



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440225 KAI 5W 3000K 600lm

Luminaire:

Report No:

Voltage(V): 230.0000

Test No: KYZ-A250930027-03-006

Current(A): 0.0260

LampCAT: LED

Power (W): 5.0000

Lamp flux(lm)

PF: 0.8462

Number of Lamps: 1

Ballast type:

Length(mm): -126

Width(mm): -126

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 600.00

Lumens(lm)/Power(W): 120.00

Central intensity(cd): 296.506

Maximum intensity(cd): 305.032

Angle of maximum intensity: $C=157.5$ $\gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=85.5

[C90/270]Total=89.3

Field angle(10%Imax): [C0/180]Total=135.0

[C90/270]Total=139.9

Maximum s/h(1/2): C0_180=1.07 C90_270=1.19

Maximum s/h(1/4): C0_180=1.14 C90_270=1.24

Up flux rate of LUM(%): 1.65%

Down flux rate of LUM(%): 98.35%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.164%

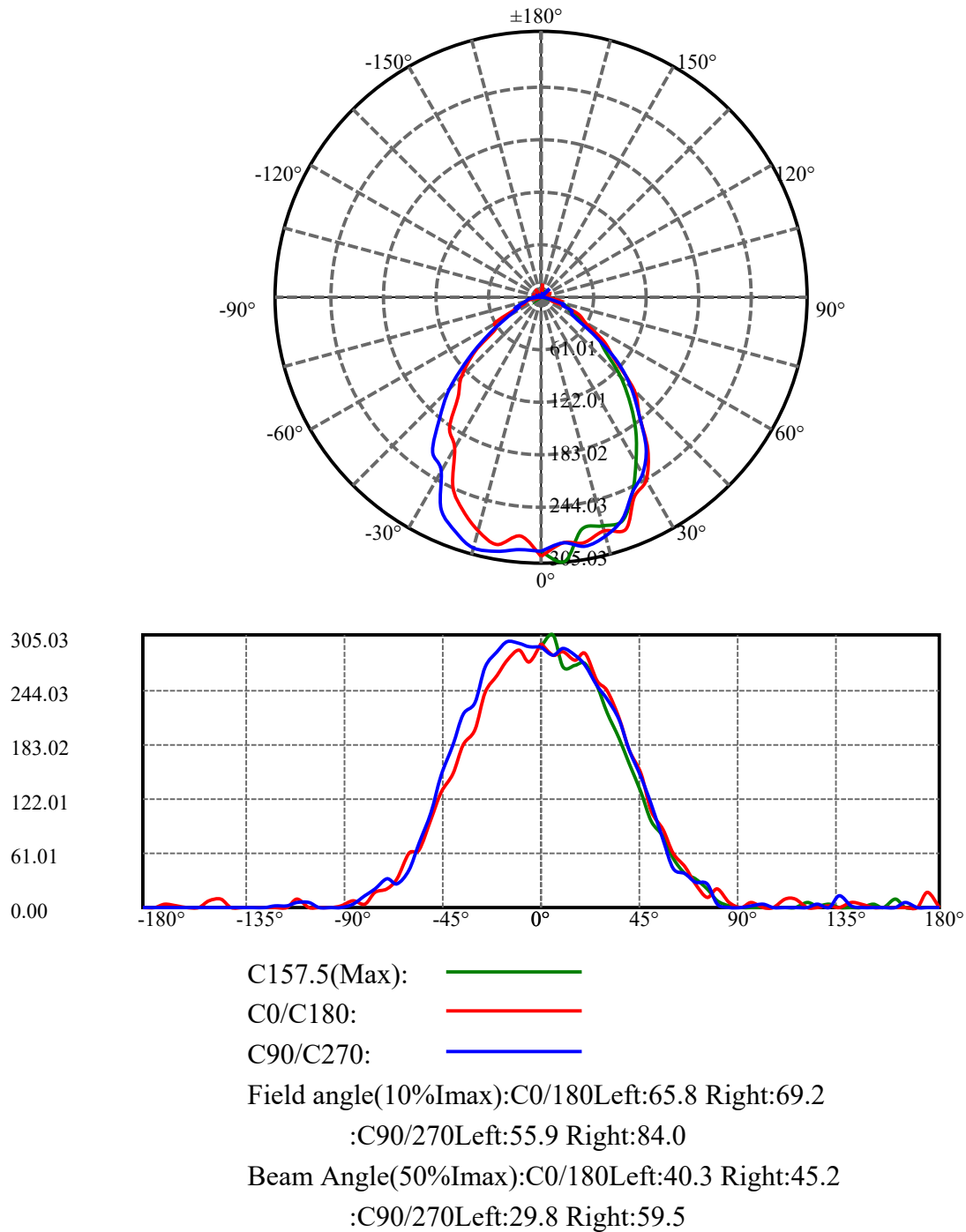
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	297.603	0.000	0	.000%	.000%
5.0	300.190	6.891	6.891	1.148%	1.148%
10.0	298.382	20.647	27.538	3.441%	4.590%
15.0	294.312	33.901	61.439	5.650%	10.240%
20.0	288.659	46.327	107.766	7.721%	17.961%
25.0	264.190	55.910	163.676	9.318%	27.279%
30.0	238.087	61.291	224.967	10.215%	37.495%
35.0	211.256	63.803	288.77	10.634%	48.128%
40.0	179.577	62.876	351.646	10.479%	58.608%
45.0	137.597	56.627	408.273	9.438%	68.046%
50.0	104.887	47.245	455.519	7.874%	75.920%
55.0	75.041	37.724	493.242	6.287%	82.207%
60.0	58.385	29.738	522.98	4.956%	87.164%
65.0	39.066	22.843	545.824	3.807%	90.971%
70.0	28.615	16.524	562.348	2.754%	93.725%
75.0	22.083	12.778	575.126	2.130%	95.854%
80.0	13.968	9.301	584.427	1.550%	97.405%
85.0	3.367	4.542	588.969	.757%	98.162%
90.0	1.005	1.154	590.123	.192%	98.354%
95.0	1.131	0.564	590.687	.094%	98.448%
100.0	2.336	0.908	591.595	.151%	98.599%
105.0	1.985	1.115	592.71	.186%	98.785%
110.0	2.839	1.216	593.926	.203%	98.988%
115.0	2.110	1.208	595.134	.201%	99.189%
120.0	0.678	0.654	595.788	.109%	99.298%
125.0	1.809	0.554	596.342	.092%	99.391%
130.0	1.583	0.711	597.053	.119%	99.509%
135.0	1.457	0.592	597.646	.099%	99.608%
140.0	0.452	0.341	597.986	.057%	99.665%
145.0	1.960	0.388	598.374	.065%	99.729%
150.0	0.904	0.407	598.781	.068%	99.797%
155.0	1.658	0.313	599.094	.052%	99.849%
160.0	1.708	0.340	599.434	.057%	99.906%
165.0	1.457	0.252	599.686	.042%	99.948%
170.0	1.206	0.152	599.838	.025%	99.973%
175.0	2.010	0.111	599.949	.018%	99.992%
180.0	2.311	0.050	599.999	.008%	100.000%

