



SGSO

Address: LIT by CARDI

Client:

LumCAT: 0017440220 RIO 14W 6500K 1400lm

Luminaire:

Report No:

Voltage(V): 230.2600

Test No: KYZ-A251020063-02-006

Current(A): 0.0645

LampCAT: LED

Power (W): 14.0000

Lamp flux(lm): -1.0

PF: 0.9425

Number of Lamps: 1

Ballast type:

Length(mm): -175

Width(mm): -175

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1400.00

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 100.00

Central intensity(cd): 727.168

Maximum intensity(cd): 727.168

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=81.8

[C90/270]Total=82.3

Field angle(10%Imax): [C0/180]Total=142.2

[C90/270]Total=135.3

Maximum s/h(1/2): C0_180=1.07 C90_270=1.15

Maximum s/h(1/4): C0_180=1.14 C90_270=1.19

Up flux rate of lamp(%): 1.14%

Down flux rate of lamp(%): 98.86%

Up flux rate of LUM(%): 1.14%

Down flux rate of LUM(%): 98.86%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 86.517%

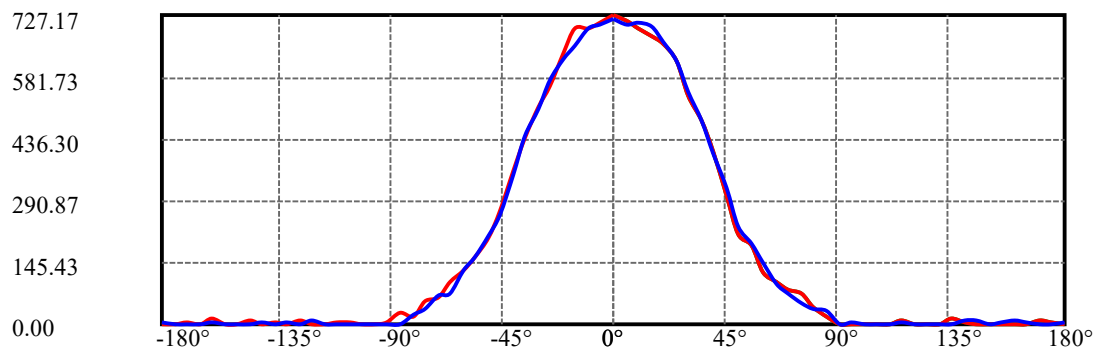
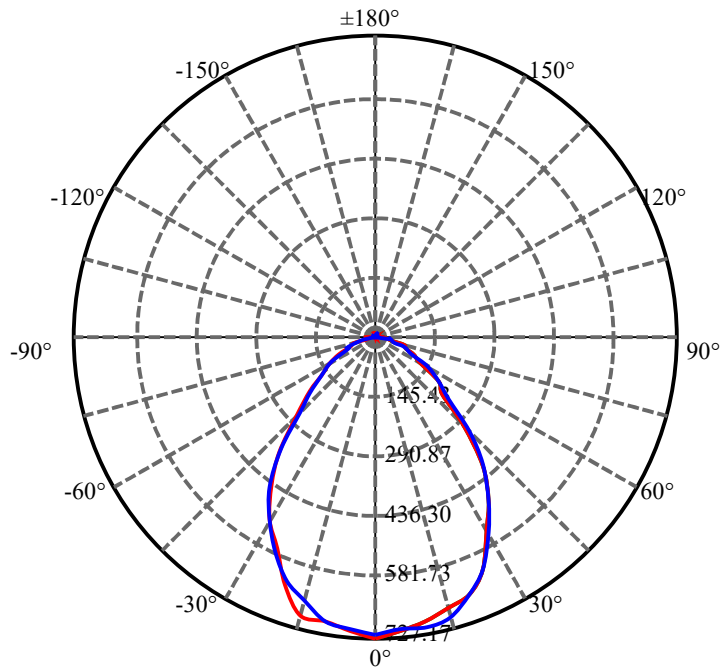
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	752.634	0.000	0	.000%	.000%
5.0	744.134	17.032	17.032	.000%	1.217%
10.0	735.956	50.399	67.432	.000%	4.817%
15.0	713.845	81.863	149.294	.000%	10.664%
20.0	682.158	109.514	258.808	.000%	18.486%
25.0	627.554	130.754	389.562	.000%	27.826%
30.0	552.236	142.118	531.68	.000%	37.977%
35.0	486.334	145.577	677.257	.000%	48.375%
40.0	402.140	141.101	818.358	.000%	58.454%
45.0	312.028	125.870	944.229	.000%	67.445%
50.0	242.468	106.652	1050.881	.000%	75.063%
55.0	186.571	88.798	1139.679	.000%	81.406%
60.0	138.691	71.565	1211.244	.000%	86.517%
65.0	98.181	54.813	1266.057	.000%	90.433%
70.0	75.210	41.791	1307.848	.000%	93.418%
75.0	58.479	33.262	1341.11	.000%	95.793%
80.0	34.269	23.622	1364.733	.000%	97.481%
85.0	18.238	13.581	1378.313	.000%	98.451%
90.0	3.712	5.721	1384.034	.000%	98.859%
95.0	2.690	1.669	1385.703	.000%	98.979%
100.0	0.538	0.835	1386.538	.000%	99.038%
105.0	2.959	0.891	1387.428	.000%	99.102%
110.0	1.291	1.057	1388.486	.000%	99.177%
115.0	2.475	0.908	1389.393	.000%	99.242%
120.0	4.681	1.656	1391.049	.000%	99.361%
125.0	1.775	1.420	1392.469	.000%	99.462%
130.0	5.326	1.470	1393.939	.000%	99.567%
135.0	4.680	1.925	1395.864	.000%	99.704%
140.0	2.152	1.204	1397.068	.000%	99.790%
145.0	2.313	0.709	1397.777	.000%	99.841%
150.0	1.237	0.498	1398.275	.000%	99.877%
155.0	1.829	0.369	1398.644	.000%	99.903%
160.0	3.820	0.564	1399.208	.000%	99.943%
165.0	1.237	0.397	1399.605	.000%	99.972%
170.0	1.829	0.173	1399.778	.000%	99.984%
175.0	2.582	0.150	1399.928	.000%	99.995%
180.0	3.874	0.073	1400.002	.000%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	531.68	N.A.	37.98%
0-40	818.36	N.A.	58.45%
0-60	1211.24	N.A.	86.52%
0-90	1384.03	N.A.	98.86%
0-120	1391.05	N.A.	99.36%
0-180	1400.00	N.A.	100.00%
60-90	244.36	N.A.	17.45%
90-120	12.74	N.A.	0.91%
90-130	15.63	N.A.	1.12%
90-150	19.96	N.A.	1.43%
90-180	21.61	N.A.	1.54%
0-53.89	1120.00	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	67.43
10-20	191.38
20-30	272.87
30-40	286.68
40-50	232.52
50-60	160.36
60-70	96.60
70-80	56.88
80-90	19.30
90-100	2.50
100-110	1.95
110-120	2.56
120-130	2.89
130-140	3.13
140-150	1.21
150-160	0.93
160-170	0.57
170-180	0.15



