
AFX

Client:

LumCAT: EMAF06LAJD1SB

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.136

Lamp flux(lm): 1201.1

Power (W): 15.420

Number of Lamps: 1

PF: 0.945

Length(mm): -140

Width(mm): -140

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1201.06, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 77.89

Central intensity(cd): 385.878, Maximum intensity(cd): 385.878

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=107.8

[C90/270]Total=107.8

Field angle(10%Imax): [C0/180]Total=165.2

[C90/270]Total=165.4

Maximum s/h(1/2): C0_180=1.22 C90_270=1.22

Maximum s/h(1/4): C0_180=1.33 C90_270=1.33

Up flux rate of lamp(%): 10.53%

Down flux rate of lamp(%): 89.47%

Up flux rate of LUM(%): 10.53%

Down flux rate of LUM(%): 89.47%

CIE Type : Semidirect lighting

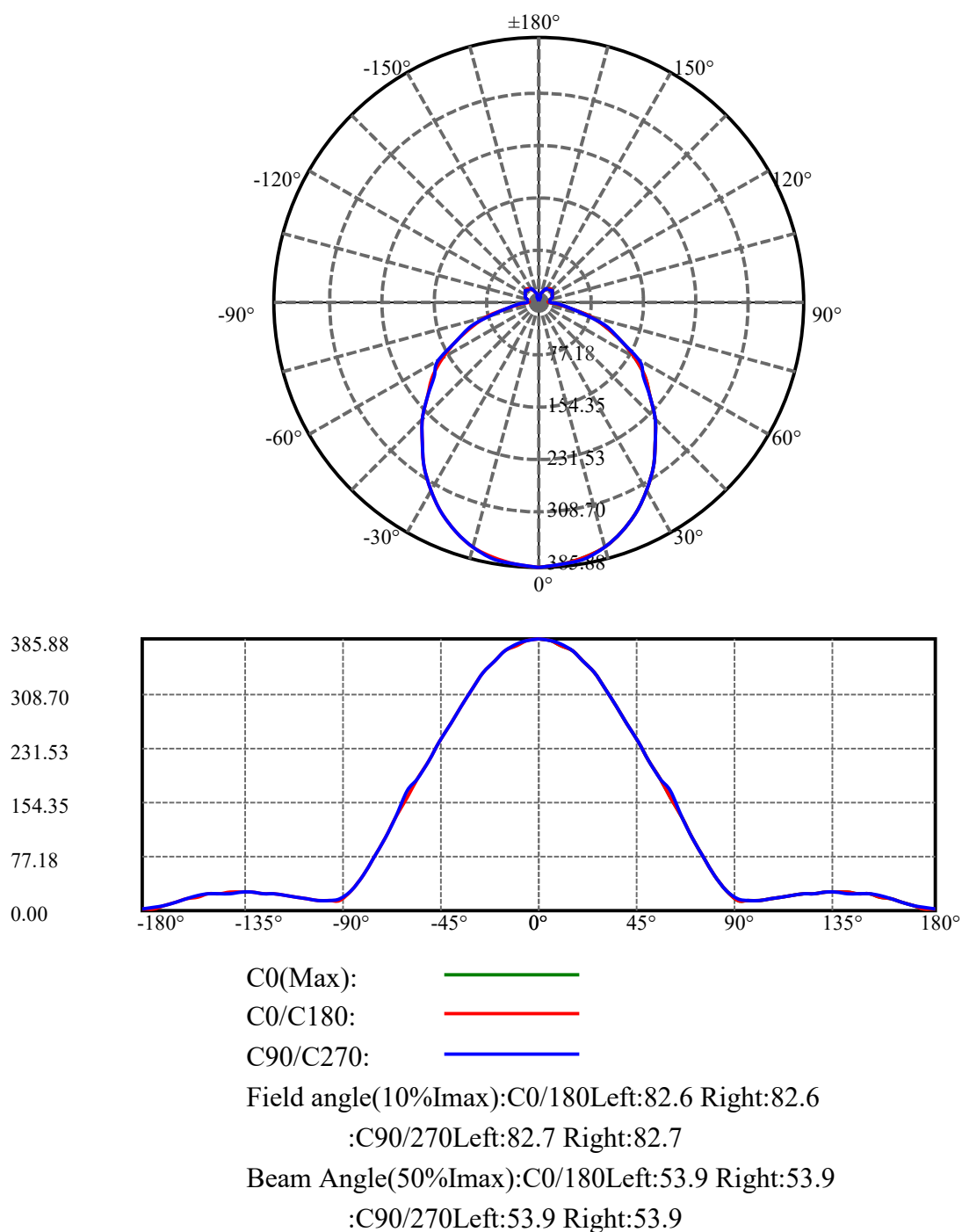
Output flux ratio in π solid angle : 69.082%