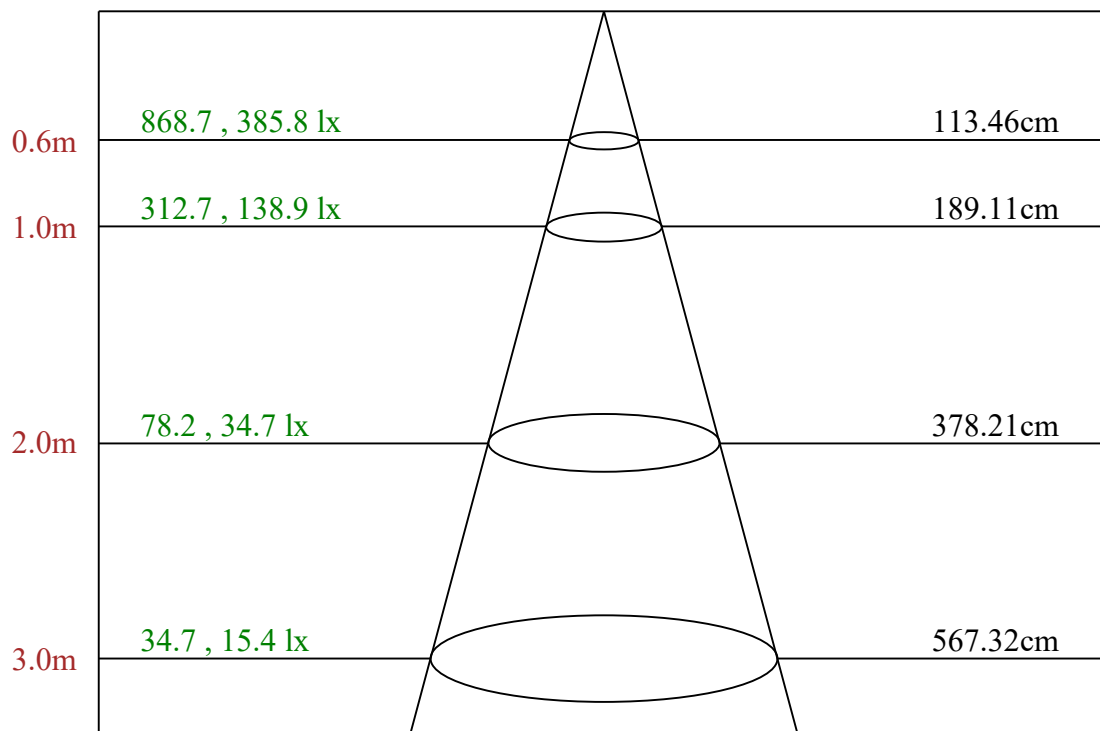
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	224.97	37.49%
0-40	351.65	58.61%
0-60	522.98	87.16%
0-90	590.12	98.35%
0-120	595.79	99.30%
0-180	600.00	100.00%
60-90	96.88	16.15%
90-120	6.82	1.14%
90-130	8.08	1.35%
90-150	9.81	1.64%
90-180	10.98	1.83%
0-53.24	480.00	80.00%

ZONAL LUMEN SUMMARY

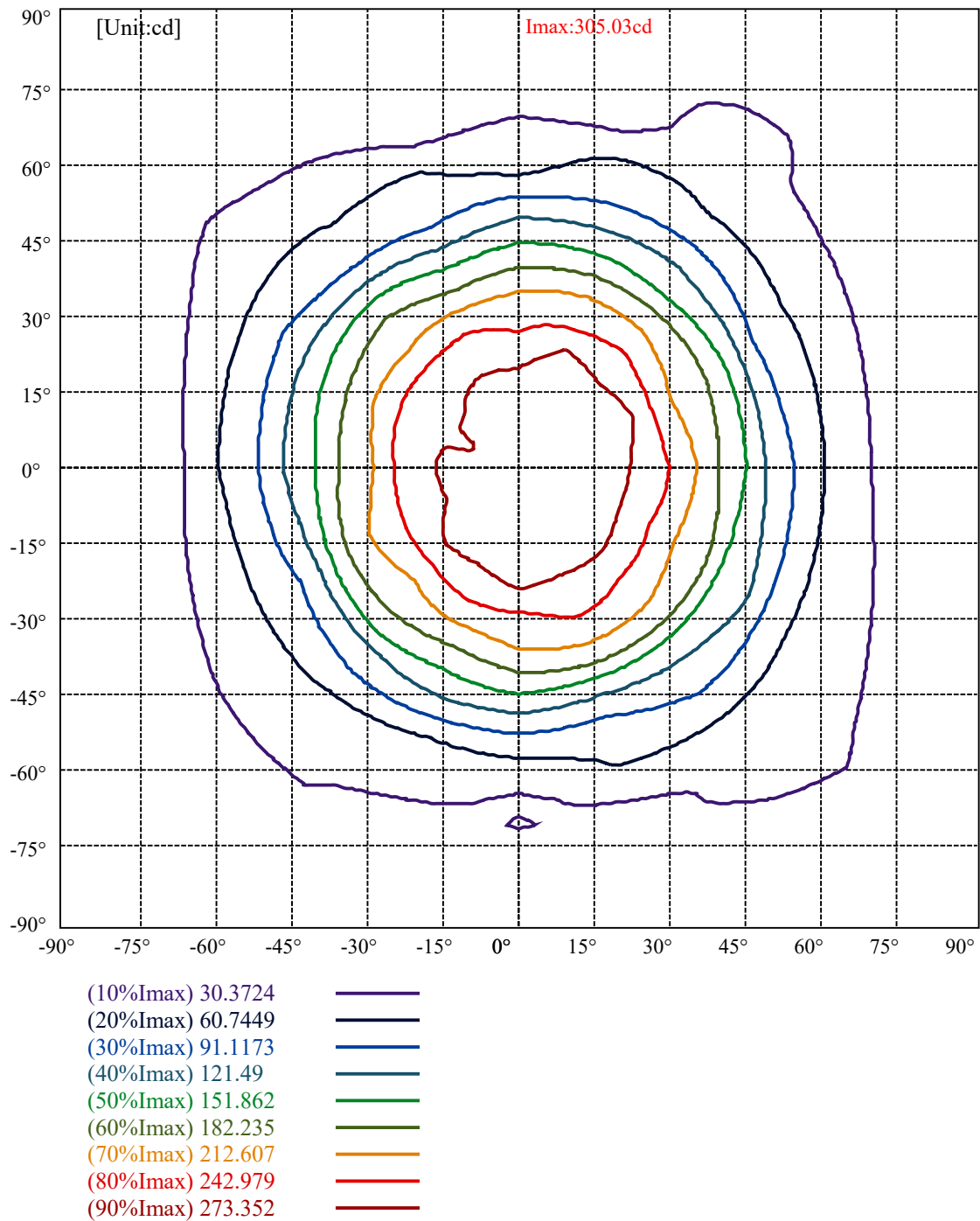
0-10	27.54
10-20	80.23
20-30	117.20
30-40	126.68
40-50	103.87
50-60	67.46
60-70	39.37
70-80	22.08
80-90	5.70
90-100	1.47
100-110	2.33
110-120	1.86
120-130	1.27
130-140	0.93
140-150	0.79
150-160	0.65
160-170	0.40
170-180	0.11

