



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440225 KAI 12.5W 3000K 1500lm

Luminaire:

Report No:

Voltage(V): 230.0000

Test No: KYZ-A250930027-03-002

Current(A): 0.0560

LampCAT: LED

Power (W): 12.5000

Lamp flux(lm)

PF: 0.9631

Number of Lamps: 1

Ballast type:

Length(mm): -126

Width(mm): -126

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1500.00

Lumens(lm)/Power(W): 120.00

Central intensity(cd): 736.703

Maximum intensity(cd): 740.833

Angle of maximum intensity: $C=337.5$ $\gamma=10.0$

Beam Angle(50%Imax): [C0/180]Total=86.9

[C90/270]Total=87.3

Field angle(10%Imax): [C0/180]Total=140.2

[C90/270]Total=139.8

Maximum s/h(1/2): C0_180=1.13 C90_270=1.20

Maximum s/h(1/4): C0_180=1.17 C90_270=1.24

Up flux rate of LUM(%): 0.55%

Down flux rate of LUM(%): 99.45%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 87.372%

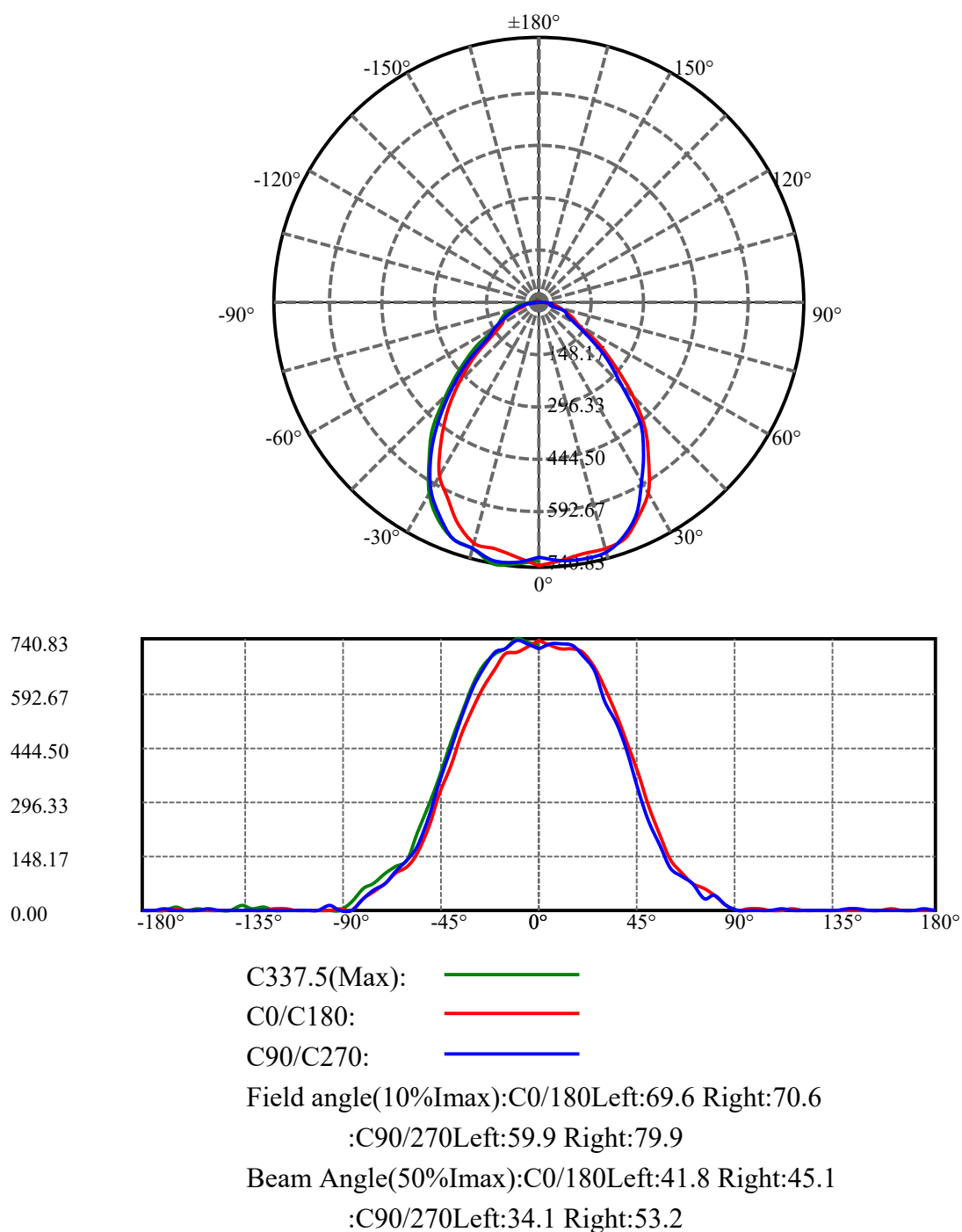
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	775.938	0.000	0	.000%	.000%
5.0	773.250	17.300	17.3	1.153%	1.153%
10.0	770.235	51.578	68.879	3.439%	4.592%
15.0	759.709	84.777	153.656	5.652%	10.244%
20.0	733.330	114.942	268.598	7.663%	17.907%
25.0	686.853	139.140	407.738	9.276%	27.183%
30.0	623.946	154.956	562.694	10.330%	37.513%
35.0	544.006	160.660	723.355	10.711%	48.224%
40.0	461.578	156.723	880.078	10.448%	58.672%
45.0	360.510	142.190	1022.268	9.479%	68.151%
50.0	270.897	119.181	1141.449	7.945%	76.096%
55.0	197.213	95.078	1236.527	6.339%	82.435%
60.0	145.737	74.050	1310.578	4.937%	87.372%
65.0	108.856	57.815	1368.393	3.854%	91.226%
70.0	80.945	44.893	1413.286	2.993%	94.219%
75.0	60.445	34.523	1447.809	2.302%	96.520%
80.0	40.297	25.180	1472.989	1.679%	98.199%
85.0	15.601	14.188	1487.178	.946%	99.145%
90.0	2.035	4.511	1491.688	.301%	99.446%
95.0	1.960	1.022	1492.71	.068%	99.514%
100.0	1.055	0.765	1493.475	.051%	99.565%
105.0	1.231	0.571	1494.047	.038%	99.603%
110.0	0.477	0.417	1494.464	.028%	99.631%
115.0	1.507	0.469	1494.933	.031%	99.662%
120.0	0.603	0.479	1495.413	.032%	99.694%
125.0	1.332	0.418	1495.83	.028%	99.722%
130.0	0.980	0.469	1496.3	.031%	99.753%
135.0	1.784	0.522	1496.821	.035%	99.788%
140.0	2.512	0.743	1497.564	.050%	99.838%
145.0	2.990	0.857	1498.422	.057%	99.895%
150.0	0.528	0.484	1498.906	.032%	99.927%
155.0	1.357	0.223	1499.129	.015%	99.942%
160.0	1.332	0.263	1499.392	.018%	99.959%
165.0	2.236	0.275	1499.667	.018%	99.978%
170.0	1.080	0.184	1499.85	.012%	99.990%
175.0	2.462	0.118	1499.969	.008%	99.998%
180.0	0.503	0.033	1500.002	.002%	100.000%

