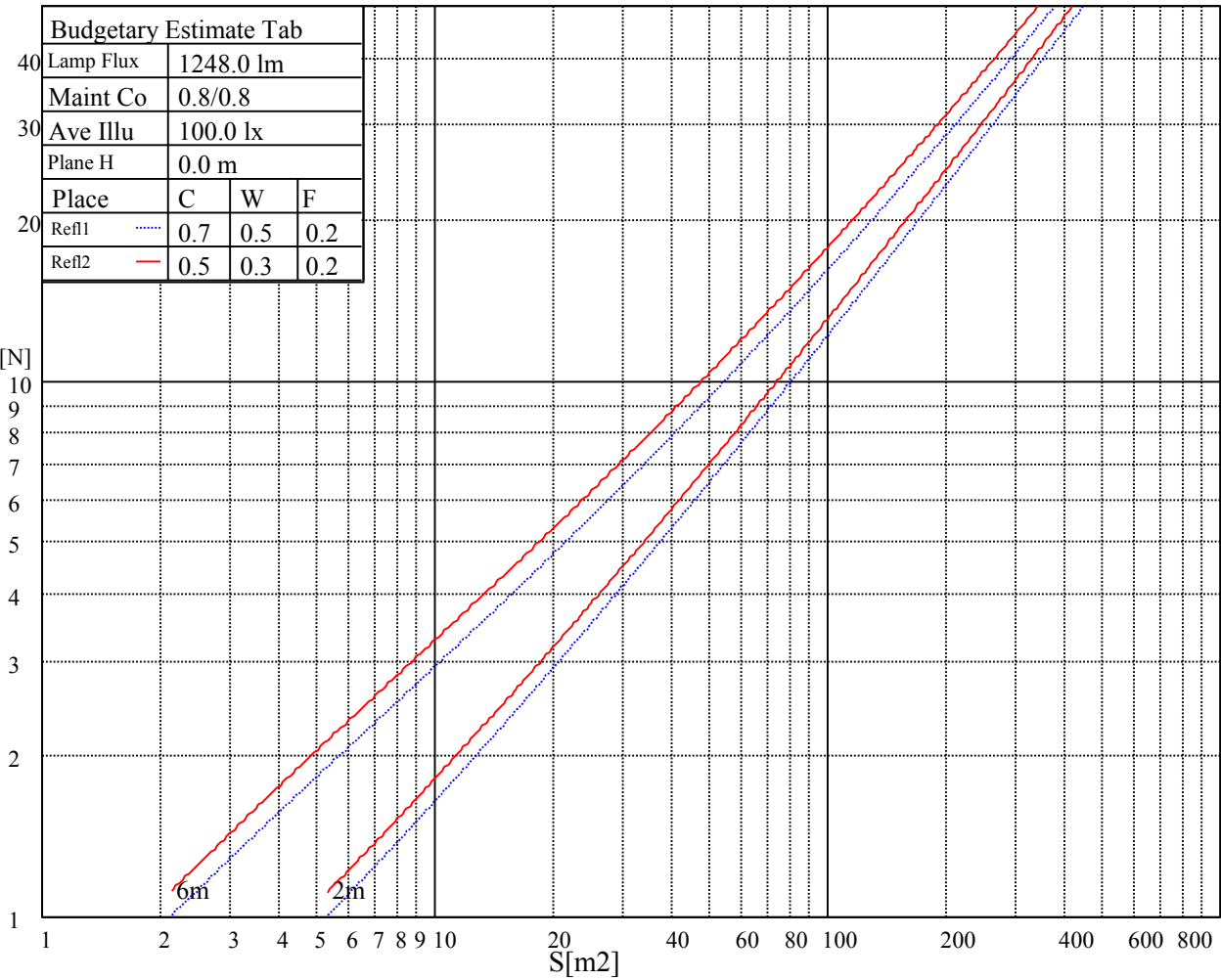
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
40299	40299	40299	39981	39981	39981	54563	54563	54563