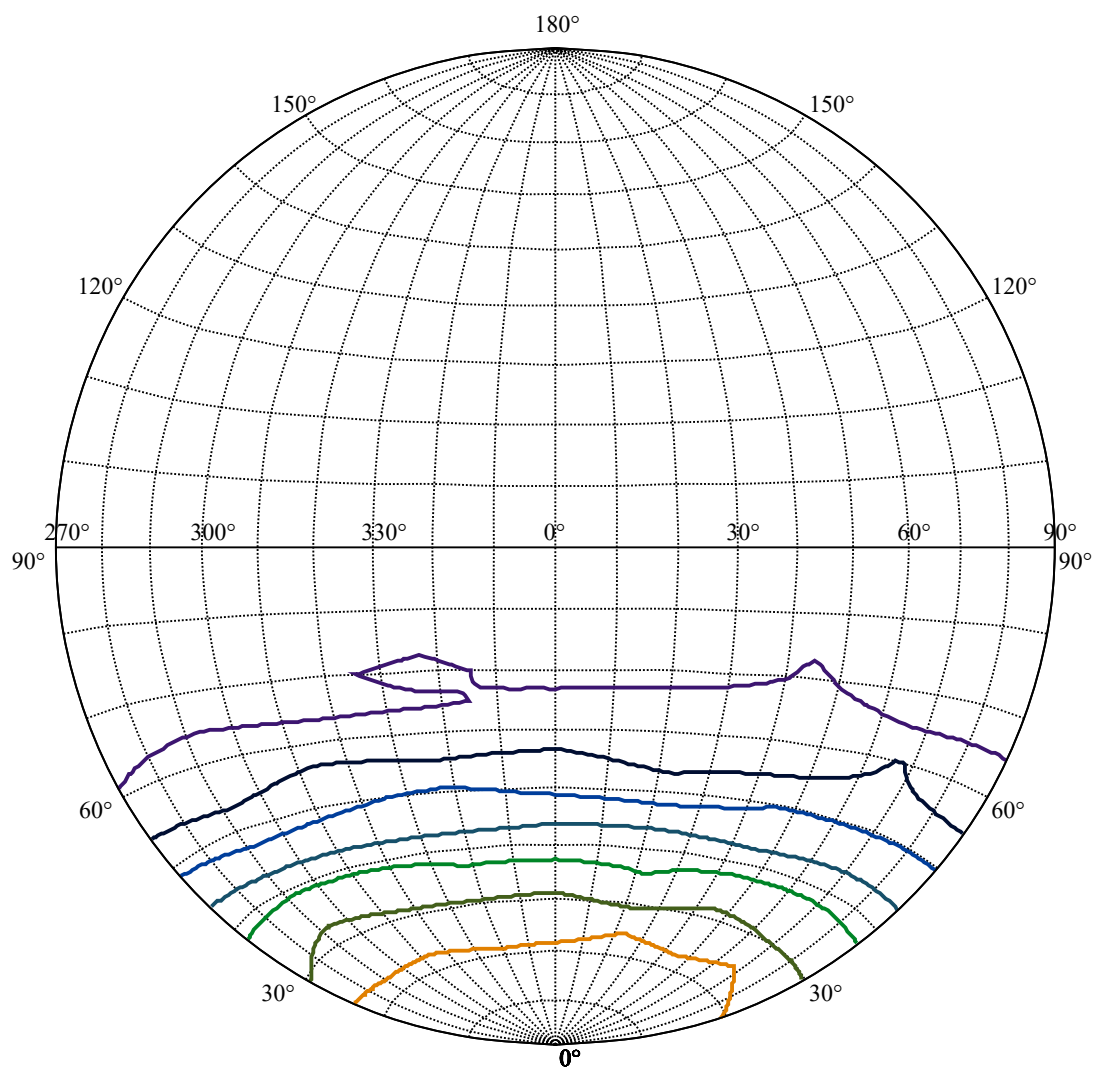




Max , Ave

Beam angle of C157.5 plane 86.79





House

[Unit:cd]

