



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440226 KAI 9.6W 3000K 1150lm

Luminaire:

Report No:

Voltage(V): 230.4500

Test No: KYZ-A251030009-03-001

Current(A): 0.0440

LampCAT: LED

Power (W): 9.6000

Lamp flux(lm): -1.0

PF: 0.9472

Number of Lamps: 1

Ballast type:

Length(mm): -178

Width(mm): -178

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1150.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 119.79

Central intensity(cd): 567.688

Maximum intensity(cd): 567.688

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=84.3

[C90/270]Total=86.2

Field angle(10%Imax): [C0/180]Total=144.7

[C90/270]Total=147.8

Maximum s/h(1/2): C0_180=1.12 C90_270=1.15

Maximum s/h(1/4): C0_180=1.14 C90_270=1.22

Up flux rate of lamp(%): 0.99%

Down flux rate of lamp(%): 99.01%

Up flux rate of LUM(%): 0.99%

Down flux rate of LUM(%): 99.01%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 85.918%

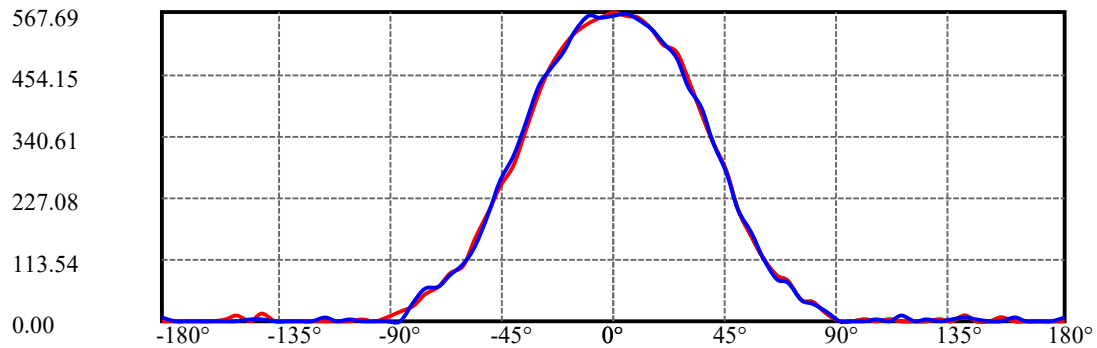
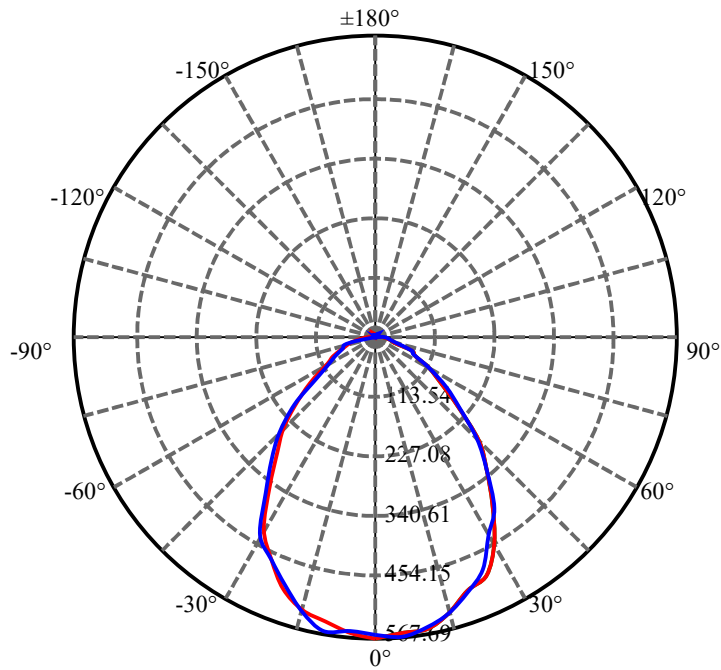
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	535.569	0.000	0	.000%	.000%
5.0	530.826	13.420	13.42	.000%	1.167%
10.0	525.124	39.763	53.183	.000%	4.625%
15.0	506.259	64.402	117.584	.000%	10.225%
20.0	483.718	85.883	203.467	.000%	17.693%
25.0	448.812	102.954	306.421	.000%	26.645%
30.0	407.192	114.031	420.452	.000%	36.561%
35.0	354.968	118.142	538.593	.000%	46.834%
40.0	299.119	114.874	653.467	.000%	56.823%
45.0	246.735	106.390	759.857	.000%	66.074%
50.0	189.821	92.856	852.713	.000%	74.149%
55.0	141.220	75.768	928.481	.000%	80.737%
60.0	103.650	59.580	988.062	.000%	85.918%
65.0	78.550	46.625	1034.687	.000%	89.973%
70.0	62.776	37.669	1072.355	.000%	93.248%
75.0	46.842	30.161	1102.516	.000%	95.871%
80.0	28.457	21.209	1123.725	.000%	97.715%
85.0	11.191	11.341	1135.065	.000%	98.701%
90.0	0.959	3.502	1138.567	.000%	99.006%
95.0	0.640	0.461	1139.028	.000%	99.046%
100.0	2.558	0.915	1139.942	.000%	99.125%
105.0	1.812	1.231	1141.173	.000%	99.232%
110.0	2.984	1.320	1142.493	.000%	99.347%
115.0	1.812	1.278	1143.771	.000%	99.458%
120.0	0.426	0.573	1144.344	.000%	99.508%
125.0	0.533	0.233	1144.577	.000%	99.528%
130.0	0.746	0.293	1144.87	.000%	99.554%
135.0	0.640	0.295	1145.165	.000%	99.579%
140.0	5.169	1.132	1146.297	.000%	99.678%
145.0	2.771	1.395	1147.692	.000%	99.799%
150.0	2.718	0.851	1148.542	.000%	99.873%
155.0	1.919	0.618	1149.16	.000%	99.927%
160.0	1.759	0.406	1149.566	.000%	99.962%
165.0	0.266	0.176	1149.742	.000%	99.977%
170.0	1.705	0.123	1149.865	.000%	99.988%
175.0	1.013	0.102	1149.967	.000%	99.997%
180.0	1.705	0.034	1150.001	.000%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	420.45	N.A.	36.56%
0-40	653.47	N.A.	56.82%
0-60	988.06	N.A.	85.92%
0-90	1138.57	N.A.	99.01%
0-120	1144.34	N.A.	99.51%
0-180	1150.00	N.A.	100.00%
60-90	210.09	N.A.	18.27%
90-120	9.28	N.A.	0.81%
90-130	9.81	N.A.	0.85%
90-150	13.48	N.A.	1.17%
90-180	14.90	N.A.	1.30%
0-54.44	920.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	53.18
10-20	150.28
20-30	216.98
30-40	233.02
40-50	199.25
50-60	135.35
60-70	84.29
70-80	51.37
80-90	14.84
90-100	1.38
100-110	2.55
110-120	1.85
120-130	0.53
130-140	1.43
140-150	2.25
150-160	1.02
160-170	0.30
170-180	0.10