C0(Max):

C0/C180:

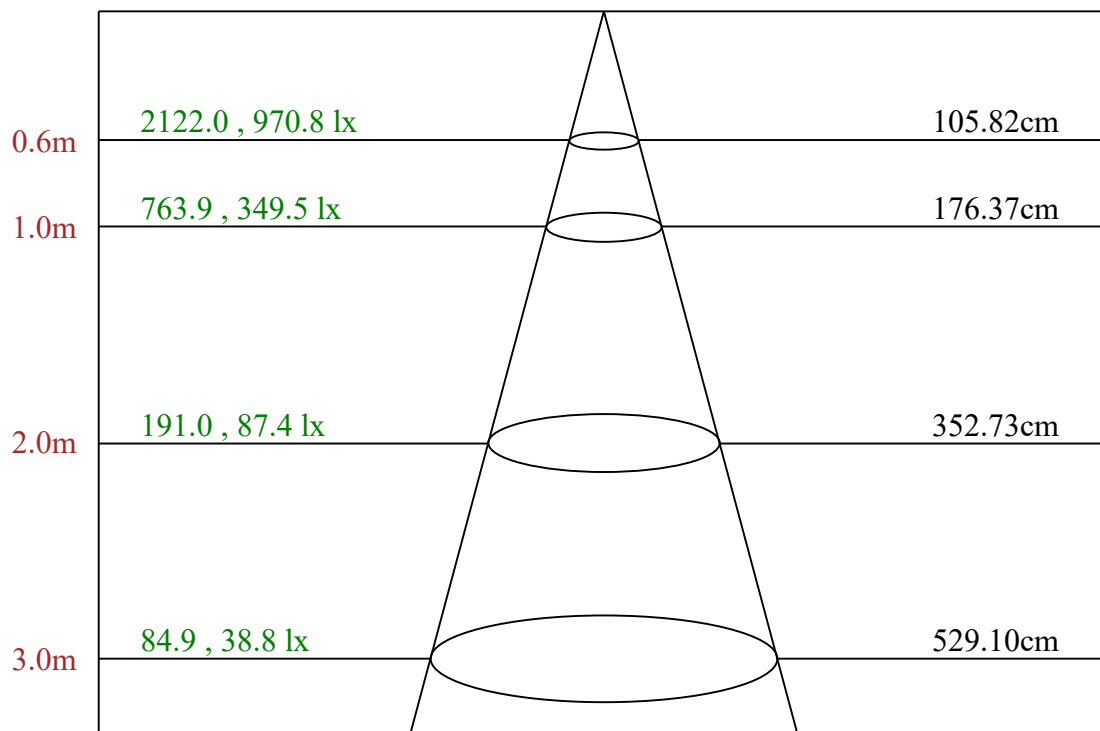
C90/C270:

Field angle(10%Imax):C0/180Left:68.5 Right:73.7

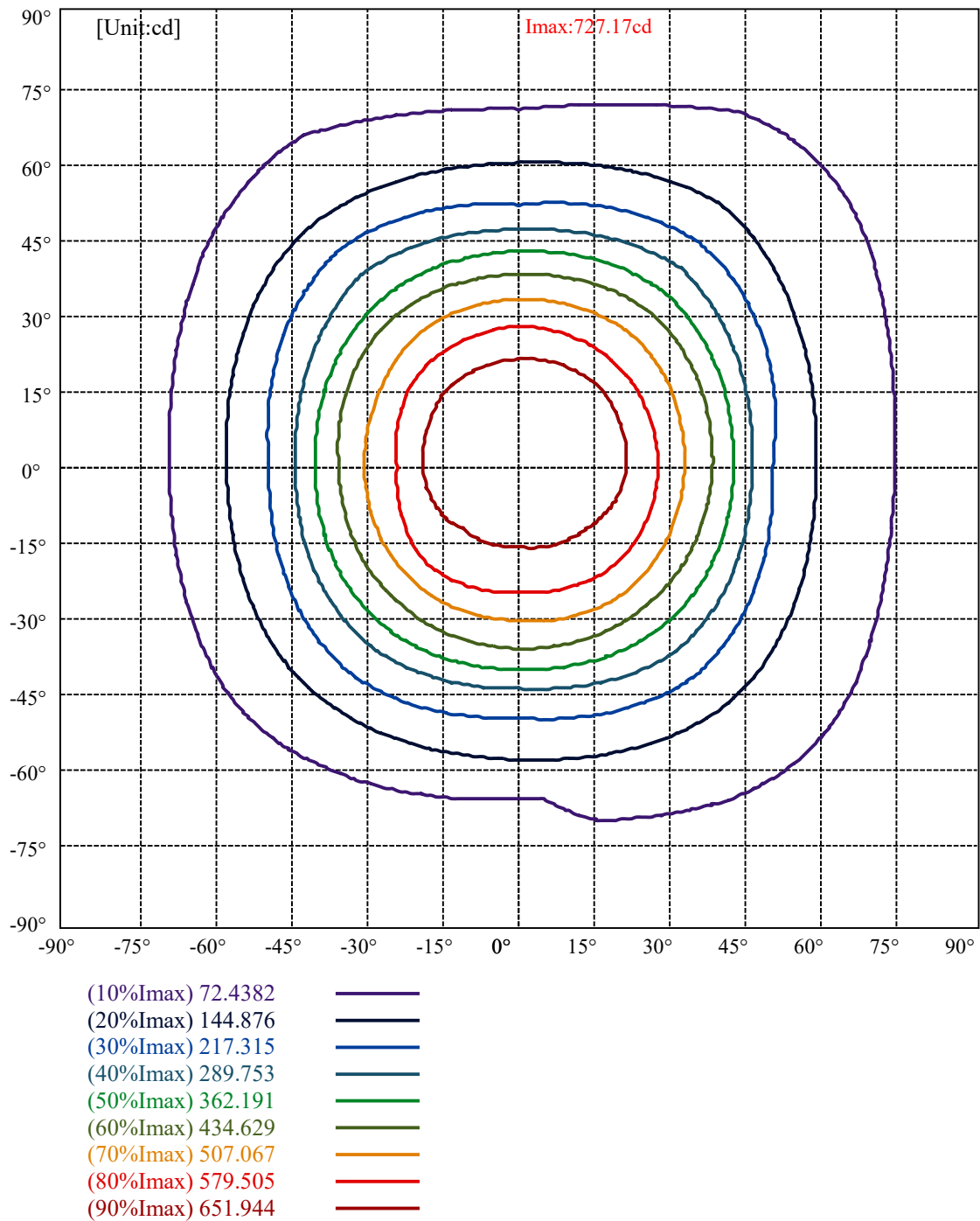