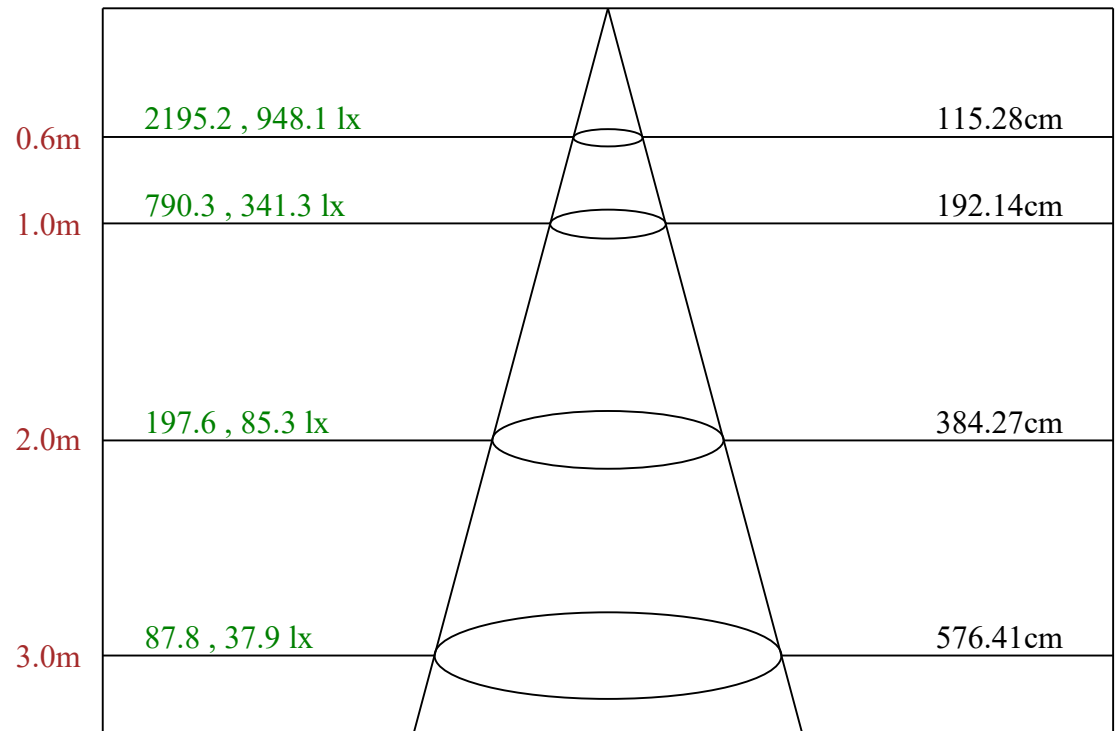
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	562.69	37.51%
0-40	880.08	58.67%
0-60	1310.58	87.37%
0-90	1491.69	99.45%
0-120	1495.41	99.69%
0-180	1500.00	100.00%
60-90	255.16	17.01%
90-120	8.24	0.55%
90-130	9.12	0.61%
90-150	11.73	0.78%
90-180	12.79	0.85%
0-53.08	1200.00	80.00%