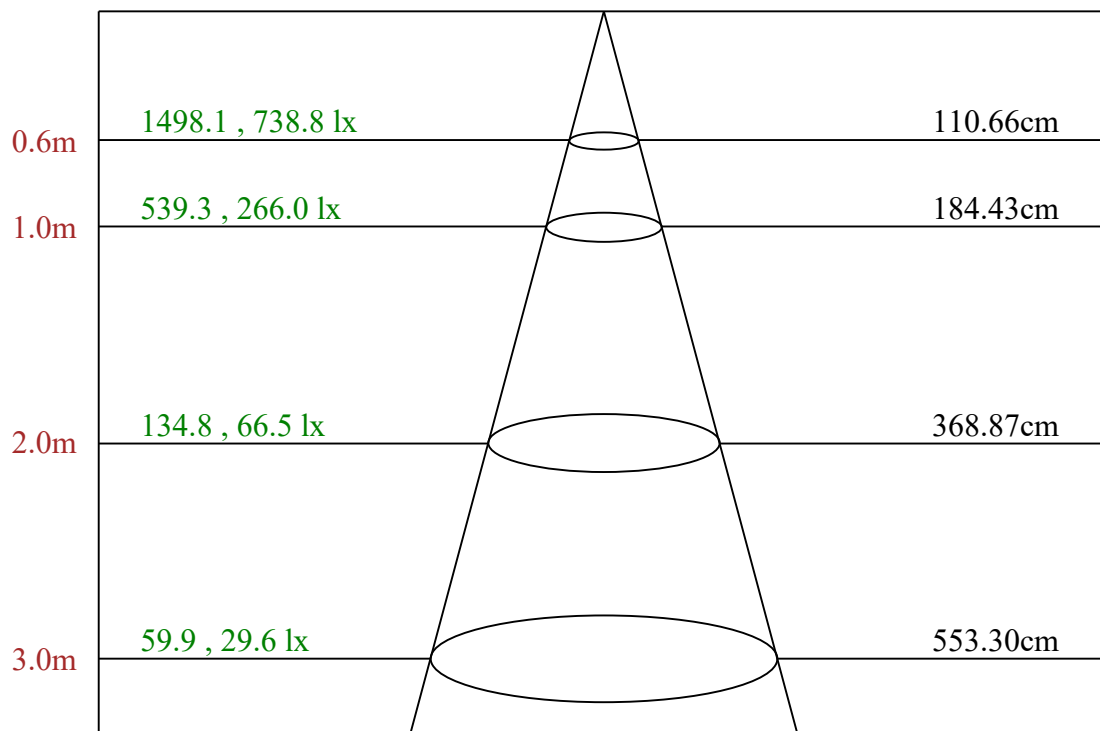
C0(Max): —C0/C180: —C90/C270: —

Field angle(10%Imax):C0/180Left:72.3 Right:72.4