:C90/270Left:64.9 Right:70.4

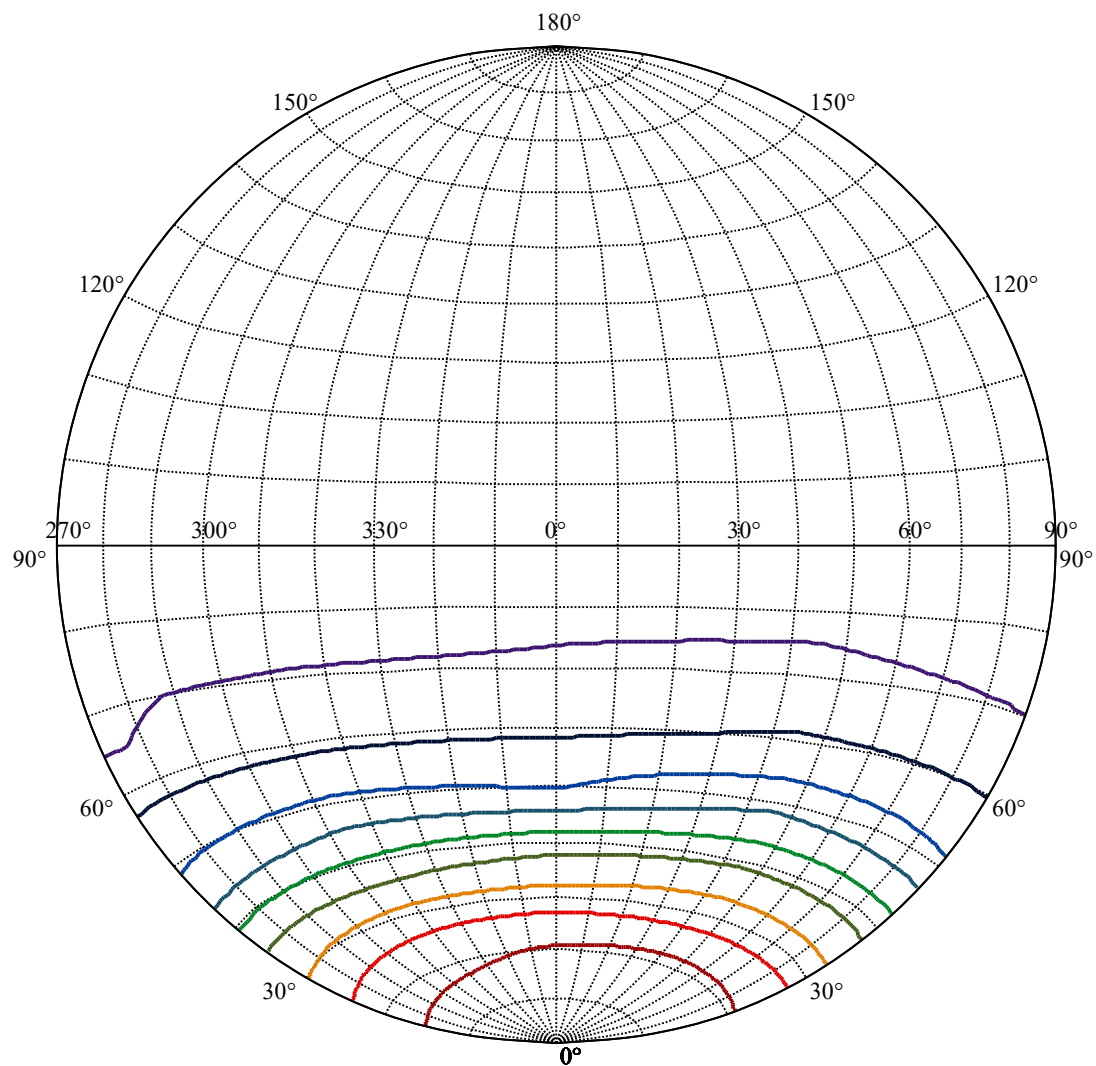
Beam Angle(50%Imax):C0/180Left:39.8 Right:42.0