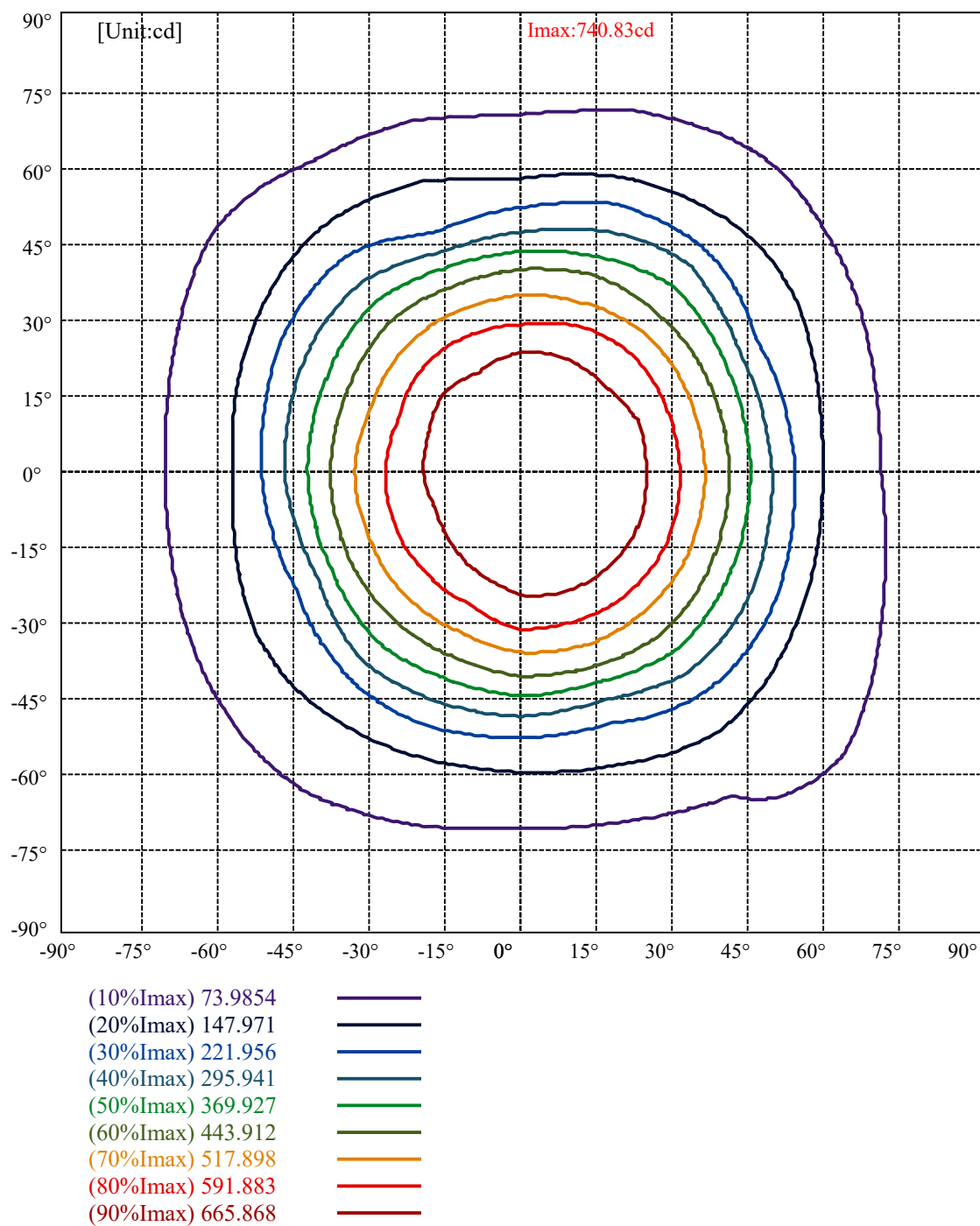
ZONAL LUMEN SUMMARY

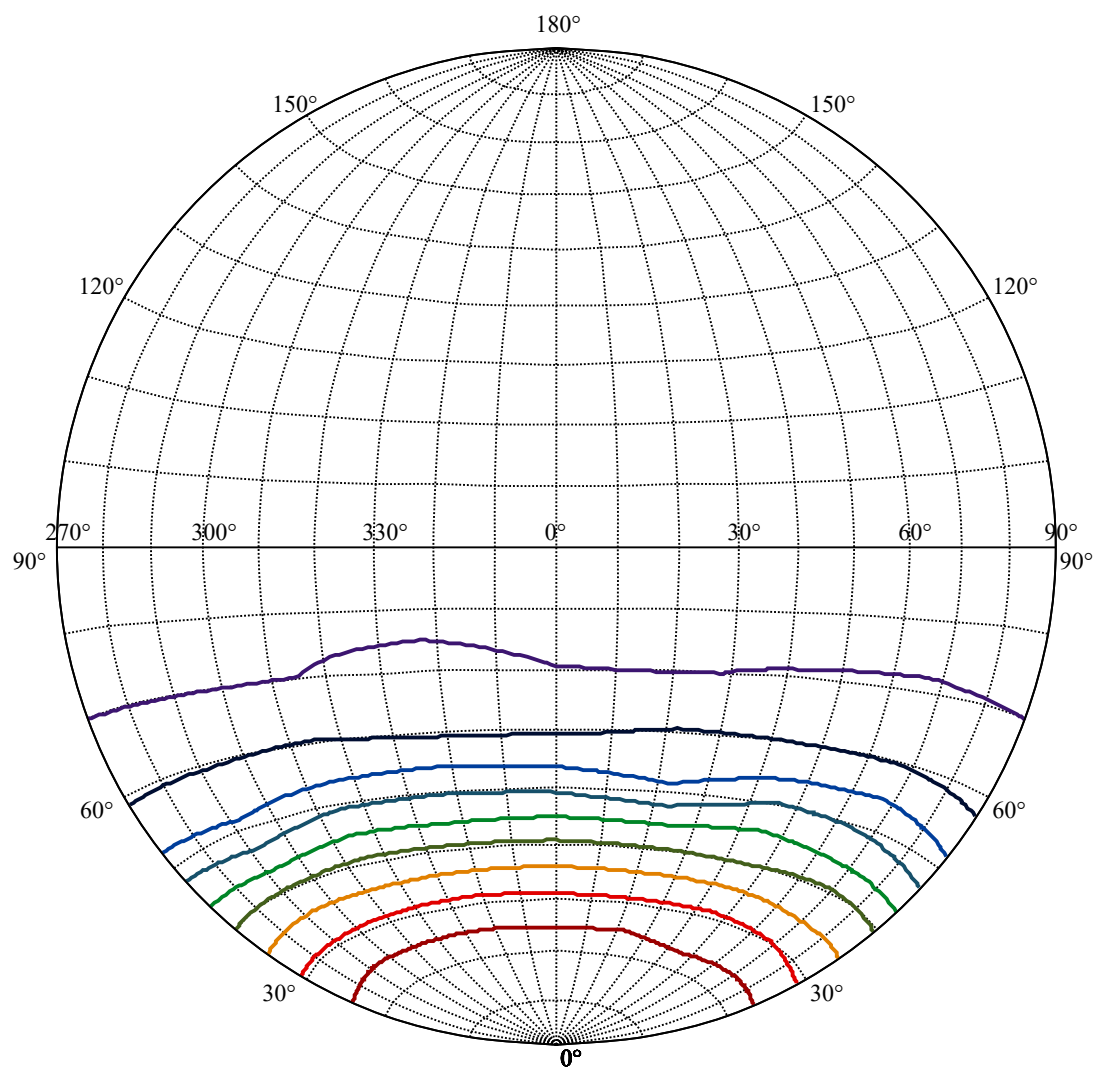
0-10	68.88
10-20	199.72
20-30	294.10
30-40	317.38
40-50	261.37
50-60	169.13
60-70	102.71
70-80	59.70
80-90	18.70
90-100	1.79
100-110	0.99
110-120	0.95
120-130	0.89
130-140	1.26
140-150	1.34
150-160	0.49
160-170	0.46
170-180	0.12





Max , Ave Beam angle of C337.5 plane 87.70





House

[Unit:cd]