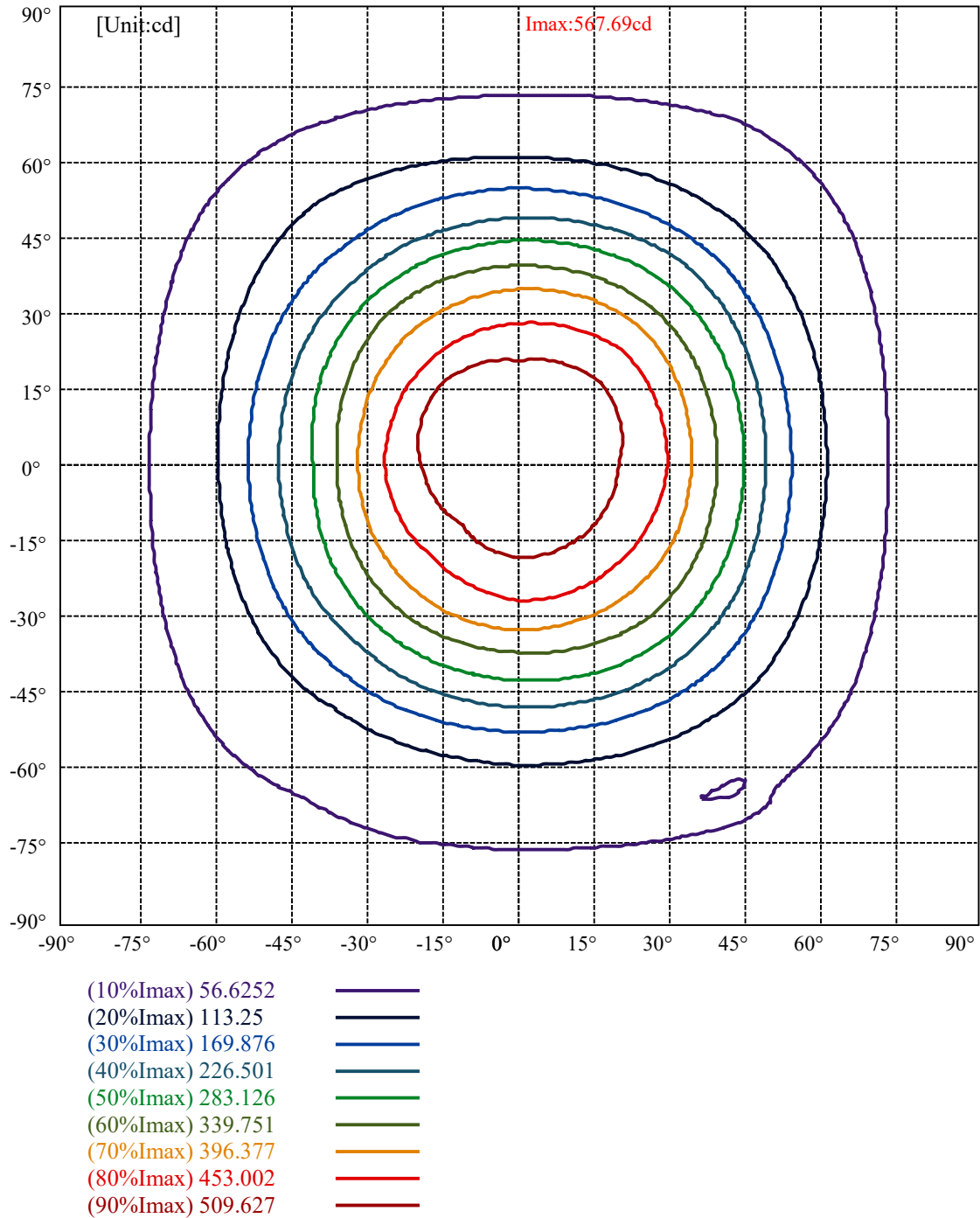
:C90/270Left:80.4 Right:67.4

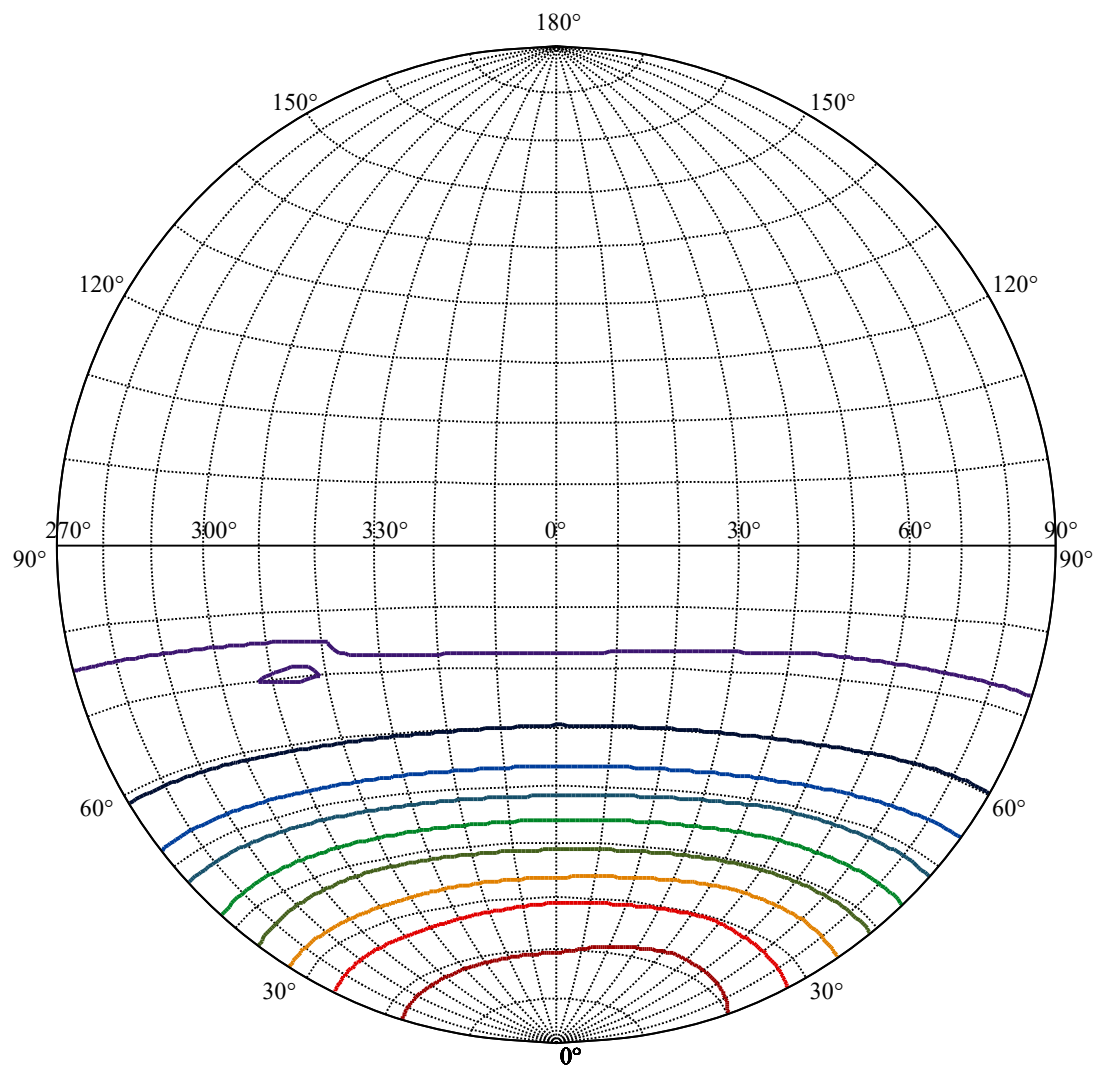
Beam Angle(50%Imax):C0/180Left:40.1 Right:44.2