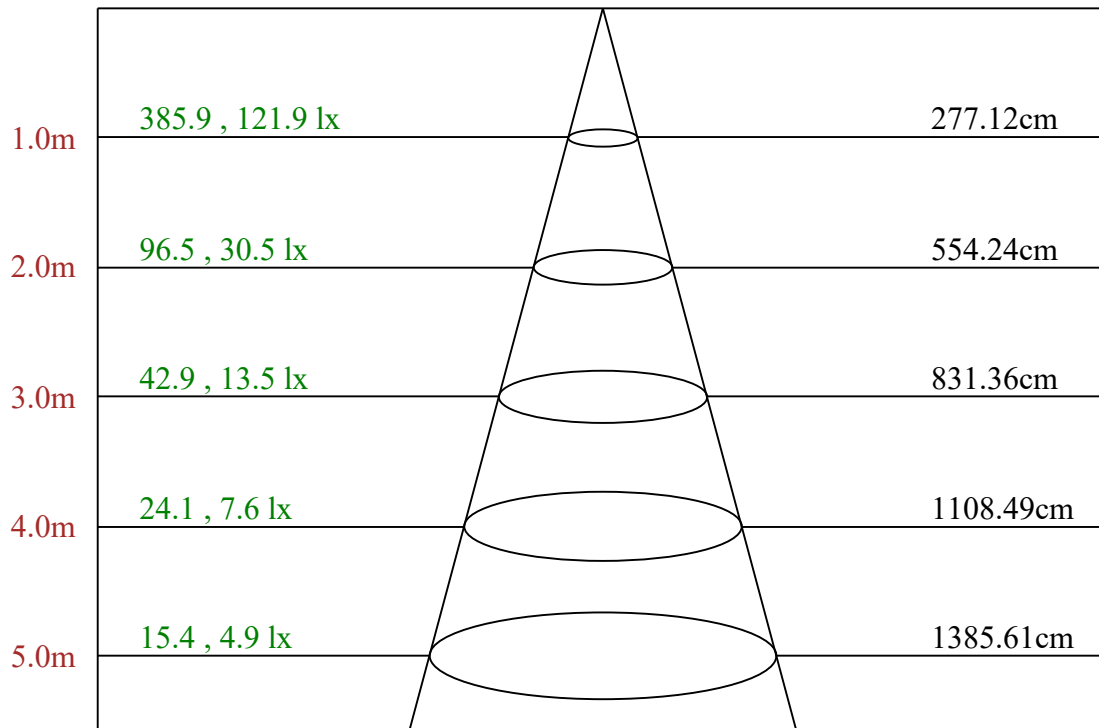
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	385.878	0.000	0	0.00%	0.00%
5.0	383.589	9.199	9.199	0.77%	0.77%
10.0	377.790	27.237	36.436	2.27%	3.03%
15.0	368.365	44.261	80.697	3.69%	6.72%
20.0	355.087	59.623	140.32	4.96%	11.68%
25.0	336.925	72.579	212.899	6.04%	17.73%
30.0	315.523	82.568	295.467	6.87%	24.60%
35.0	290.761	89.280	384.746	7.43%	32.03%
40.0	265.966	92.886	477.632	7.73%	39.77%
45.0	238.796	93.461	571.093	7.78%	47.55%
50.0	212.700	91.231	662.324	7.60%	55.15%
55.0	187.058	86.921	749.245	7.24%	62.38%
60.0	161.078	80.471	829.715	6.70%	69.08%
65.0	131.964	71.239	900.955	5.93%	75.01%
70.0	102.706	59.420	960.375	4.95%	79.96%
75.0	75.274	46.521	1006.896	3.87%	83.83%
80.0	50.971	33.779	1040.675	2.81%	86.65%
85.0	28.659	21.637	1062.312	1.80%	88.45%
90.0	16.224	12.289	1074.602	1.02%	89.47%
95.0	14.574	8.433	1083.035	0.70%	90.17%
100.0	14.881	8.004	1091.038	0.67%	90.84%
105.0	16.826	8.484	1099.522	0.71%	91.55%