Glare Table

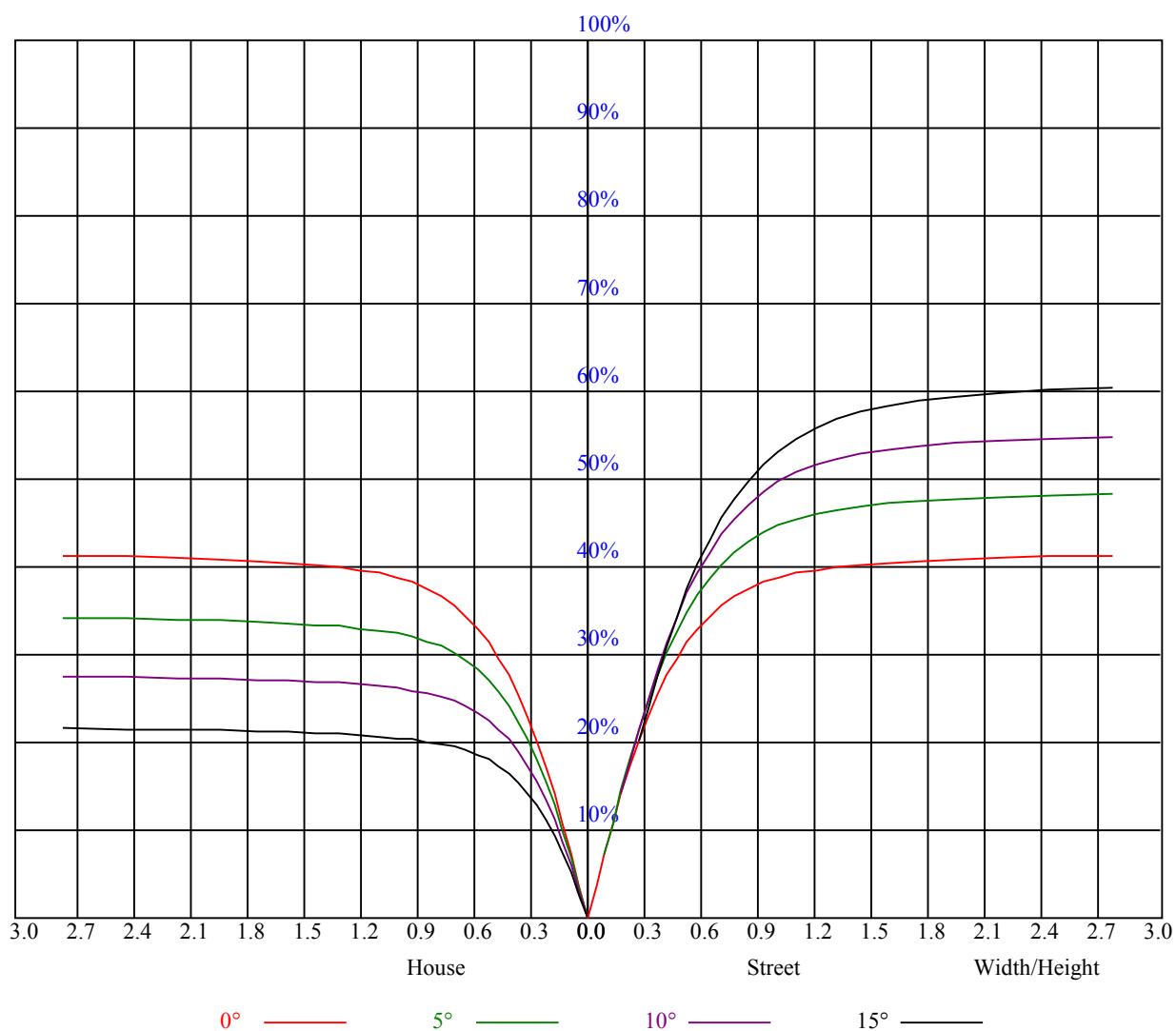
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