Road

Imax:740.83

(10%Imax) 69.17784

(20%Imax) 138.356

(30%Imax) 207.5331

(40%Imax) 276.7112

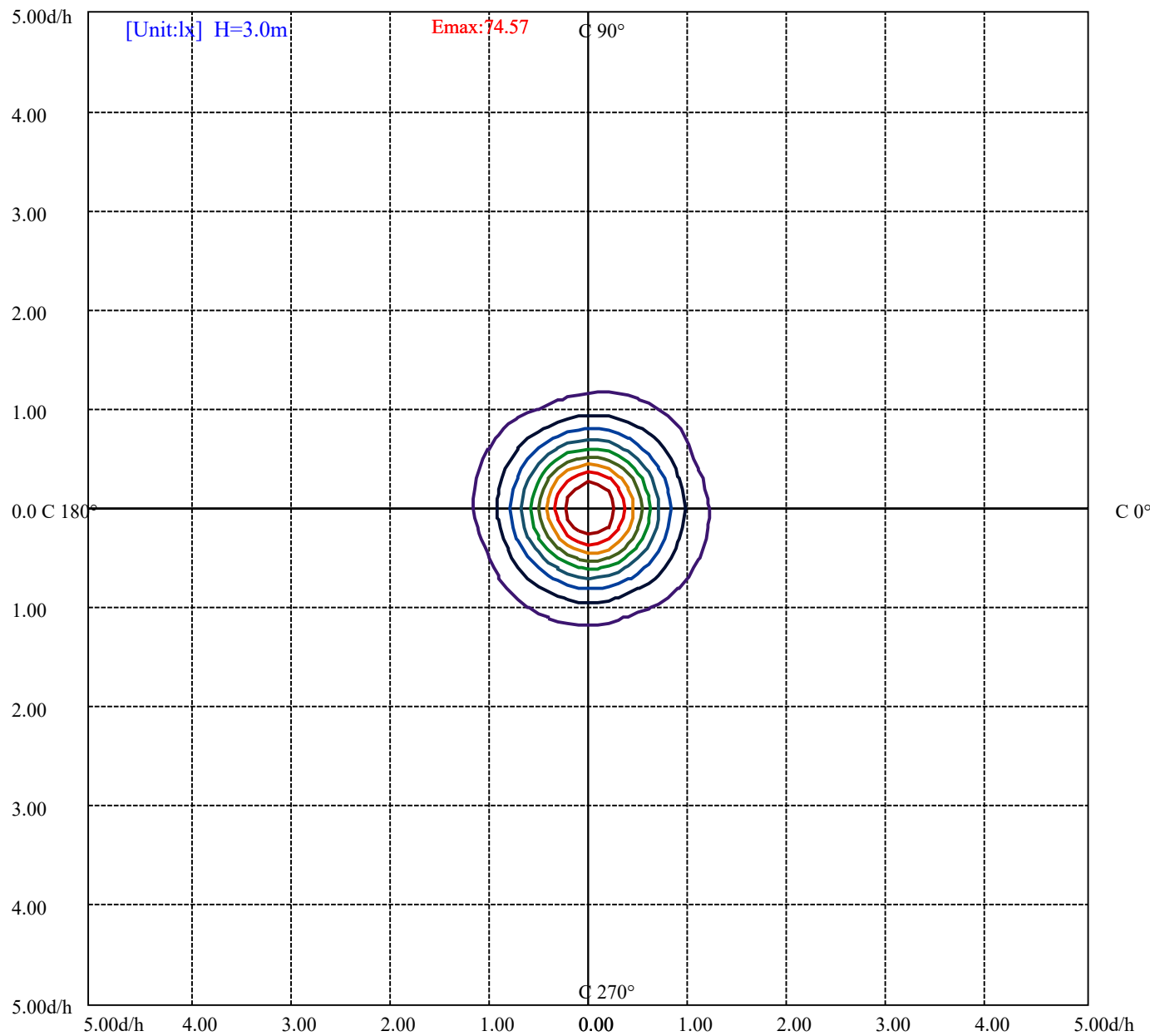
(50%Imax) 345.8892

(60%Imax) 415.0672

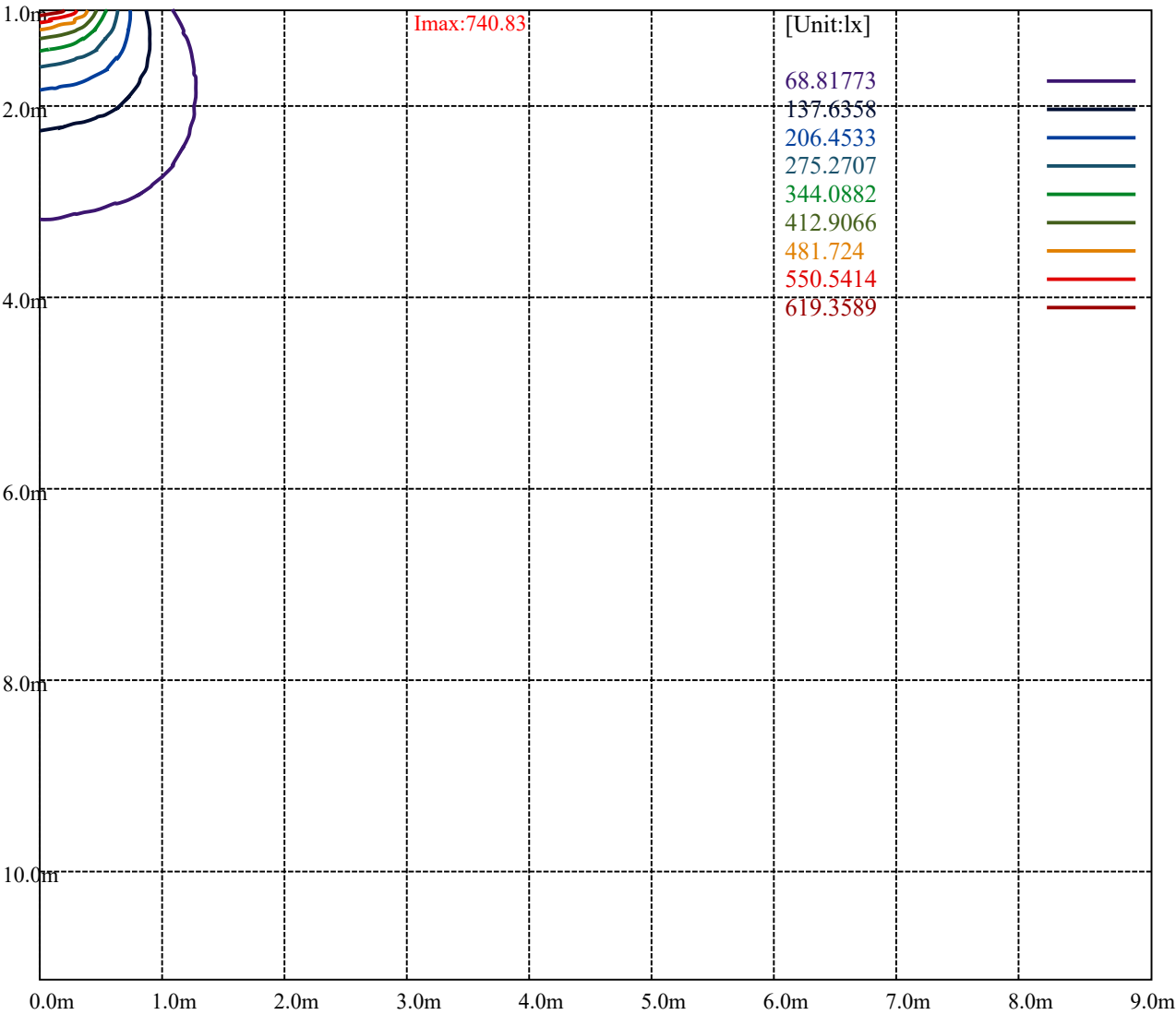
(70%Imax) 484.2452

(80%Imax) 553.4223

(90%Imax) 622.6003



(10%Emax)	7.456838	—
(20%Emax)	14.91372	—
(30%Emax)	22.37047	—
(40%Emax)	29.82733	—
(50%Emax)	37.28419	—
(60%Emax)	44.74105	—
(70%Emax)	52.19791	—
(80%Emax)	59.65466	—
(90%Emax)	67.11152	—