110.0	19.572	9.514	1109.036	0.79%	92.34%
115.0	22.015	10.530	1119.566	0.88%	93.22%
120.0	23.769	11.130	1130.696	0.93%	94.14%
125.0	24.876	11.244	1141.94	0.94%	95.08%
130.0	25.487	10.950	1152.891	0.91%	95.99%
135.0	25.563	10.315	1163.206	0.86%	96.85%
140.0	25.104	9.381	1172.587	0.78%	97.63%
145.0	24.380	8.256	1180.843	0.69%	98.32%
150.0	22.930	6.967	1187.81	0.58%	98.90%
155.0	20.336	5.475	1193.286	0.46%	99.35%
160.0	16.521	3.866	1197.151	0.32%	99.67%
165.0	11.828	2.336	1199.488	0.19%	99.87%
170.0	7.136	1.125	1200.613	0.09%	99.96%
175.0	3.628	0.385	1200.998	0.03%	100.00%
180.0	1.260	0.058	1201.056	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	295.47	24.60%	24.60%
0-40	477.63	39.77%	39.77%
0-60	829.72	69.08%	69.08%
0-90	1074.60	89.47%	89.47%
0-120	1130.70	94.14%	94.14%
0-180	1201.06	100.00%	100.00%
60-90	244.89	20.39%	20.39%
90-120	56.09	4.67%	4.67%
90-130	78.29	6.52%	6.52%
90-150	113.21	9.43%	9.43%
90-180	126.40	10.52%	10.52%
0-70.05	960.84	80.00%	80.00%