:C90/270Left:47.2 Right:39.0



Max , Ave Beam angle of C0 plane 85.36





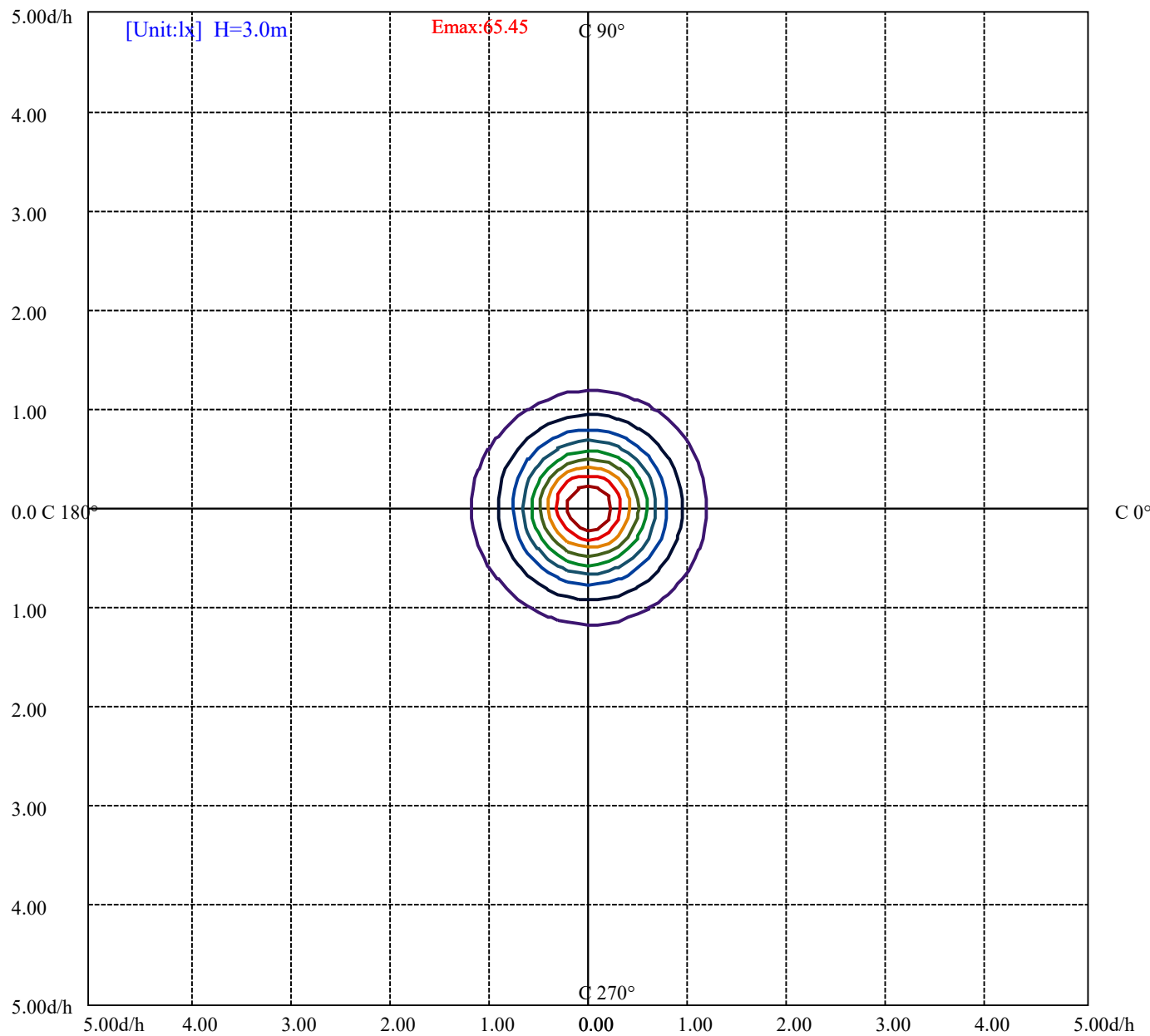
House

[Unit:cd]