Luminance Table

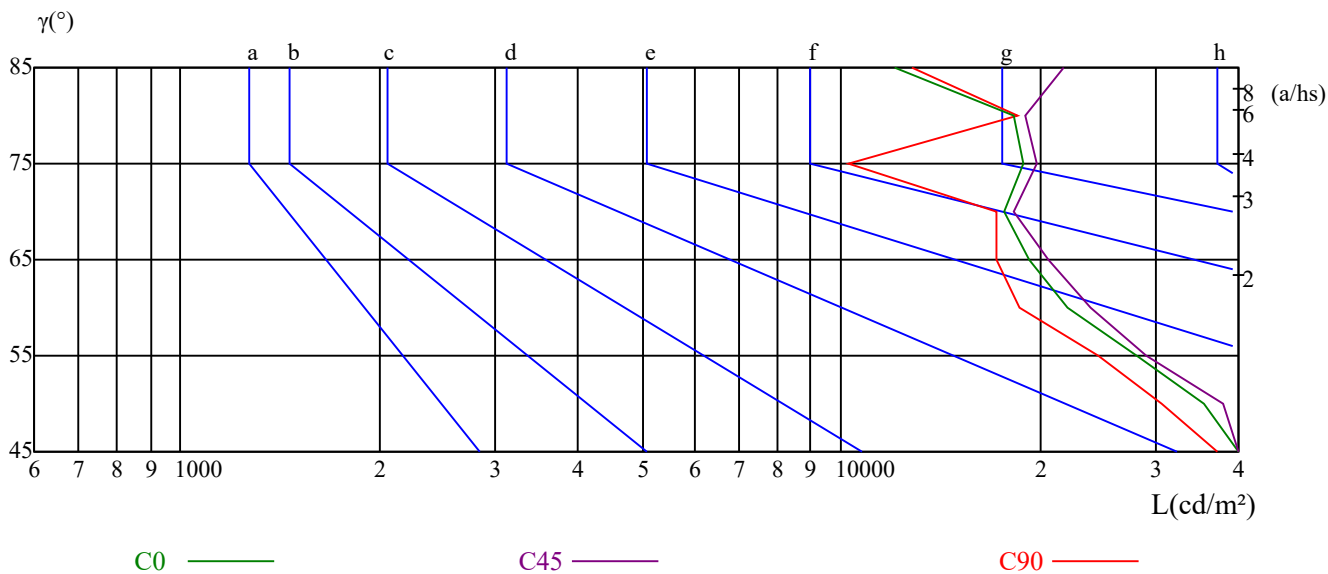
γ	45	50	55	60	65	70	75	80	85
C0	42033	35371	28088	21983	19310	17697	18849	18209	12093
C45	43183	37900	29086	23850	20664	18314	19780	19076	21768
C90	37051	30545	24518	18670	17172	17169	10239	18556	12784

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
19417	18526	18918	16929	13846	17889	6047	6392	11748

Glare Table

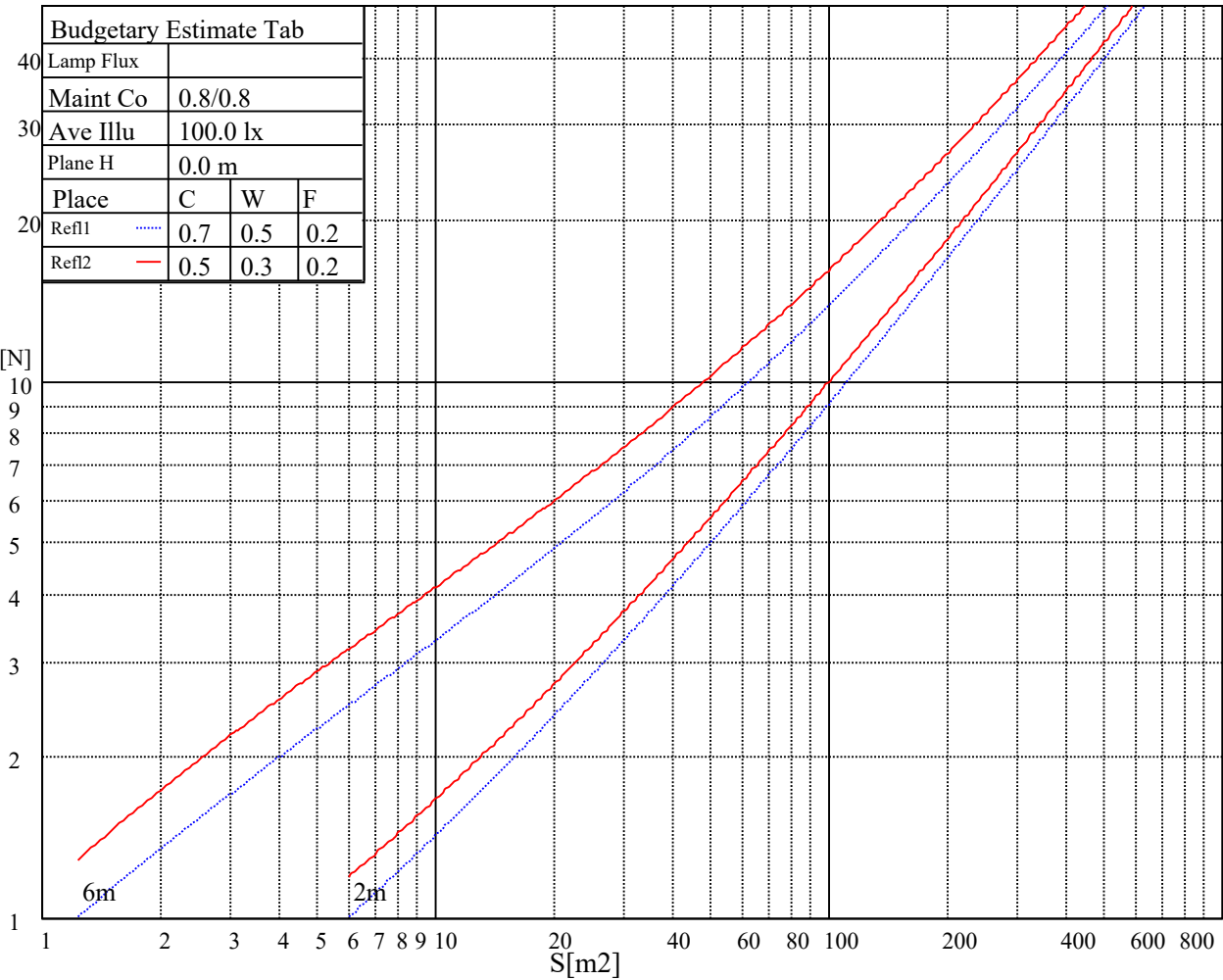
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