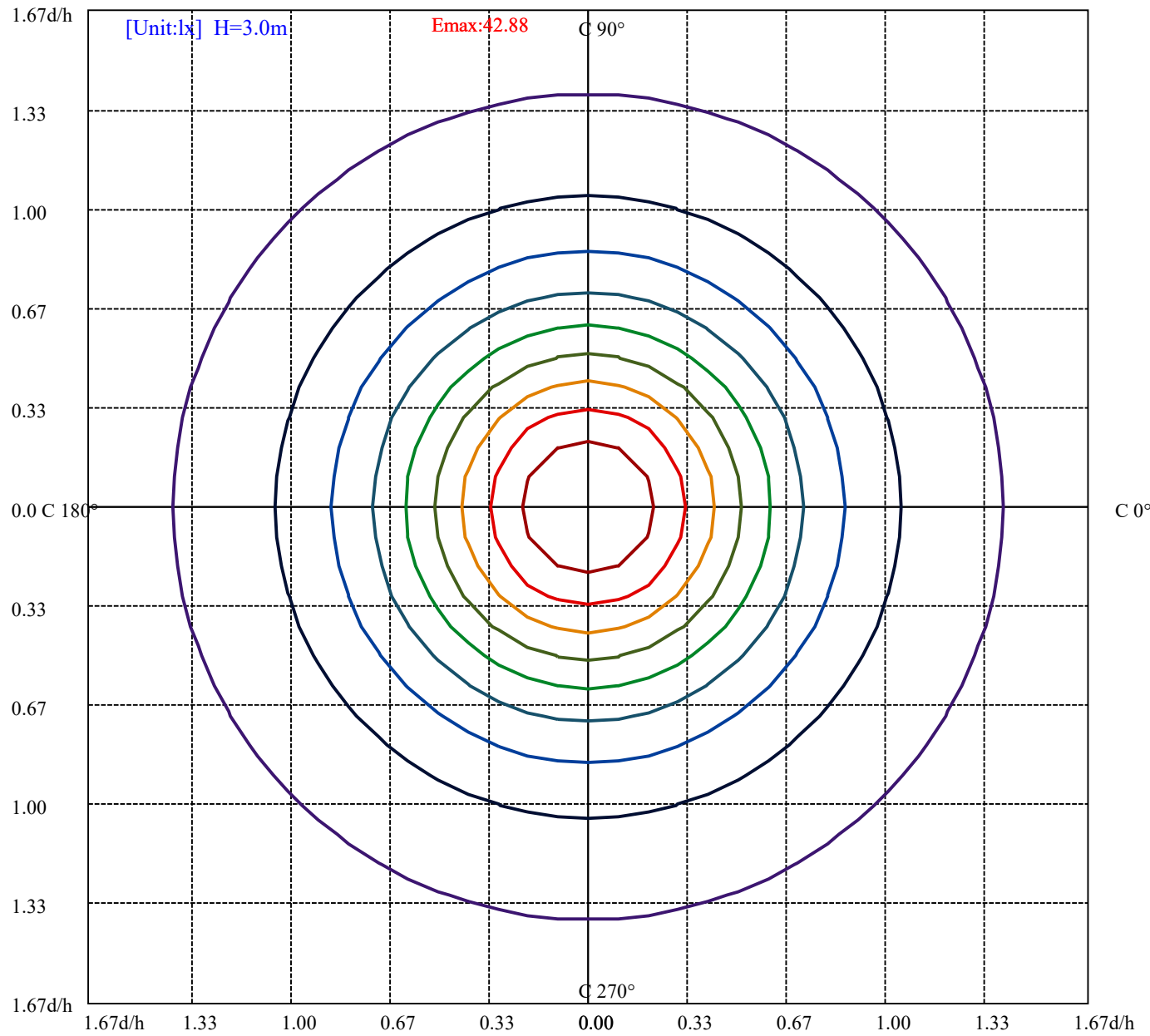
ZONAL LUMEN SUMMARY

0-10	36.44
10-20	103.88
20-30	155.15
30-40	182.17
40-50	184.69
50-60	167.39
60-70	130.66
70-80	80.30
80-90	33.93
90-100	16.44
100-110	18.00
110-120	21.66
120-130	22.19
130-140	19.70
140-150	15.22
150-160	9.34
160-170	3.46
170-180	0.39