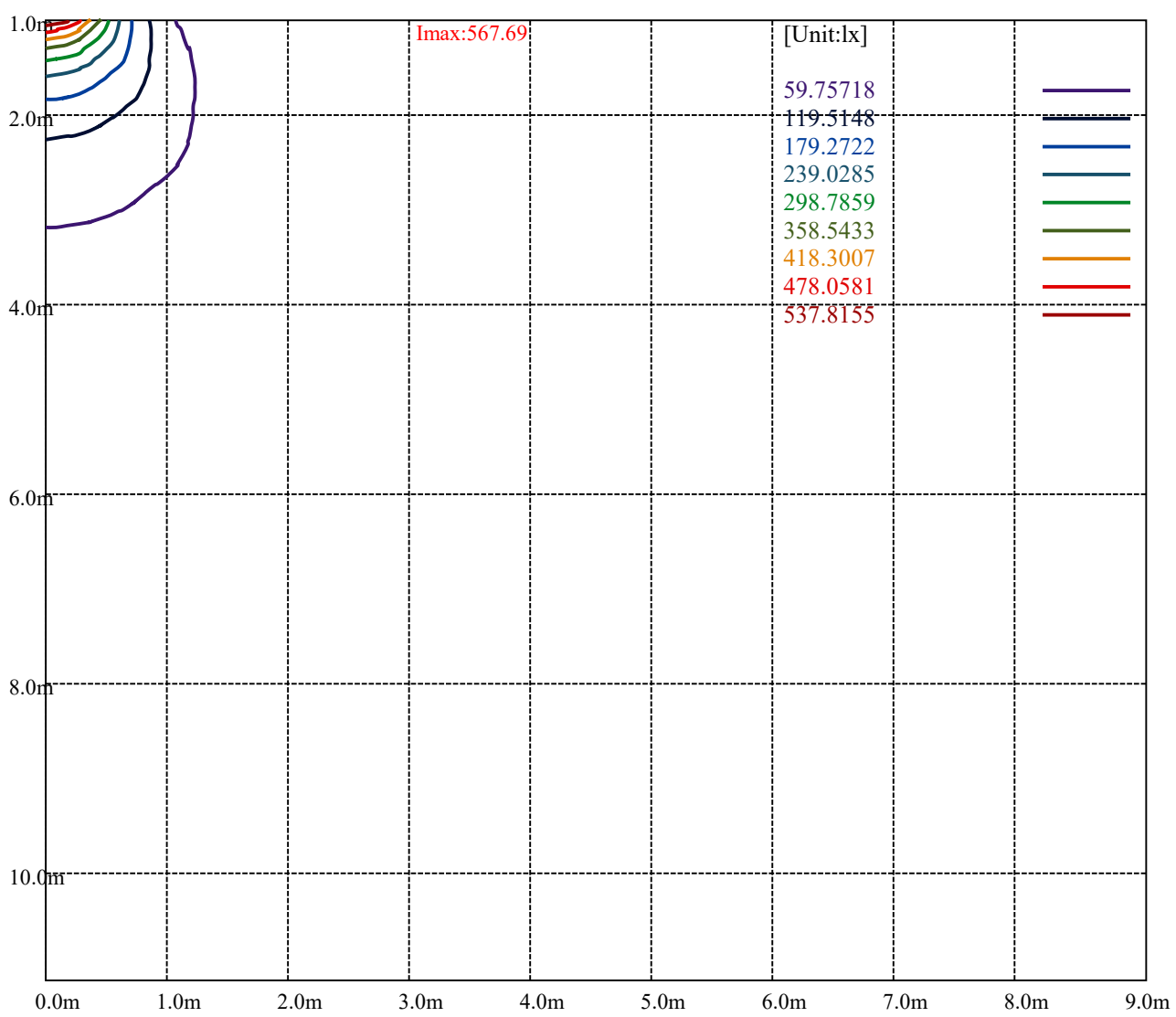
Road

Imax:567.69
(10%Imax) 59.75718
(20%Imax) 119.5148
(30%Imax) 179.2722
(40%Imax) 239.0285
(50%Imax) 298.7859
(60%Imax) 358.5433
(70%Imax) 418.3007
(80%Imax) 478.0581
(90%Imax) 537.8155





(10%Emax)	6.54523	—
(20%Emax)	13.09041	—
(30%Emax)	19.63574	—
(40%Emax)	26.18094	—
(50%Emax)	32.72615	—
(60%Emax)	39.27136	—
(70%Emax)	45.81656	—