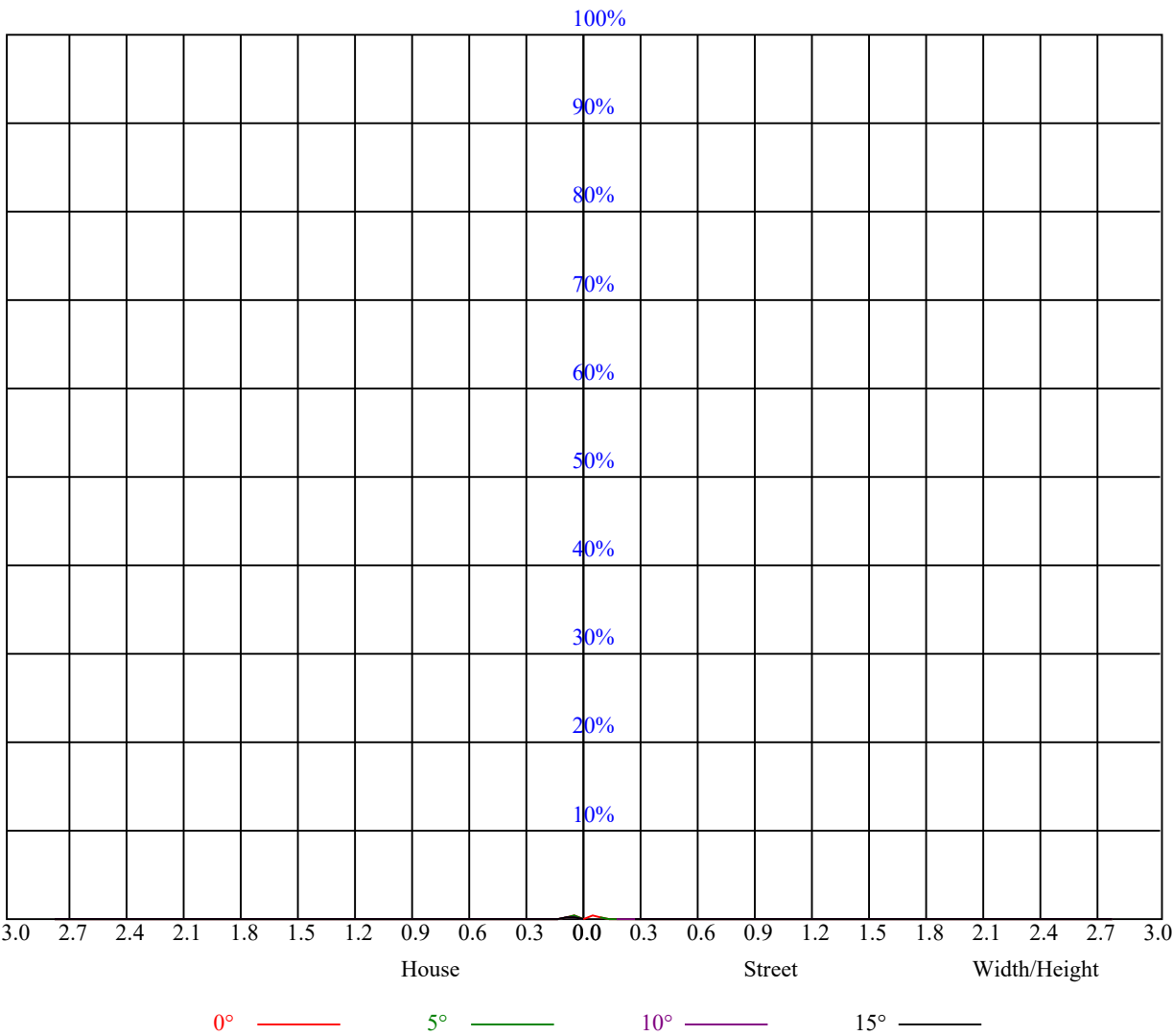


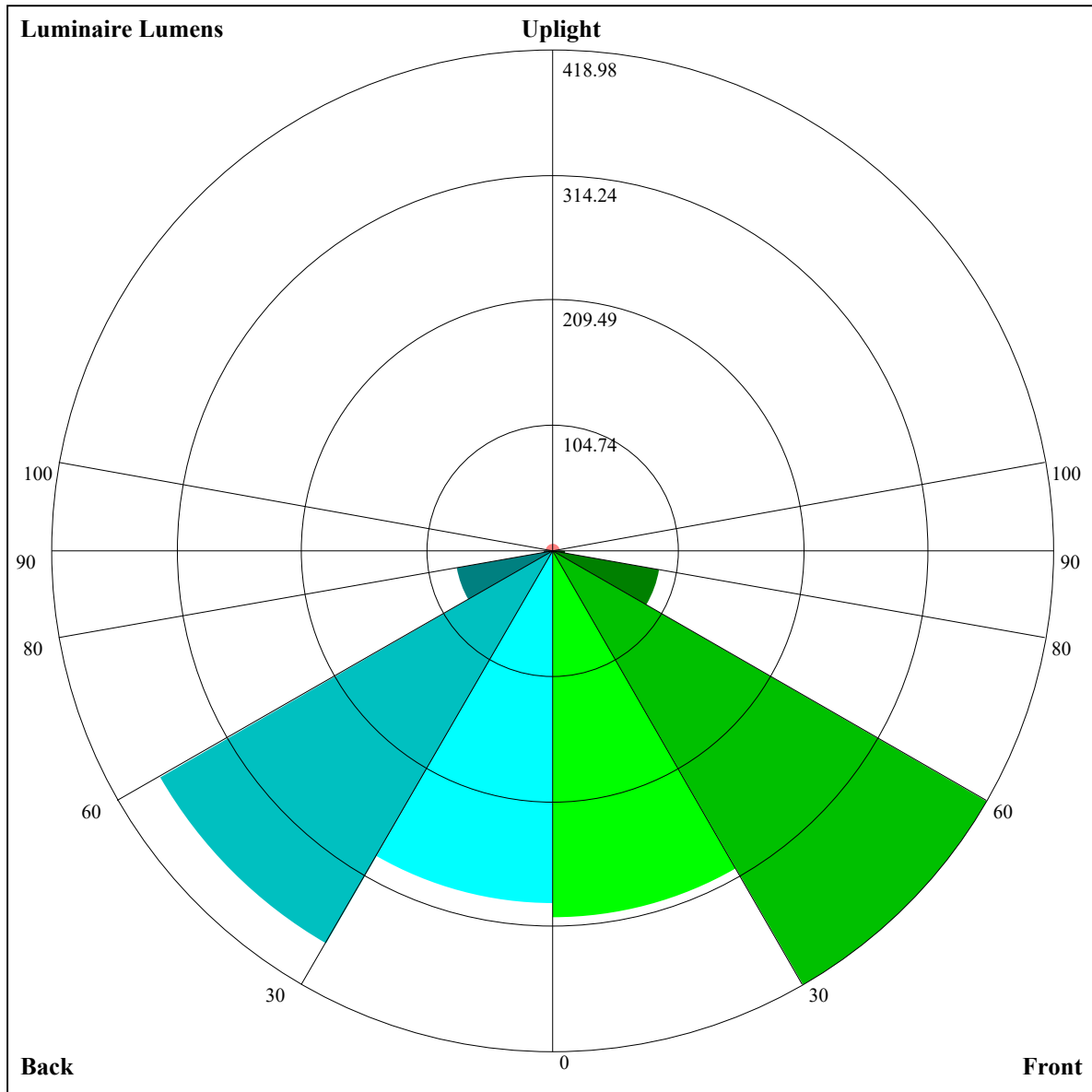
Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	19.28	20.72	19.65	21.05	21.37	19.24	20.68	19.61	21.00	21.33
	3H	20.12	21.42	20.51	21.77	22.12	20.08	21.37	20.47	21.72	22.08
	4H	20.60	21.81	21.00	22.17	22.55	20.32	21.53	20.72	21.89	22.27
	6H	21.05	22.17	21.47	22.55	22.96	20.65	21.77	21.07	22.15	22.56
	8H	21.18	22.26	21.60	22.65	23.06	20.78	21.86	21.21	22.25	22.67
	12H	21.24	22.27	21.66	22.66	23.09	20.84	21.87	21.27	22.27	22.69
4H	2H	19.67	20.88	20.08	21.24	21.62	19.62	20.83	20.02	21.19	21.57
	3H	20.70	21.72	21.12	22.12	22.54	20.69	21.71	21.11	22.11	22.53
	4H	21.42	22.31	21.86	22.74	23.20	21.12	22.02	21.56	22.44	22.90
	6H	22.01	22.81	22.48	23.26	23.72	21.56	22.35	22.03	22.81	23.27
	8H	22.24	22.99	22.73	23.45	23.92	21.77	22.52	22.26	22.98	23.45
	12H	22.39	23.08	22.88	23.53	24.05	21.89	22.58	22.38	23.03	23.55
8H	4H	21.64	22.39	22.12	22.84	23.32	21.36	22.10	21.84	22.56	23.04
	6H	22.41	23.03	22.91	23.51	24.02	21.95	22.57	22.45	23.05	23.56
	8H	22.83	23.37	23.35	23.89	24.39	22.29	22.83	22.81	23.35	23.85
	12H	23.11	23.57	23.65	24.09	24.61	22.46	22.91	22.99	23.43	23.95
12H	4H	21.66	22.35	22.15	22.80	23.32	21.40	22.09	21.88	22.54	23.06