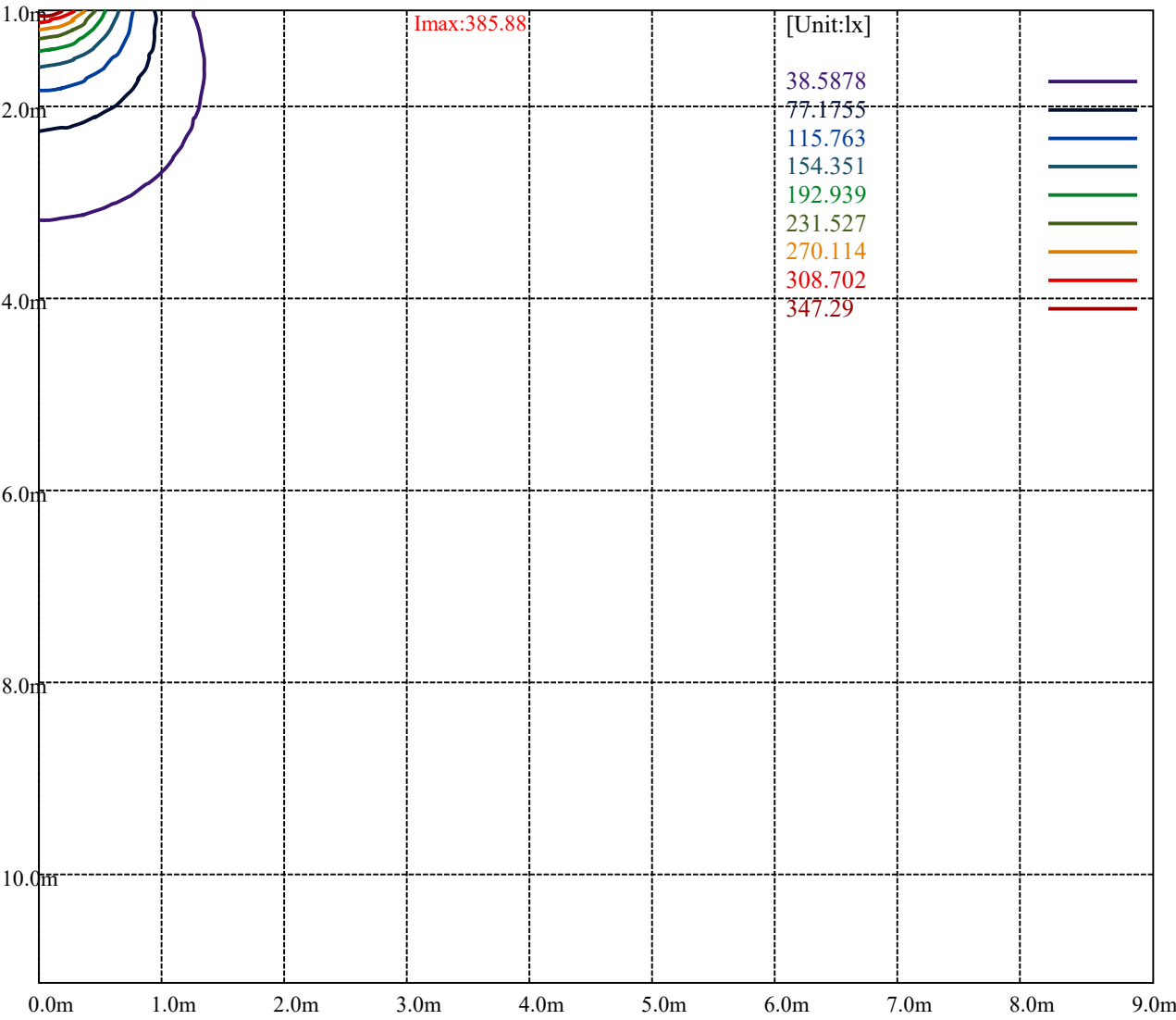




Max , Ave Beam angle of C0 plane 108.36



(10%Emax)	4.287522	
(20%Emax)	8.575055	
(30%Emax)	12.86256	
(40%Emax)	17.15011	
(50%Emax)	21.43767	
(60%Emax)	25.72522	
(70%Emax)	30.01267	
(80%Emax)	34.30022	
(90%Emax)	38.58778	



Luminance Limiting Curve(no luminous side)