(80%Emax)	52.36177	—
(90%Emax)	58.90709	—



Luminance Table

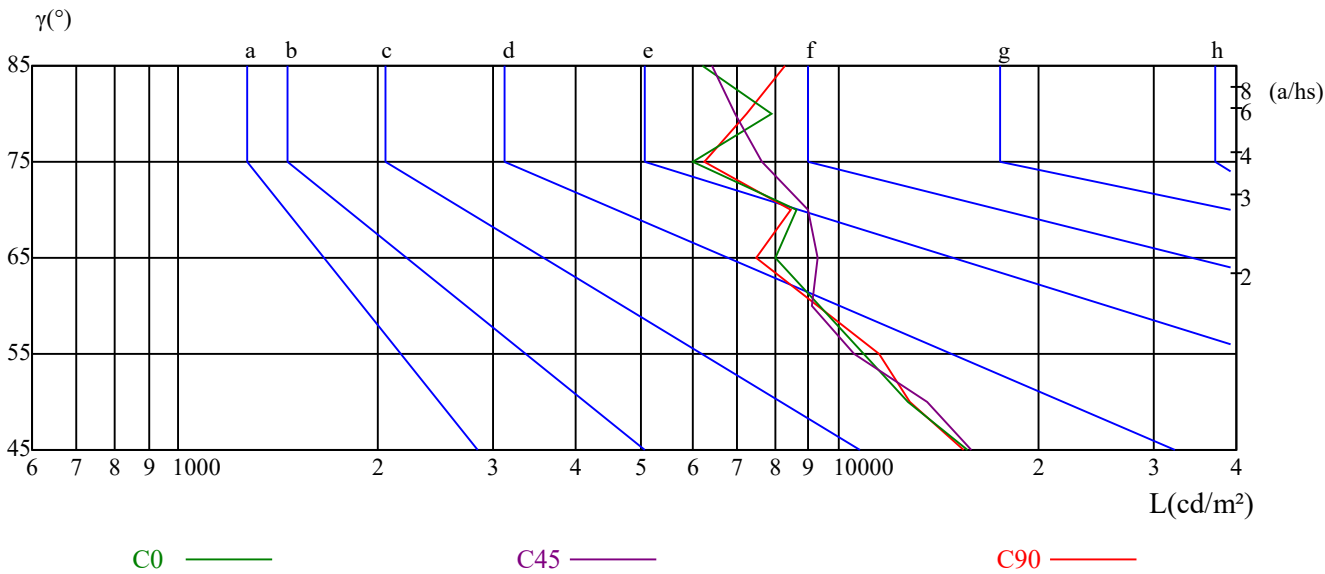
γ	45	50	55	60	65	70	75	80	85
C0	15634	12737	10910	9342	8022	8647	5992	7893	6208
C45	15863	13635	10564	9089	9303	8964	7665	6958	6414
C90	15455	12850	11476	9269	7510	8436	6271	7270	8277

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8150	7830	7734	6724	7665	8117	6828	4138	5380