:C90/270Left:39.7 Right:42.6



Max , Ave Beam angle of C0 plane 82.81





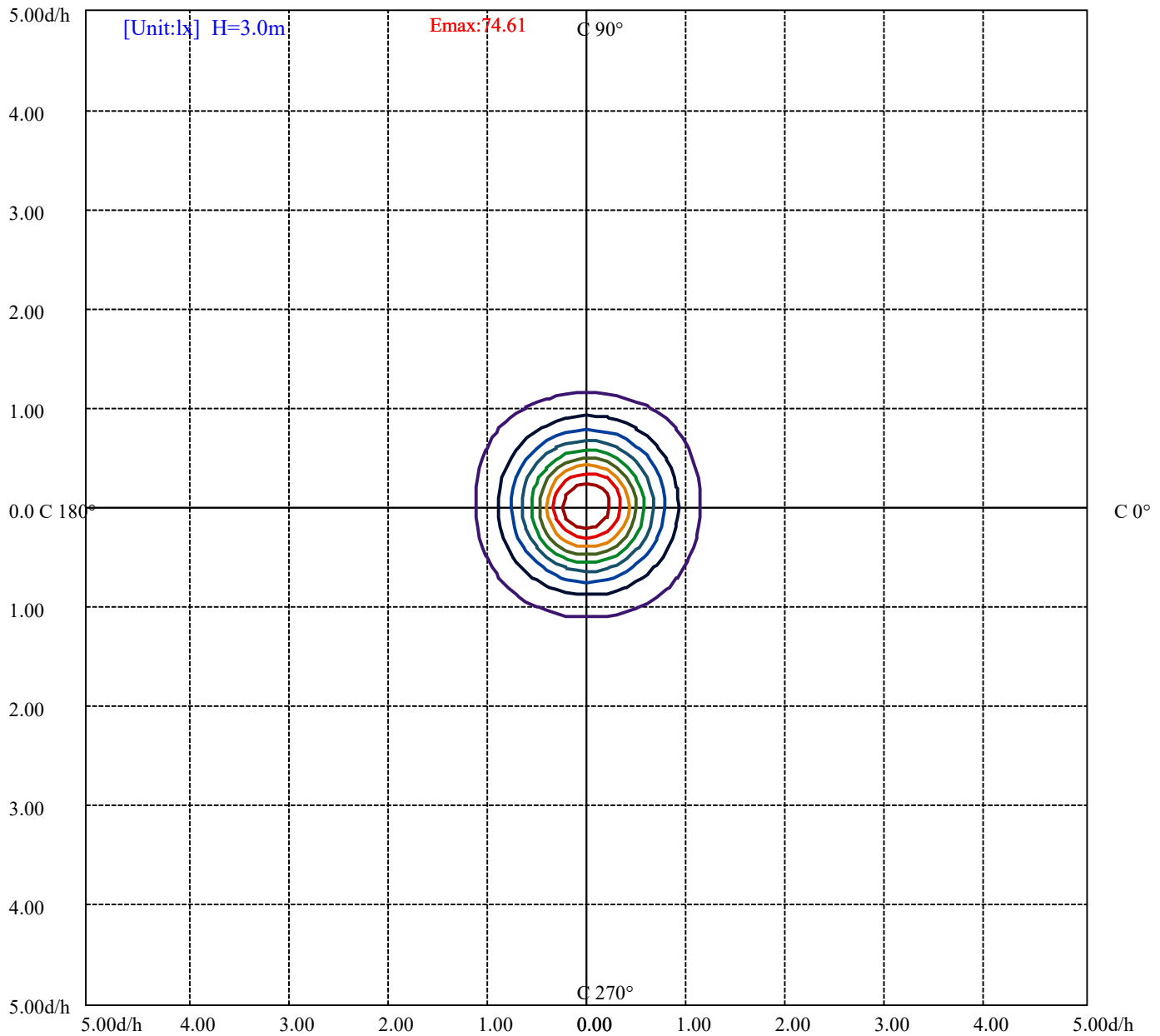
House

[Unit:cd]