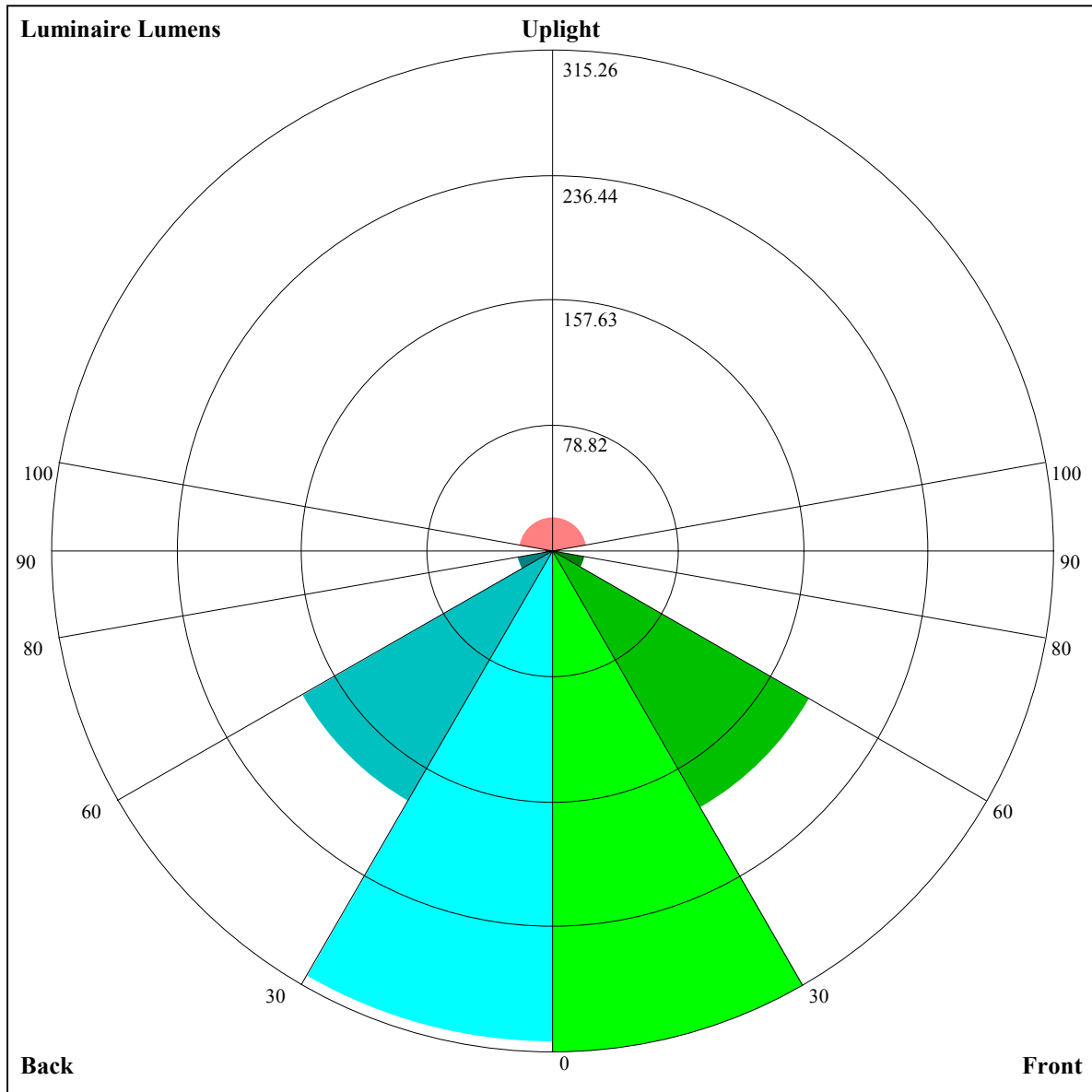
Luminance Limiting Curve

 $\gamma(^{\circ})$ 



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	1.00	1.00	1.00	0.98	0.98	0.98	0.93	0.93	0.93	0.89	0.89	0.89	0.86	0.86	0.86	0.84
1	0.92	0.89	0.87	0.90	0.87	0.85	0.86	0.84	0.83	0.83	0.82	0.80	0.80	0.79	0.78	0.76
2	0.85	0.81	0.78	0.83	0.80	0.77	0.80	0.77	0.75	0.78	0.75	0.73	0.75	0.73	0.72	0.70
3	0.78	0.74	0.70	0.77	0.73	0.70	0.75	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.65
4	0.73	0.68	0.64	0.72	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.62	0.60
5	0.68	0.63	0.59	0.68	0.63	0.59	0.66	0.62	0.58	0.65	0.61	0.58	0.63	0.60	0.57	0.56
6	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.52
7	0.60	0.55	0.51	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.50	0.49
8	0.57	0.52	0.48	0.57	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.48	0.46
9	0.54	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.51	0.48	0.45	0.44
10	0.51	0.46	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.50	0.46	0.43	0.49	0.45	0.43	0.41





Luminaire Lumens:

FL=315.26,FM=187.15,FH=20.89,FVH=3.79

BL=308.86,BM=182.3,BH=22.57,BVH=4.57

UL=4.57,UH=21.73

BUG Rating:B1-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	1262.44	1223.90	1103.88	922.75	750.97	582.50	449.81	344.10	252.82
45.0	1268.50	1202.98	1072.50	886.96	711.33	559.37	431.09	311.62	215.00
90.0	1267.95	1179.31	1009.62	831.30	662.88	515.00	401.47	287.06	191.38
135.0	1270.70	1201.33	1057.63	878.15	701.97	542.31	419.53	313.82	213.34
180.0	1262.44	1201.88	1051.74	868.79	703.13	544.07	417.71	313.38	218.24
225.0	1268.50	1226.66	1098.04	916.74	738.09	570.11	445.90	328.52	229.59
270.0	1267.95	1258.04	1151.78	973.95	807.13	620.49	482.84	361.17	279.14
315.0	1270.70	1238.77	1091.66	931.28	766.94	603.80	468.75	346.30	235.64
360.0	1262.44	1223.90	1103.88	922.75	750.97	582.50	449.81	344.10	252.82

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	147.44	93.76	54.12	35.95	25.05	18.94	13.76	10.13	6.61
45.0	131.75	81.43	50.10	35.29	25.27	18.77	14.37	9.30	5.45
90.0	115.07	73.45	46.41	32.59	23.78	18.17	16.52	13.10	6.94
135.0	129.00	81.04	51.20	35.62	26.04	20.32	19.05	17.29	7.71
180.0	133.13	83.19	51.53	36.34	26.54	20.92	16.85	13.76	8.70
225.0	145.24	87.32	54.01	38.15	27.58	21.36	16.63	12.83	8.75
270.0	166.99	102.18	63.31	41.73	28.46	21.20	15.47	10.96	7.27
315.0	143.59	86.55	53.02	35.13	24.50	18.33	13.27	9.52	6.44
360.0	147.44	93.76	54.12	35.95	25.05	18.94	13.76	10.13	6.61

C/γ(°)	90.0
0.0	4.13
45.0	4.13
90.0	4.07
135.0	4.18
180.0	4.13
225.0	4.29
270.0	4.35
315.0	4.18
360.0	4.13