Glare Table

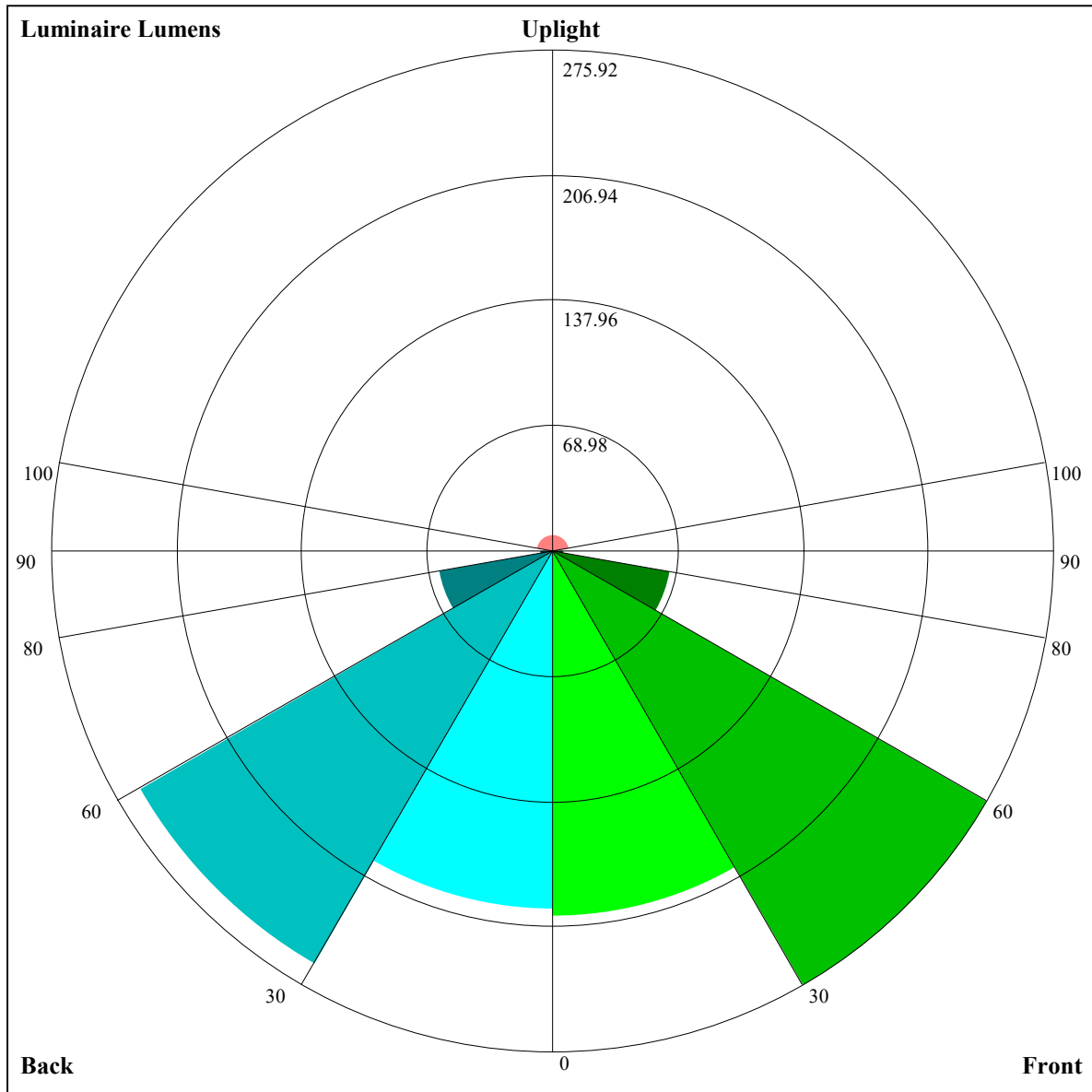
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	15.21	16.66	15.59	17.00	17.34	15.23	16.68	15.60	17.02	17.36
	3H	16.35	17.65	16.74	18.01	18.38	16.30	17.60	16.70	17.96	18.33
	4H	16.71	17.93	17.12	18.31	18.69	16.68	17.90	17.09	18.28	18.66
	6H	17.09	18.23	17.52	18.62	19.03	17.04	18.17	17.46	18.56	18.98
	8H	17.24	18.33	17.67	18.73	19.15	17.19	18.28	17.61	18.67	19.10
	12H	17.31	18.36	17.75	18.76	19.20	17.31	18.36	17.75	18.76	19.20
4H	2H	15.68	16.90	16.09	17.27	17.66	15.69	16.91	16.10	17.28	17.67
	3H	17.03	18.06	17.46	18.47	18.90	16.98	18.01	17.41	18.42	18.86
	4H	17.55	18.46	18.00	18.89	19.36	17.52	18.43	17.97	18.87	19.33
	6H	18.02	18.83	18.50	19.29	19.76	17.97	18.78	18.45	19.24	19.70
	8H	18.24	19.00	18.73	19.47	19.95	18.19	18.95	18.68	19.42	19.90
	12H	18.39	19.09	18.88	19.55	20.08	18.40	19.10	18.90	19.56	20.09
8H	4H	17.75	18.51	18.24	18.97	19.46	17.73	18.49	18.22	18.95	19.44
	6H	18.35	18.99	18.86	19.47	20.00	18.30	18.93	18.81	19.42	19.94
	8H	18.70	19.25	19.24	19.78	20.30	18.66	19.21	19.19	19.74	20.25
	12H	18.91	19.37	19.45	19.90	20.44	18.95	19.41	19.49	19.94	20.47
12H	4H	17.77	18.47	18.26	18.93	19.46	17.75	18.45	18.24	18.91	19.44
	6H	18.45	19.00	18.98	19.53	20.04	18.40	18.95	18.93	19.48	19.99
	8H	18.79	19.25	19.33	19.78	20.31	18.75	19.21	19.29	19.74	20.28
Variation with the observer position at spacings:											
S = 1.0H		0.3/-0.6					0.3/-0.7				
S = 1.5H		0.6/-1.2					0.6/-1.2				
S = 2.0H		1.4/-1.3					1.3/-1.2				
Standard tables:		BK3					BK3				
Uncorrected UGR		5.6					5.6				