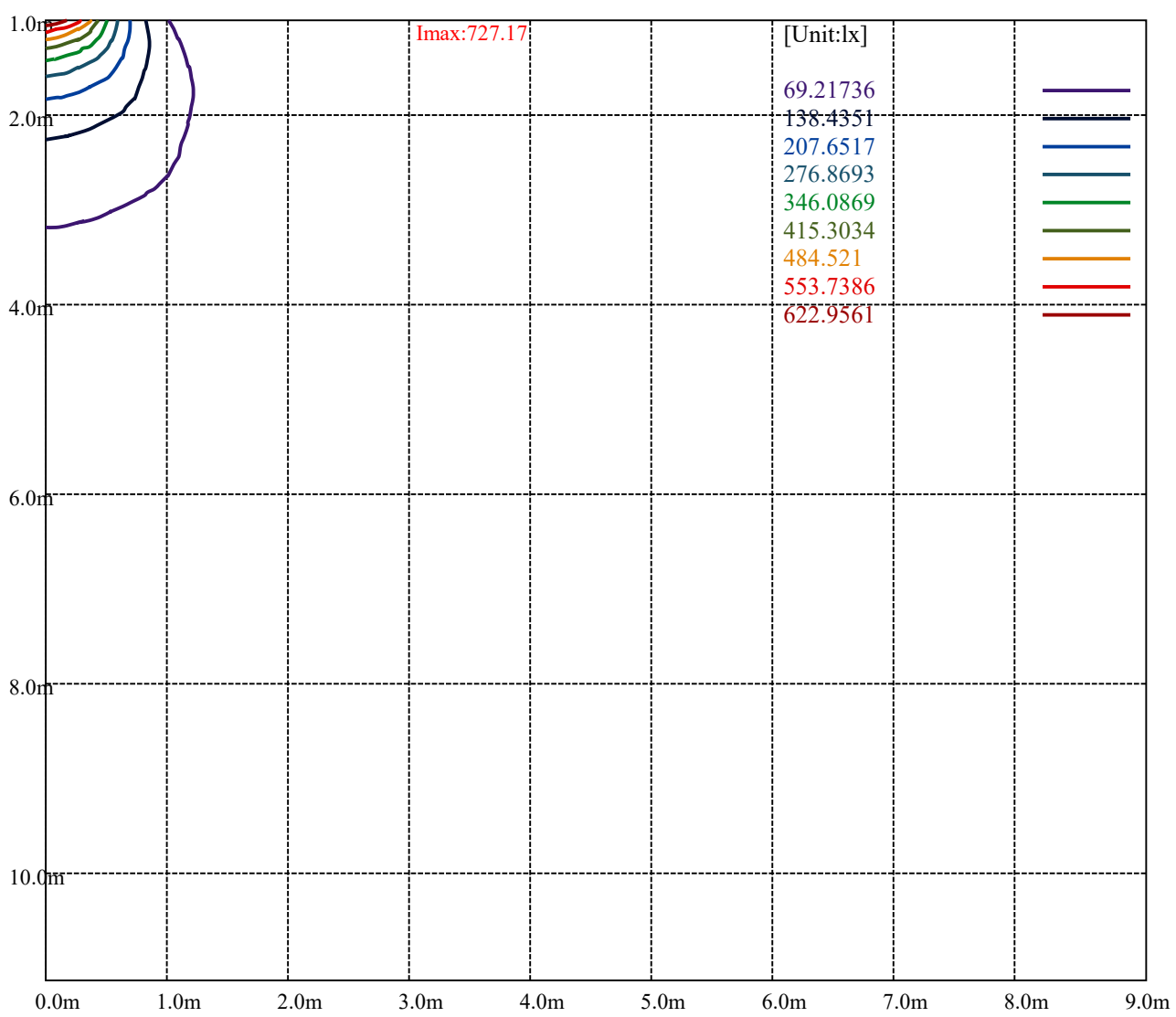
Road

Imax:727.17
(10%Imax) 69.21736
(20%Imax) 138.4351
(30%Imax) 207.6517
(40%Imax) 276.8693
(50%Imax) 346.0869
(60%Imax) 415.3034
(70%Imax) 484.521
(80%Imax) 553.7386
(90%Imax) 622.9561





(10%Emax)	7.461184	
(20%Emax)	14.92235	
(30%Emax)	22.38357	
(40%Emax)	29.84469	
(50%Emax)	37.30592	
(60%Emax)	44.76714	
(70%Emax)	52.22827	
(80%Emax)	59.68949	
(90%Emax)	67.15061	



Luminance Table

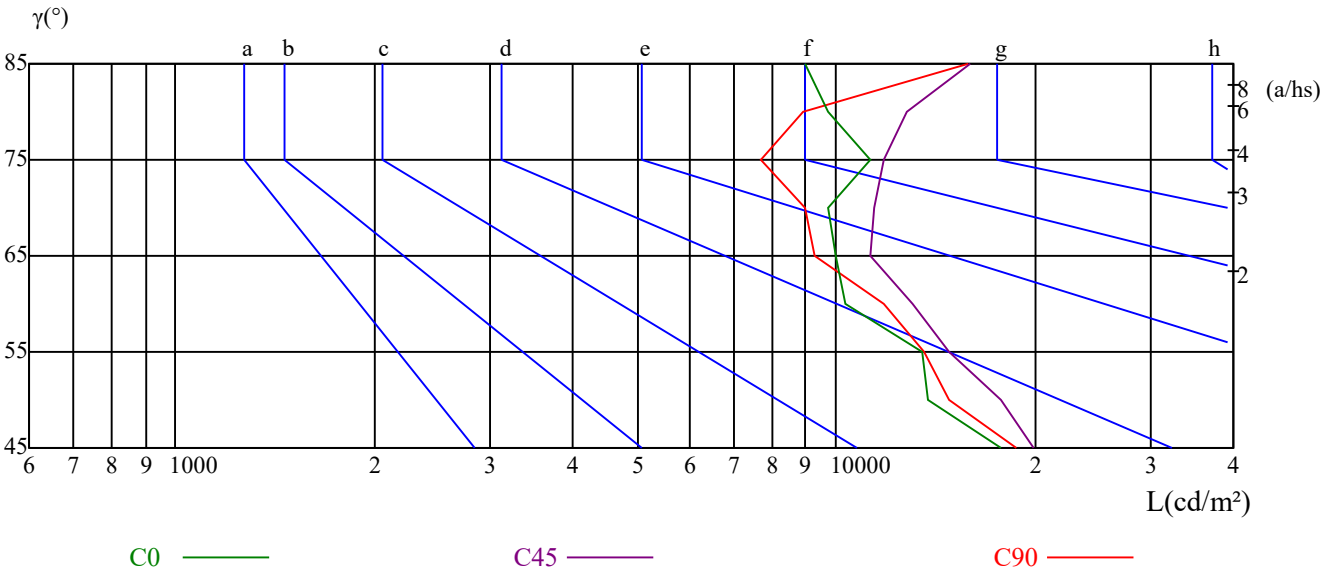
γ	45	50	55	60	65	70	75	80	85
C0	17824	13832	13511	10321	9995	9761	11253	9710	8990
C45	19872	17753	14877	13081	11244	11404	11845	12849	16024
C90	18764	14812	13630	11854	9310	8964	7699	8926	15829

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9793	8101	9441	10003	6910	9427	10455	8403	7133