Road

Imax:305.03

(10%Imax) 37.65358

(20%Imax) 75.30716

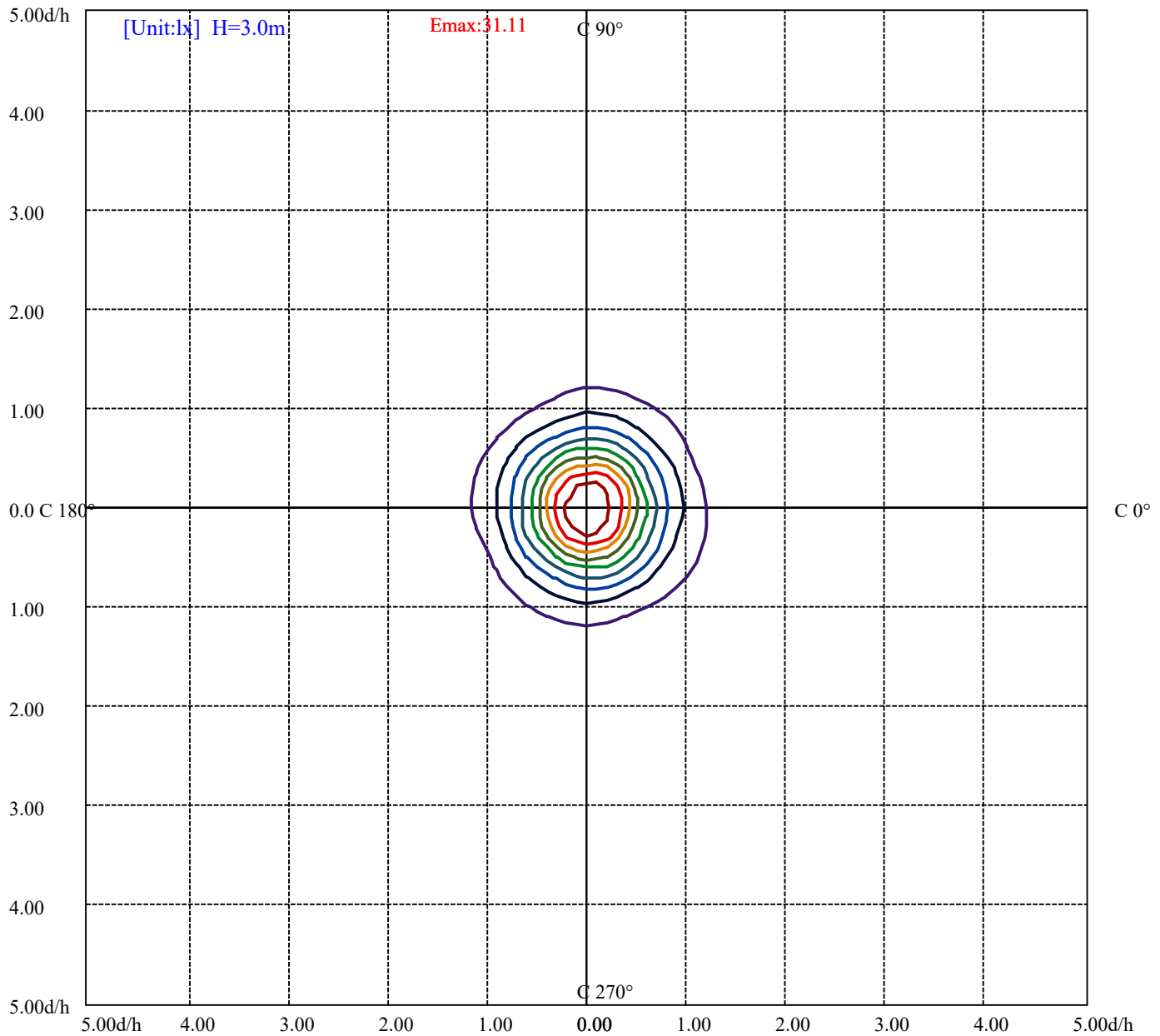
(30%Imax) 112.961

(40%Imax) 150.6147

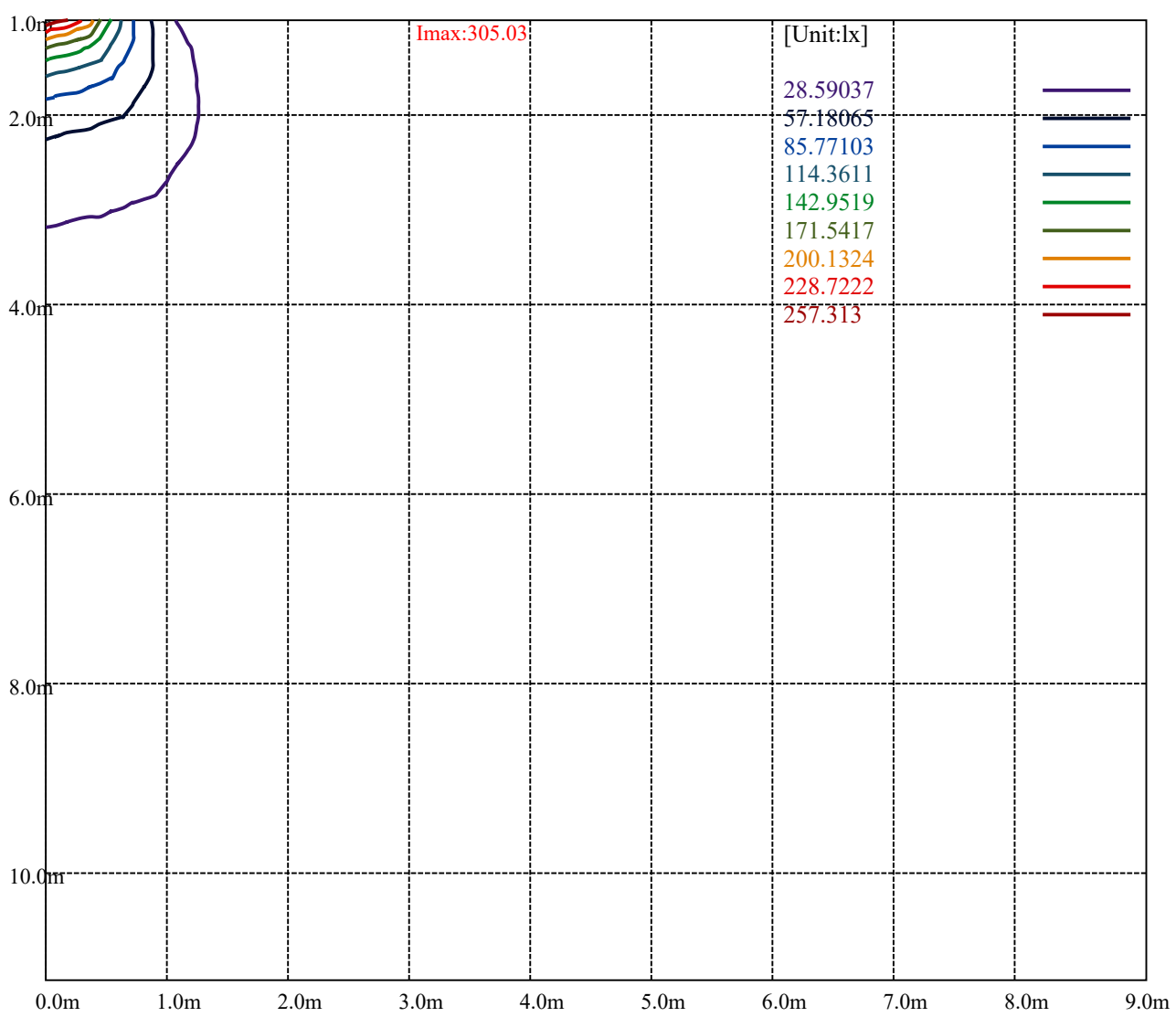
(50%Imax) 188.2674

(60%Imax) 225.9211

(70%Imax) 263.5748



(10%Emax) 3.110915	—
(20%Emax) 6.22183	—
(30%Emax) 9.332744	—
(40%Emax) 12.44366	—
(50%Emax) 15.55463	—
(60%Emax) 18.66549	—
(70%Emax) 21.77646	—
(80%Emax) 24.88732	—
(90%Emax) 27.99829	—