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



Luminaire Lumens:

FL=201.22,FM=275.92,FH=65.61,FVH=6.69

BL=197.68,BM=263.23,BH=63.57,BVH=7.3

UL=1.31,UH=9.56

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	567.69	560.51	557.37	537.62	507.11	492.74	445.18	381.90	327.60
45.0	559.61	563.20	553.33	543.90	529.54	490.50	452.36	401.65	333.88
90.0	561.41	565.89	553.33	537.62	512.04	481.53	429.47	392.22	327.60
135.0	566.34	564.10	547.94	534.93	531.79	464.92	423.19	377.86	322.21
180.0	567.69	558.27	544.80	529.99	504.86	464.47	417.35	346.45	284.97
225.0	559.61	553.78	539.86	514.29	491.40	447.42	412.86	352.73	294.84
270.0	561.41	556.47	561.85	534.03	494.99	463.13	430.37	358.11	304.26
315.0	566.34	547.94	563.65	530.89	501.72	474.79	418.25	378.31	323.56
360.0	567.69	560.51	557.37	537.62	507.11	492.74	445.18	381.90	327.60
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	275.09	203.74	155.72	116.23	84.37	73.60	38.59	34.11	13.46
45.0	279.13	218.10	150.79	113.09	97.83	76.29	49.36	30.07	13.91
90.0	271.95	205.53	163.80	115.33	78.98	71.80	40.39	31.41	17.95
135.0	249.96	188.48	153.48	122.96	81.68	65.52	45.77	19.30	11.22
180.0	245.92	200.15	150.34	102.77	87.06	64.17	48.02	28.27	16.16
225.0	234.26	184.89	129.69	90.65	78.53	57.89	54.30	25.58	21.54
270.0	256.25	197.01	138.22	105.46	85.71	64.17	58.34	36.35	0.00
315.0	265.22	200.60	147.20	106.36	67.32	55.20	59.69	34.56	0.00
360.0	275.09	203.74	155.72	116.23	84.37	73.60	38.59	34.11	13.46
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	1.35	2.24	0.00	2.24	0.00	0.00	0.00	2.24
45.0	0.00	3.14	0.00	0.00	0.00	0.00	2.69	0.00	3.14
90.0	0.00	0.00	0.00	4.04	0.00	8.97	0.00	3.14	0.00
135.0	0.00	0.00	3.59	0.00	8.08	0.00	0.90	0.00	0.00
180.0	6.28	0.00	4.04	0.00	0.00	0.00	0.00	1.35	0.90
225.0	0.00	0.00	11.67	0.00	8.97	0.00	0.00	0.00	0.00
270.0	1.35	0.00	0.00	4.04	0.00	6.28	0.00	0.00	0.00
315.0	0.45	0.90	0.00	7.18	5.83	0.00	0.00	0.00	0.00
360.0	0.00	1.35	2.24	0.00	2.24	0.00	0.00	0.00	2.24
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.90	11.22	0.00	0.00	8.08	1.35	0.00	0.00	0.00
45.0	0.00	5.39	0.00	4.04	0.00	4.49	0.00	7.63	0.00
90.0	4.04	8.53	2.69	0.00	0.00	5.39	0.00	0.00	0.00
135.0	0.00	0.00	1.35	0.00	2.69	0.45	0.00	0.00	2.24
180.0	0.45	14.36	0.00	8.97	3.59	0.00	0.45	0.00	0.00
225.0	0.00	0.00	8.08	0.00	1.79	1.79	1.79	4.49	0.00
270.0	0.00	4.04	4.94	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	6.28	9.87	0.00	1.35	0.00	2.24	6.28
360.0	0.90	11.22	0.00	0.00	8.08	1.35	0.00	0.00	0.00
C/γ(°)	180.0								
0.0	0.00								
45.0	0.00								
90.0	7.18								
135.0	0.00								
180.0	0.00								
225.0	0.00								
270.0	7.18								
315.0	0.00								
360.0	0.00								