Appendix Page: 8 Total:12

Luminance Table

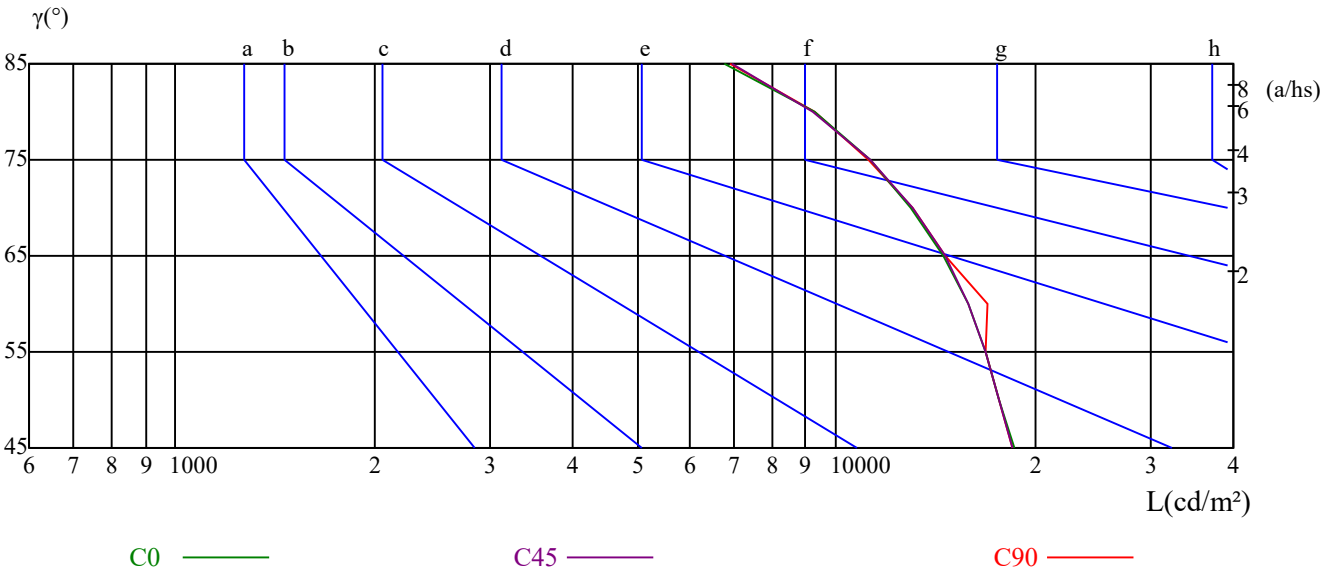
γ	45	50	55	60	65	70	75	80	85
C0	18606	17635	16859	15855	14556	12959	11255	9297	6766
C45	18563	17663	16809	15819	14611	13045	11284	9209	6944
C90	18568	17666	16850	16929	14630	13090	11195	9305	6895

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
20233	20336	20310	18895	18794	18944	20832	21229	21380

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



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	1.17	1.17	1.17	1.13	1.13	1.13	1.05	1.05	1.05	0.99	0.99	0.99	0.92	0.92	0.92	0.89
1	1.01	0.97	0.93	0.98	0.94	0.90	0.91	0.88	0.85	0.86	0.83	0.81	0.81	0.79	0.77	0.74
2	0.88	0.81	0.75	0.85	0.79	0.73	0.80	0.75	0.70	0.75	0.71	0.67	0.70	0.67	0.64	0.61
3	0.77	0.69	0.62	0.75	0.67	0.61	0.70	0.64	0.59	0.66	0.61	0.56	0.62	0.58	0.54	0.52
4	0.68	0.60	0.53	0.66	0.58	0.52	0.62	0.55	0.50	0.59	0.53	0.48	0.56	0.51	0.47	0.44
5	0.61	0.52	0.45	0.59	0.51	0.45	0.56	0.49	0.43	0.53	0.47	0.42	0.50	0.45	0.40	0.38
6	0.55	0.46	0.40	0.53	0.45	0.39	0.50	0.43	0.38	0.48	0.42	0.37	0.45	0.40	0.36	0.33
7	0.50	0.41	0.35	0.48	0.40	0.34	0.46	0.39	0.34	0.44	0.37	0.33	0.41	0.36	0.32	0.29
8	0.45	0.37	0.31	0.44	0.36	0.31	0.42	0.35	0.30	0.40	0.34	0.29	0.38	0.32	0.28	0.26
9	0.42	0.33	0.28	0.41	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.30	0.26	0.24
10	0.38	0.31	0.25	0.37	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.24	0.33	0.27	0.23	0.21

Intensity data(cd)