Luminance Table

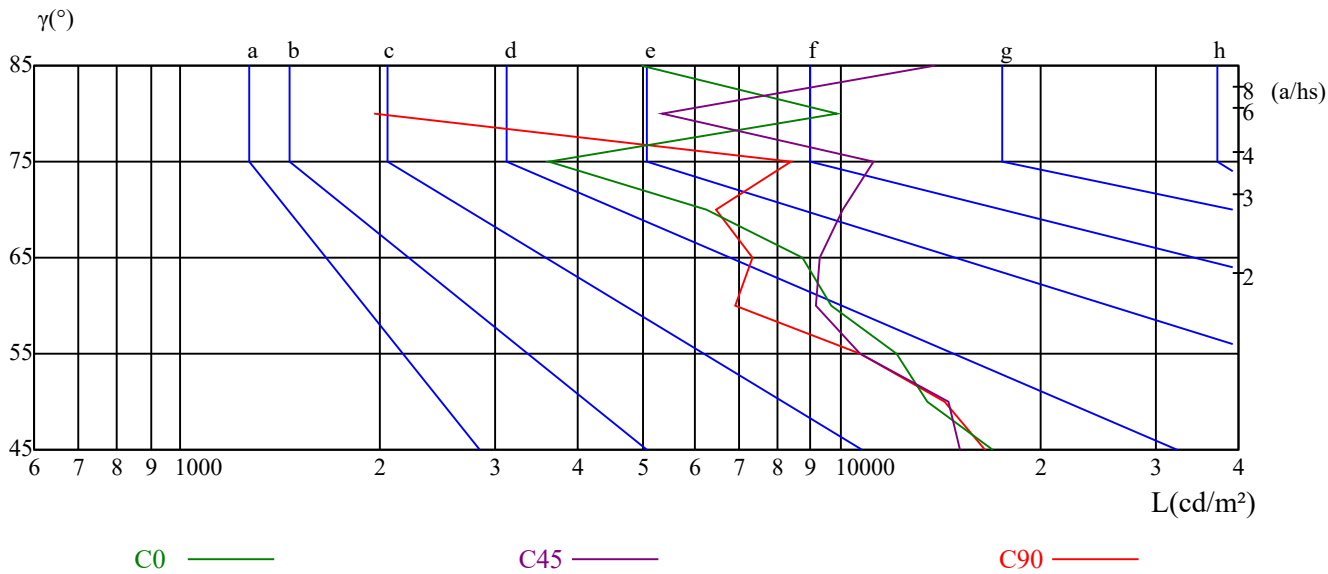
γ	45	50	55	60	65	70	75	80	85
C0	17012	13492	12139	9698	8753	6271	3603	9845	4993
C45	15122	14508	10676	9139	9267	10088	11169	5370	13910
C90	16573	14314	10676	6901	7355	6453	8407	1969	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7355	6252	7318	4444	7446	7566	5884	2140	5617

Glare Table

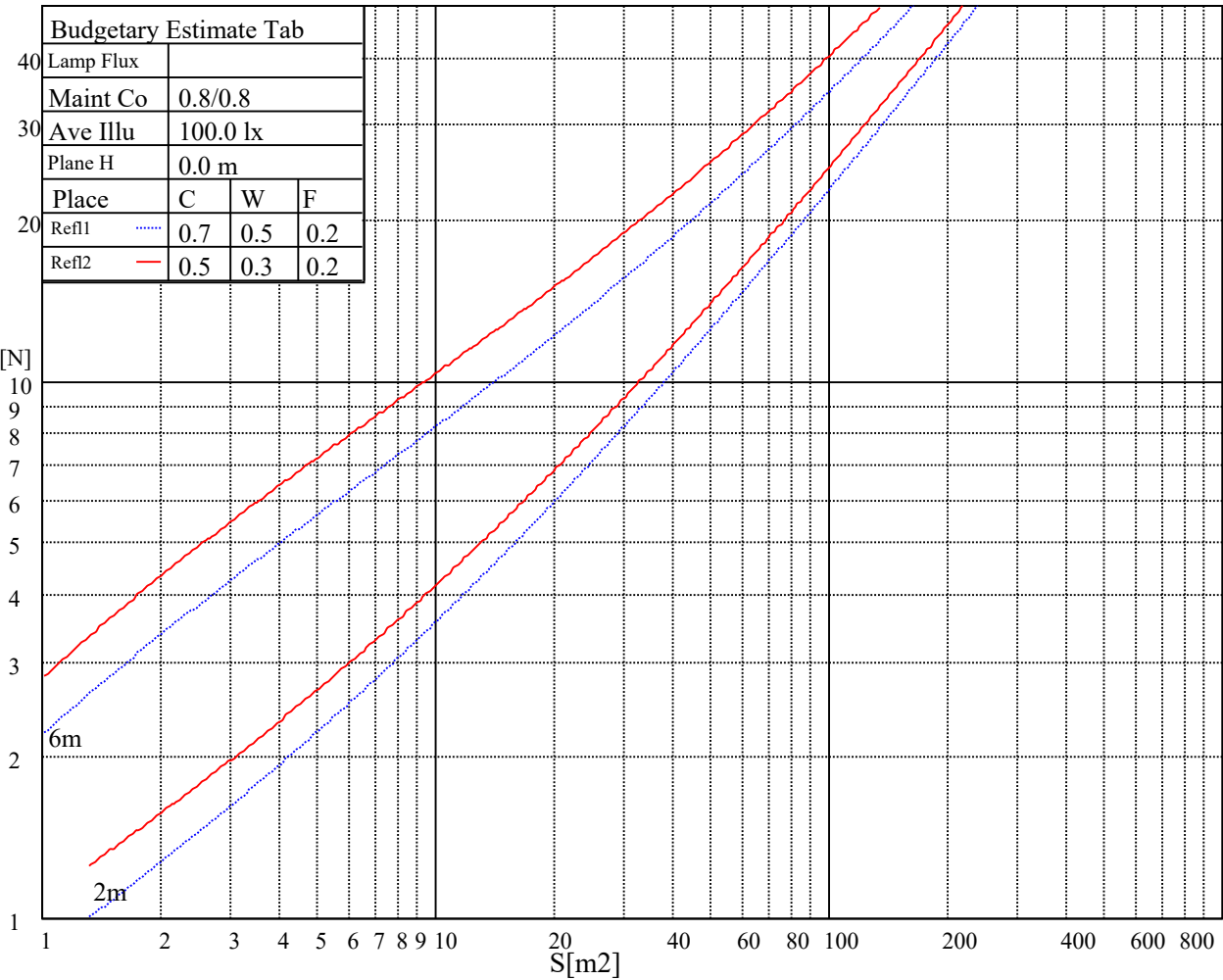
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