Glare Table

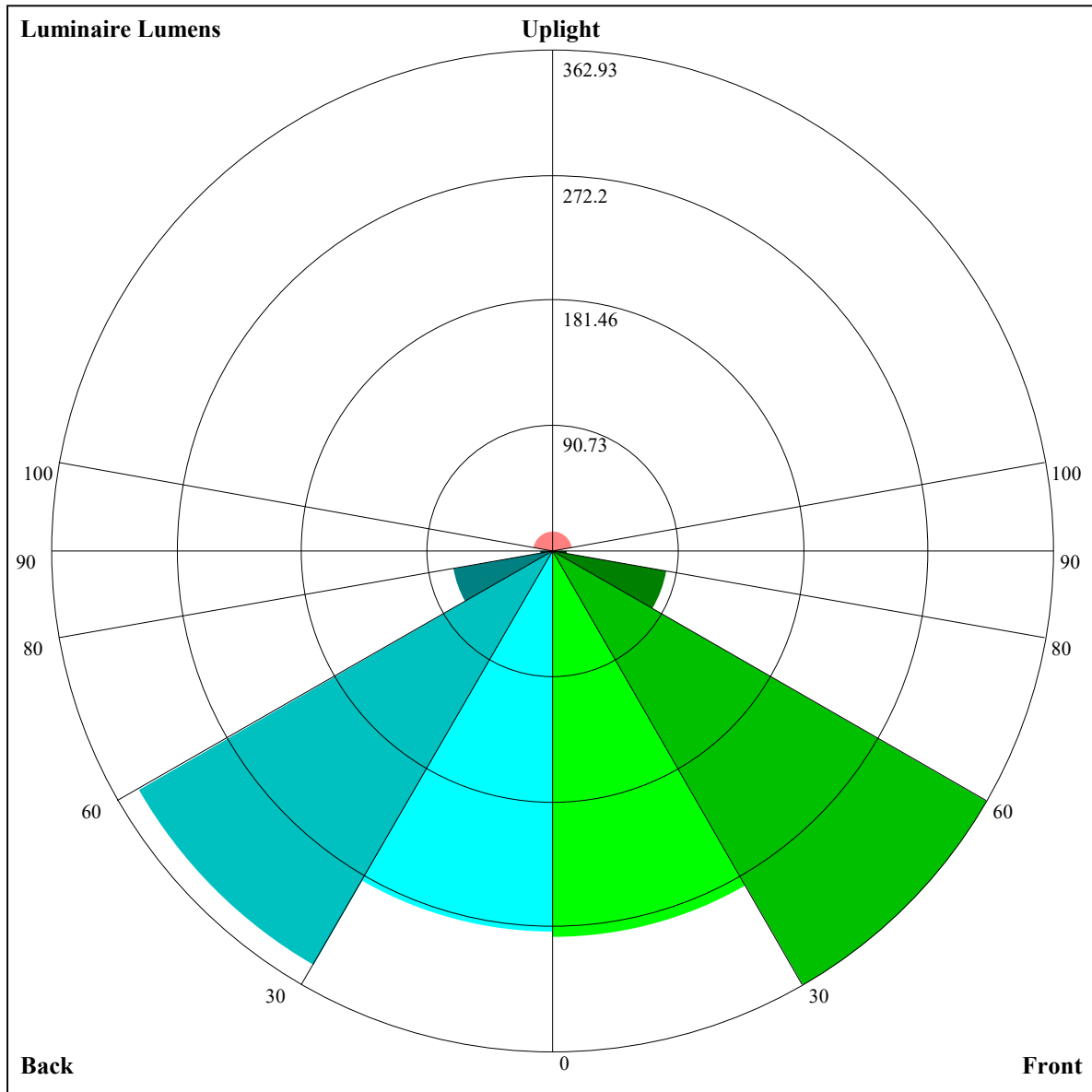
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	16.65	18.08	17.03	18.42	18.76	16.82	18.24	17.20	18.58	18.93
	3H	17.73	19.01	18.13	19.38	19.75	17.73	19.01	18.13	19.37	19.74
	4H	18.35	19.55	18.76	19.92	20.31	18.10	19.30	18.52	19.68	20.07
	6H	18.87	19.98	19.29	20.37	20.79	18.50	19.61	18.92	20.00	20.42
	8H	19.02	20.09	19.45	20.49	20.92	18.71	19.78	19.14	20.18	20.61
	12H	19.12	20.14	19.55	20.55	20.99	19.00	20.02	19.44	20.43	20.87
4H	2H	17.16	18.36	17.57	18.73	19.13	17.29	18.49	17.70	18.86	19.26
	3H	18.48	19.49	18.92	19.90	20.34	18.44	19.45	18.87	19.86	20.30
	4H	19.31	20.20	19.77	20.64	21.11	19.02	19.91	19.47	20.35	20.82
	6H	19.95	20.74	20.43	21.20	21.68	19.54	20.34	20.03	20.80	21.27
	8H	20.19	20.93	20.68	21.40	21.89	19.87	20.61	20.36	21.08	21.57
	12H	20.37	21.06	20.87	21.52	22.05	20.29	20.97	20.78	21.44	21.97
8H	4H	19.62	20.36	20.12	20.83	21.33	19.37	20.11	19.86	20.58	21.07
	6H	20.44	21.06	20.96	21.55	22.08	20.10	20.72	20.61	21.21	21.74
	8H	20.85	21.39	21.39	21.92	22.44	20.61	21.15	21.15	21.68	22.20
	12H	21.14	21.59	21.68	22.12	22.66	21.18	21.64	21.73	22.17	22.70
12H	4H	19.67	20.35	20.17	20.82	21.35	19.42	20.11	19.92	20.57	21.10
	6H	20.61	21.15	21.14	21.68	22.19	20.28	20.82	20.82	21.35	21.87
	8H	21.04	21.49	21.59	22.02	22.56	20.83	21.28	21.37	21.81	22.35
Variation with the observer position at spacings:											
S = 1.0H		0.4/-0.6					0.3/-0.6				
S = 1.5H		0.5/-1.1					0.6/-1.0				
S = 2.0H		1.2/-1.3					1.2/-1.1				
Standard tables:		BK4					BK4				
Uncorrected UGR		6.8					6.7				