	6H	22.52	23.06	23.04	23.58	24.08	22.08	22.62	22.61	23.15	23.65
	8H	22.95	23.41	23.49	23.93	24.45	22.43	22.88	22.96	23.40	23.92
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.8					0.4/-0.7				
S = 1.5H		0.7/-1.6					0.7/-1.1				
S = 2.0H		1.7/-1.6					1.5/-1.4				
Standard tables:		BK3					BK4				
Uncorrected UGR		8.0					8.8				

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 RHOF=20 CU															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.99
1	1.06	1.02	0.99	1.04	1.01	0.98	1.00	0.97	0.94	0.96	0.93	0.91	0.92	0.90	0.89	0.87
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	0.83	0.80	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	0.73	0.66	0.61	0.70	0.65	0.60	0.68	0.63	0.60	0.58
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	0.54	0.49	0.60	0.53	0.48	0.59	0.53	0.48	0.57	0.52	0.48	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	0.53	0.47	0.43	0.41
8	0.53	0.45	0.40	0.52	0.45	0.40	0.51	0.44	0.39	0.50	0.44	0.39	0.49	0.43	0.39	0.37
9	0.49	0.41	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	0.45	0.38	0.33	0.45	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.33	0.42	0.37	0.33	0.31





Luminaire Lumens:

FL=307.14,FM=418.98,FH=90.8,FVH=11.26

BL=295.67,BM=380.24,BH=81.48,BVH=8.16

UL=1.91,UH=6.99

BUG Rating:B1-U1-G1

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	736.70	723.56	714.55	715.30	701.78	662.36	609.04	535.07	459.22
22.5	728.07	717.93	704.79	722.06	695.40	666.11	606.41	529.81	448.71
45.0	716.43	720.18	729.19	723.56	697.65	648.09	610.54	530.56	442.70
67.5	738.20	711.55	719.81	706.66	706.29	653.34	598.90	516.29	456.21
90.0	711.55	725.44	726.94	722.06	696.15	651.47	572.62	512.54	437.44
112.5	720.56	721.68	710.79	698.78	673.62	637.20	571.11	494.14	415.29
135.0	726.19	723.56	717.93	700.28	678.50	629.31	554.97	484.75	419.04
157.5	720.93	716.05	711.92	689.77	662.73	604.91	536.94	477.24	390.88
180.0	736.70	716.80	701.78	698.03	657.85	605.66	553.84	479.87	396.89
202.5	728.07	718.30	716.43	689.39	651.09	614.67	543.33	479.87	393.13
225.0	716.43	717.93	711.55	702.16	658.60	607.16	563.23	474.99	407.03
247.5	738.20	731.82	726.56	702.53	682.26	623.68	561.73	494.51	414.16
270.0	711.55	728.44	734.07	713.05	703.28	658.23	605.66	523.80	443.82
292.5	720.56	730.32	716.43	725.44	701.03	667.24	606.03	534.32	450.96
315.0	726.19	721.68	728.44	731.07	692.77	667.61	613.92	529.06	464.10
337.5	720.93	731.82	740.83	714.55	701.41	668.74	617.30	533.94	459.22
360.0	736.70	723.56	714.55	715.30	701.78	662.36	609.04	535.07	459.22
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	370.60	283.49	200.88	137.05	101.76	75.47	60.83	39.43	13.14
22.5	358.59	240.69	173.10	154.33	107.01	72.47	70.59	46.18	30.41
45.0	380.74	303.77	208.02	148.69	108.89	78.10	63.83	41.30	23.66
67.5	354.08	285.74	216.28	143.81	103.26	88.24	53.69	39.80	14.27
90.0	326.67	244.82	175.35	116.40	90.49	73.22	33.04	40.18	13.89
112.5	298.14	204.26	171.60	140.81	94.62	74.35	58.20	25.16	15.02
135.0	322.92	253.83	178.36	135.55	88.61	65.71	54.07	25.16	0.00
157.5	319.54	246.32	180.61	114.52	95.37	74.35	56.70	35.67	13.89
180.0	316.16	231.67	158.08	118.65	102.88	71.34	48.44	31.54	0.00
202.5	269.97	197.13	170.47	135.55	98.00	64.21	50.69	24.03	18.02
225.0	331.18	229.80	169.72	128.04	91.99	74.72	46.56	42.81	12.77
247.5	325.55	256.08	176.10	131.04	105.89	76.22	55.20	43.56	14.27
270.0	349.58	257.58	174.23	140.06	104.76	72.84	56.32	32.29	0.00
292.5	330.43	238.06	181.74	143.06	106.64	72.84	54.07	43.56	26.66
315.0	370.23	284.62	201.26	152.82	109.27	74.72	66.46	33.79	14.64
337.5	363.85	291.00	211.77	137.80	117.53	101.01	74.72	57.82	22.53
360.0	370.60	283.49	200.88	137.05	101.76	75.47	60.83	39.43	13.14
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.50	3.38	5.26	0.00	0.00	4.88	0.00	1.50	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	2.25	4.88	2.25
45.0	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	6.01	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	2.25	0.00	3.38	1.88	0.00	0.00	0.00
112.5	3.00	9.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	3.76	0.00	0.00	0.00	0.00
157.5	0.00	0.00	5.63	0.00	0.00	0.00	0.00	0.00	6.01
180.0	4.51	0.00	2.25	0.00	0.00	5.63	3.76	0.00	0.00
202.5	0.00	4.13	0.00	1.50	0.00	0.00	0.00	0.00	0.00
225.0	7.51	0.00	0.38	9.39	0.00	10.14	0.00	0.00	0.00
247.5	12.02	0.00	0.00	0.00	0.00	0.00	0.00	4.51	0.00
270.0	1.50	12.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00
337.5	0.38	0.00	0.00	0.00	0.00	0.00	0.00	8.64	6.38
360.0	1.50	3.38	5.26	0.00	0.00	4.88	0.00	1.50	0.00

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	0.00	0.75	0.00	1.88	6.01	0.00	0.00	0.00	
22.5	0.75	0.38	0.00	0.00	5.26	0.00	7.13	0.00	0.00	
45.0	1.88	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	
67.5	6.01	0.00	0.00	0.00	0.00	1.50	4.88	0.00	0.00	
90.0	1.50	3.38	3.76	0.00	0.00	0.75	0.00	1.50	3.00	
112.5	0.00	0.00	0.00	0.00	0.00	0.00	2.25	1.13	0.00	
135.0	0.00	12.39	0.00	0.00	0.00	9.76	3.76	0.00	1.13	
157.5	1.50	0.00	15.39	0.00	1.13	1.50	0.00	0.00	3.76	
180.0	0.00	2.25	0.00	0.00	0.00	0.00	3.00	0.00	0.00	
202.5	0.00	0.00	0.00	0.00	4.13	0.00	3.00	0.00	21.40	
225.0	0.38	6.01	7.89	0.00	4.51	0.00	0.00	8.26	0.75	
247.5	0.00	0.00	0.00	0.38	0.00	0.00	1.13	0.00	0.00	
270.0	0.00	0.00	0.00	3.76	0.00	0.00	0.38	5.26	0.00	
292.5	0.00	13.14	12.02	3.76	0.00	0.00	0.00	0.00	0.00	
315.0	0.00	0.00	4.88	0.00	0.00	0.00	0.00	0.00	6.76	
337.5	14.64	0.00	0.00	0.00	2.63	0.38	7.89	0.00	0.00	
360.0	0.00	0.00	0.75	0.00	1.88	6.01	0.00	0.00	0.00	
C/ γ (°)	180.0									
0.0	0.00									
22.5	0.00									
45.0	0.00									
67.5	0.00									
90.0	0.00									
112.5	1.50									
135.0	0.00									
157.5	2.25									
180.0	0.00									
202.5	0.00									
225.0	0.00									
247.5	0.00									
270.0	0.00									
292.5	1.50									
315.0	0.00									
337.5	2.25									
360.0	0.00									