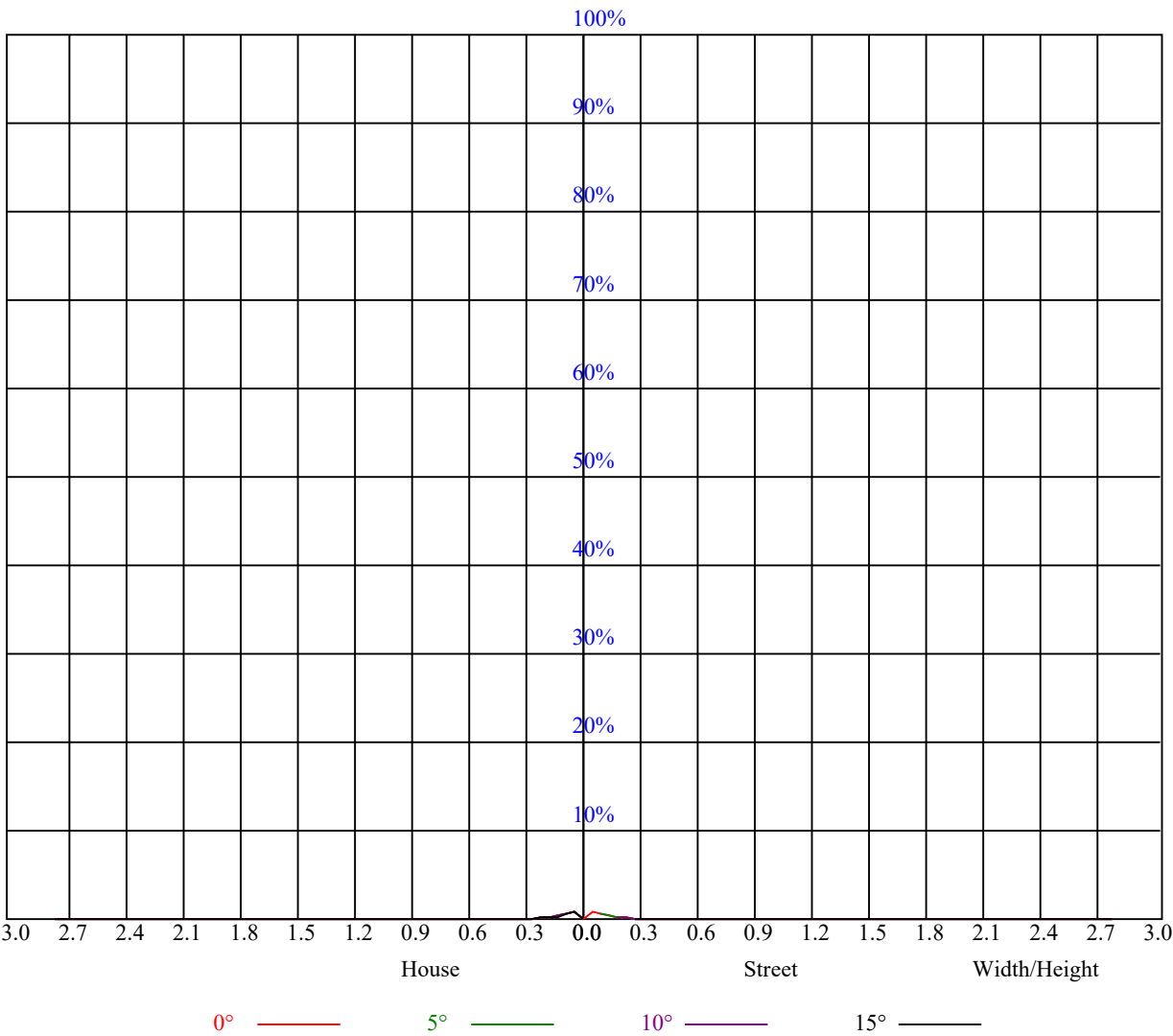


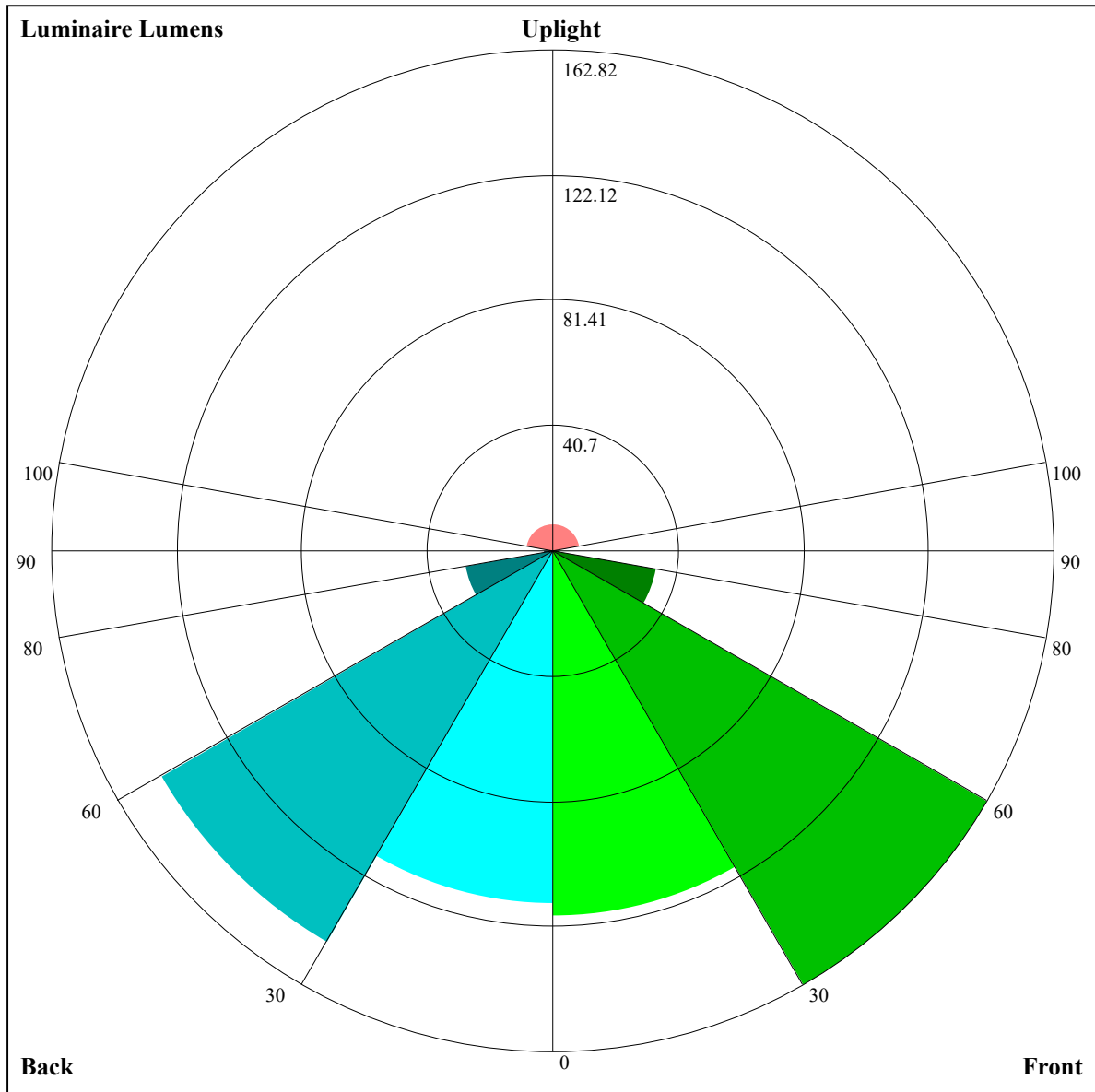
Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	15.85	17.26	16.24	17.61	17.97	16.15	17.55	16.53	17.90	18.26
	3H	16.73	17.99	17.14	18.37	18.75	16.73	17.99	17.14	18.36	18.75
	4H	16.93	18.11	17.35	18.49	18.90	17.11	18.29	17.53	18.68	19.08
	6H	17.39	18.48	17.82	18.88	19.32	17.25	18.34	17.68	18.74	19.18
	8H	17.59	18.64	18.03	19.05	19.49	17.19	18.24	17.63	18.65	19.10
	12H	17.64	18.65	18.09	19.07	19.52	17.14	18.14	17.58	18.56	19.01
4H	2H	16.35	17.53	16.77	17.91	18.32	16.54	17.72	16.96	18.10	18.51
	3H	17.38	18.37	17.83	18.79	19.24	17.30	18.29	17.75	18.71	19.16
	4H	17.81	18.68	18.27	19.13	19.61	17.81	18.68	18.27	19.13	19.61
	6H	18.37	19.14	18.86	19.62	20.10	17.93	18.70	18.42	19.18	19.66
	8H	18.63	19.35	19.13	19.83	20.33	17.90	18.62	18.41	19.10	19.61
	12H	18.71	19.38	19.22	19.86	20.40	17.87	18.54	18.38	19.01	19.56
8H	4H	18.12	18.84	18.62	19.32	19.83	18.11	18.83	18.61	19.31	19.81
	6H	18.77	19.38	19.30	19.88	20.42	18.26	18.86	18.78	19.36	19.90
	8H	19.11	19.63	19.65	20.17	20.70	18.29	18.82	18.84	19.36	19.88
	12H	19.19	19.63	19.74	20.17	20.72	18.25	18.69	18.81	19.23	19.78
12H	4H	18.11	18.78	18.61	19.25	19.80	18.12	18.79	18.63	19.26	19.81