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



Luminaire Lumens:

FL=280.6,FM=362.93,FH=84.07,FVH=10.97

BL=276.7,BM=347,BH=74.3,BVH=9.01

UL=2.63,UH=14.14

BUG Rating:B1-U2-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	727.17	713.24	697.67	678.01	661.62	619.01	535.85	478.50	405.17
45.0	705.46	705.86	710.37	700.13	681.69	610.41	548.14	492.43	422.37
90.0	716.93	704.64	709.14	698.08	662.85	618.61	546.50	480.14	401.48
135.0	716.11	712.01	695.21	684.15	657.52	609.18	517.83	490.38	383.04
180.0	727.17	709.14	694.39	695.62	637.04	561.66	510.45	437.94	360.92
225.0	705.46	709.14	709.96	658.75	631.71	591.57	505.54	430.56	360.92
270.0	716.93	705.46	694.39	655.07	623.52	571.90	505.54	442.86	352.73
315.0	716.11	707.09	693.16	666.13	638.68	596.48	535.44	450.64	375.67
360.0	727.17	713.24	697.67	678.01	661.62	619.01	535.85	478.50	405.17
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	303.16	213.85	186.40	124.13	101.60	80.30	70.05	40.56	18.85
45.0	337.98	274.48	205.25	157.31	114.30	93.81	73.74	53.67	33.59
90.0	319.13	229.01	188.04	142.57	94.63	73.74	47.93	37.28	33.18
135.0	312.58	263.42	188.45	135.19	100.78	77.43	63.09	38.51	16.80
180.0	265.88	204.02	158.13	127.82	97.50	62.27	54.49	16.80	24.99
225.0	277.76	220.40	158.95	113.48	79.89	36.87	45.47	20.07	0.00
270.0	255.23	207.29	160.18	124.95	70.05	67.19	38.10	24.17	2.05
315.0	304.39	233.92	175.34	130.68	88.90	81.12	52.44	29.91	9.42
360.0	303.16	213.85	186.40	124.13	101.60	80.30	70.05	40.56	18.85
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	0.00	0.00	0.41	0.00	9.01	0.00	0.00	0.00
45.0	4.10	13.93	4.10	5.74	5.33	0.00	0.00	0.00	0.00
90.0	0.00	6.55	0.00	0.00	0.00	3.28	2.05	0.00	2.05
135.0	7.78	0.00	0.00	7.37	0.00	3.28	7.37	0.00	5.33
180.0	3.28	0.00	0.00	3.28	4.51	0.00	0.00	7.78	0.82
225.0	13.11	0.00	0.00	0.00	0.00	0.82	0.00	0.00	15.57
270.0	0.00	0.00	0.00	0.00	0.00	0.00	10.24	0.00	3.28
315.0	0.00	0.00	0.00	5.74	0.00	2.46	15.98	5.74	13.52
360.0	0.00	0.00	0.00	0.41	0.00	9.01	0.00	0.00	0.00
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	12.70	4.92	0.00	0.00	0.00	0.00	0.00	11.06	5.74
45.0	0.00	0.00	0.00	0.00	0.00	1.23	2.87	0.00	13.11
90.0	0.00	8.60	6.96	0.00	6.55	8.19	5.74	0.00	0.00
135.0	16.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
180.0	6.55	0.00	10.65	0.00	0.00	12.70	0.00	2.87	0.00
225.0	0.00	0.00	0.00	0.00	0.00	3.69	0.00	0.00	0.00
270.0	0.00	2.87	0.00	0.00	2.05	3.28	0.82	0.00	0.00
315.0	0.00	0.00	0.00	9.42	5.33	0.00	0.00	0.00	0.00
360.0	12.70	4.92	0.00	0.00	0.00	0.00	0.00	11.06	5.74
C/γ(°)	180.0								
0.0	0.00								
45.0	8.60								
90.0	3.28								
135.0	2.87								
180.0	0.00								
225.0	8.60								
270.0	3.28								
315.0	2.87								
360.0	0.00								