	6H	18.84	19.37	19.39	19.91	20.44	18.36	18.88	18.90	19.43	19.95
	8H	19.18	19.62	19.73	20.16	20.71	18.40	18.83	18.95	19.37	19.92
Variation with the observer position at spacings:											
S = 1.0H		0.6/-0.7					0.4/-0.9				
S = 1.5H		0.7/-1.5					1.1/-1.0				
S = 2.0H		2.2/-2.4					1.6/-1.4				
Standard tables:		BK3					BK3				
Uncorrected UGR		4.9					5.1				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.98
1	1.06	1.03	0.99	1.04	1.00	0.98	0.99	0.97	0.94	0.95	0.93	0.91	0.91	0.90	0.88	0.86
2	0.95	0.89	0.84	0.93	0.87	0.83	0.89	0.85	0.81	0.86	0.82	0.79	0.82	0.79	0.77	0.75
3	0.85	0.78	0.72	0.83	0.77	0.71	0.80	0.75	0.70	0.77	0.73	0.69	0.75	0.71	0.67	0.65
4	0.76	0.69	0.63	0.75	0.68	0.62	0.72	0.66	0.61	0.70	0.65	0.60	0.68	0.63	0.59	0.57
5	0.69	0.61	0.55	0.68	0.61	0.55	0.66	0.59	0.54	0.64	0.58	0.54	0.62	0.57	0.53	0.51
6	0.63	0.55	0.49	0.62	0.55	0.49	0.60	0.54	0.49	0.58	0.53	0.48	0.57	0.52	0.47	0.46
7	0.58	0.50	0.44	0.57	0.49	0.44	0.55	0.49	0.44	0.54	0.48	0.43	0.52	0.47	0.43	0.41
8	0.53	0.45	0.40	0.52	0.45	0.40	0.51	0.44	0.40	0.50	0.44	0.39	0.48	0.43	0.39	0.37
9	0.49	0.42	0.36	0.48	0.41	0.36	0.47	0.41	0.36	0.46	0.40	0.36	0.45	0.40	0.36	0.34
10	0.46	0.38	0.33	0.45	0.38	0.33	0.44	0.38	0.33	0.43	0.37	0.33	0.42	0.37	0.33	0.31





Luminaire Lumens:

FL=118.72,FM=162.82,FH=34.28,FVH=2.79

BL=114.63,BM=147.06,BH=28.87,BVH=2.88

UL=1.53,UH=8.71

BUG Rating:B1-U1-G0

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	296.51	282.55	285.27	276.74	283.71	253.87	241.86	212.40	176.35
22.5	285.65	293.40	282.55	283.71	287.59	271.70	227.13	196.12	183.33
45.0	281.39	294.96	284.49	285.65	285.65	261.62	244.57	215.89	180.23
67.5	278.29	286.82	304.64	298.44	289.92	272.86	235.27	217.05	181.39
90.0	291.08	282.94	289.92	282.94	271.70	247.28	233.33	210.46	176.35
112.5	287.20	284.88	291.86	284.10	272.09	254.26	236.43	191.86	159.30
135.0	284.49	279.06	283.71	273.25	266.27	252.71	216.66	196.90	175.58
157.5	291.08	305.03	269.76	270.93	272.47	247.28	218.21	190.31	161.62
180.0	296.51	275.58	287.98	277.51	260.07	240.31	199.22	182.55	149.61
202.5	285.65	291.86	285.27	274.03	261.24	241.86	220.93	198.45	154.26
225.0	281.39	305.03	295.34	285.27	275.96	243.41	210.46	192.24	167.05
247.5	278.29	293.02	286.43	290.30	274.80	256.97	231.00	194.96	160.46
270.0	291.08	291.47	294.96	298.06	286.43	268.99	229.84	215.50	182.55
292.5	287.20	285.27	281.39	298.06	287.20	260.07	249.61	224.41	177.98
315.0	284.49	291.86	293.79	282.55	297.28	255.42	239.53	219.38	187.59
337.5	291.08	287.59	286.04	279.06	281.00	247.28	239.14	200.77	186.82
360.0	296.51	282.55	285.27	276.74	283.71	253.87	241.86	212.40	176.35
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	150.00	108.14	86.82	60.46	46.12	26.74	11.63	21.32	5.43
22.5	145.73	94.57	68.60	55.81	55.43	21.71	24.42	16.28	0.00
45.0	133.33	116.28	76.36	56.98	48.84	43.02	36.05	11.63	15.12
67.5	144.96	114.34	84.49	79.46	39.15	20.93	19.38	5.43	0.39
90.0	146.12	114.73	76.36	43.02	38.76	27.52	27.13	4.26	0.00
112.5	120.54	87.59	69.77	60.85	29.07	17.44	13.18	15.89	0.00
135.0	126.74	83.72	64.34	56.20	41.08	21.32	13.18	14.73	0.39
157.5	129.45	97.29	79.46	54.65	37.21	32.95	21.71	7.36	1.94
180.0	128.68	98.06	64.34	59.69	31.39	20.54	17.05	4.65	7.36
202.5	100.39	78.29	62.01	51.16	35.27	26.74	10.46	20.15	2.71
225.0	114.73	89.53	59.69	57.75	33.72	30.23	22.09	21.32	8.91
247.5	133.72	98.83	58.91	44.57	37.21	18.99	14.73	14.73	0.00
270.0	147.28	105.42	71.70	41.86	27.13	31.78	20.93	13.57	4.65
292.5	134.49	96.51	67.44	62.40	36.05	22.48	29.07	4.65	0.00
315.0	133.33	111.63	87.21	59.30	30.62	33.33	26.36	13.57	0.00
337.5	133.33	123.25	80.23	56.59	35.66	45.74	33.33	25.97	5.04
360.0	150.00	108.14	86.82	60.46	46.12	26.74	11.63	21.32	5.43
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	5.81	0.00	0.00	9.69	8.53	0.00	0.00	2.71
22.5	0.00	0.78	0.00	10.85	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	5.04	0.00	0.00	0.00	0.00	0.00
67.5	0.00	2.33	6.59	2.33	6.59	0.00	0.00	7.36	8.53
90.0	0.00	2.33	3.49	0.00	0.00	0.00	0.00	3.10	0.00
112.5	0.00	0.00	0.00	0.00	0.00	11.63	0.00	0.78	0.00
135.0	0.00	0.00	0.00	1.16	0.00	0.00	0.00	0.00	2.33
157.5	0.00	0.00	0.00	0.00	0.00	0.00	6.20	1.16	4.65
180.0	2.71	0.00	0.00	0.00	9.69	0.00	0.00	0.00	0.00
202.5	12.79	0.00	0.00	0.00	0.00	5.81	0.00	0.00	1.94
225.0	0.00	5.81	0.00	0.00	3.49	0.00	0.78	12.40	0.00
247.5	0.00	0.00	5.81	5.43	1.16	0.00	0.00	0.00	0.00
270.0	0.00	0.39	0.00	5.81	5.43	1.94	2.71	0.00	0.00
292.5	0.00	0.00	14.73	0.00	0.00	4.65	0.78	1.55	0.00
315.0	0.00	0.00	0.00	0.00	7.75	0.00	0.00	0.00	4.26
337.5	0.00	0.00	5.43	0.00	0.00	0.00	0.00	1.55	0.00
360.0	0.00	5.81	0.00	0.00	9.69	8.53	0.00	0.00	2.71

Intensity data(cd)

Appendix Page: 17 Total:17

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	5.04	3.49	0.00	0.00	0.00	0.00	0.00	16.28
22.5	0.00	0.00	0.00	0.39	0.00	1.94	0.00	0.00	6.59
45.0	0.00	0.00	0.00	0.00	0.00	1.16	0.00	6.59	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	12.40	1.94	0.00	0.00	0.00	0.00	6.59	0.00	0.00
112.5	3.49	0.00	12.79	0.00	0.00	0.00	10.08	0.00	5.81
135.0	3.49	0.00	0.00	0.39	8.53	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	4.65	0.00	8.53	0.00	0.00	0.39
180.0	0.00	0.00	9.69	7.36	0.00	0.00	2.33	3.88	0.00
202.5	0.00	0.00	0.00	1.16	0.00	0.00	0.00	0.00	0.00
225.0	3.10	0.00	0.00	0.00	0.00	6.59	0.00	0.00	0.00
247.5	0.00	0.00	0.39	0.00	7.36	4.65	0.00	0.00	1.94
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	5.04	3.49	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	4.65	0.00	3.49	0.00	0.00
337.5	0.00	0.00	3.88	0.00	0.00	0.00	0.00	8.14	0.00
360.0	0.00	5.04	3.49	0.00	0.00	0.00	0.00	0.00	16.28

C/γ(°)	180.0
0.0	0.00
22.5	0.00
45.0	0.00
67.5	6.98
90.0	0.00
112.5	10.85
135.0	0.00
157.5	0.00
180.0	0.00
202.5	0.00
225.0	0.00
247.5	6.98
270.0	0.00
292.5	10.85
315.0	0.00
337.5	0.00
360.0	0.00