Appendix Page: 10 Total:12

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	385.88	383.17	377.76	368.75	356.13	338.09	317.36	293.01	266.87
15.0	385.88	383.16	377.73	367.76	355.08	337.87	315.22	292.58	267.22
30.0	385.88	383.15	376.80	367.72	353.19	335.94	315.06	290.54	265.12
45.0	385.88	383.15	376.78	366.77	354.02	335.82	314.89	290.32	264.84
60.0	385.88	384.05	377.65	367.59	353.87	336.50	315.47	290.78	265.18
75.0	385.88	383.13	376.73	366.68	353.87	336.50	315.47	290.78	267.01
90.0	385.88	383.12	378.53	368.42	355.56	339.02	317.89	294.00	268.28
105.0	385.88	384.96	379.43	370.22	358.25	339.83	320.49	296.55	270.76
120.0	385.88	384.95	380.34	372.03	360.03	343.41	322.18	299.10	273.25
135.0	385.88	385.88	381.25	372.92	361.82	345.16	324.80	301.67	276.68
150.0	385.88	384.03	380.34	373.88	350.80	346.18	327.72	303.72	277.87
165.0	385.88	384.95	382.18	374.80	363.72	347.11	329.57	305.56	278.79
180.0	385.88	383.17	376.86	367.85	354.32	336.29	314.65	288.51	263.26
195.0	385.88	384.07	378.63	369.57	355.99	337.87	316.13	290.77	264.50
210.0	385.88	384.06	377.71	369.53	355.92	337.76	315.97	291.45	266.03
225.0	385.88	383.15	378.60	369.50	356.75	338.55	315.80	292.14	264.84
240.0	385.88	384.96	379.48	370.33	356.62	338.33	316.38	290.78	266.09
255.0	385.88	384.05	377.65	368.50	356.62	337.41	314.55	288.95	263.35
270.0	385.88	384.04	378.53	368.42	354.64	335.35	314.21	287.57	261.85
285.0	385.88	384.04	376.67	367.46	352.72	333.38	311.28	285.49	281.81
300.0	385.88	383.11	376.65	365.57	362.80	331.41	308.33	282.48	255.71
315.0	385.88	383.10	375.70	364.59	349.79	328.50	306.30	280.39	253.55
330.0	385.88	381.26	372.95	361.88	346.18	325.87	302.79	276.02	251.10
345.0	385.88	379.42	372.03	360.03	343.41	324.03	300.02	275.10	249.25
360.0	385.88	383.17	377.76	368.75	356.13	338.09	317.36	293.01	266.87
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	242.53	214.58	191.14	164.09	134.34	103.68	76.63	50.49	27.95
15.0	240.95	214.68	190.22	163.05	134.97	103.26	75.18	49.82	27.17
30.0	238.79	216.09	190.67	164.34	135.28	105.32	76.27	50.85	28.15
45.0	239.35	214.78	190.21	164.73	137.42	105.57	78.27	51.88	29.12
60.0	240.49	214.88	191.11	166.42	138.07	108.81	79.55	54.86	30.18
75.0	240.49	215.80	191.11	166.42	139.90	108.81	82.30	55.78	32.00
90.0	242.55	216.83	192.94	168.13	140.57	112.09	83.61	58.80	34.91
105.0	244.97	219.19	193.40	168.53	143.67	113.28	86.57	60.78	36.84
120.0	248.33	219.71	195.71	170.78	144.01	116.32	88.62	62.77	39.70
135.0	249.85	223.94	198.03	172.12	145.28	119.37	91.61	64.78	41.64
150.0	251.10	225.25	201.25	174.48	147.70	120.01	92.32	66.47	43.39
165.0	254.79	228.02	201.25	175.40	149.55	122.78	94.16	68.31	44.31
180.0	236.21	210.07	183.92	156.88	128.93	100.98	73.93	50.49	27.95
195.0	237.32	210.15	185.69	157.61	130.44	102.36	75.18	49.82	28.08
210.0	238.79	211.55	185.22	157.98	129.84	100.78	75.36	49.03	28.15
225.0	239.35	211.14	185.66	158.36	130.14	101.02	72.81	48.23	26.39
240.0	238.66	212.14	184.71	157.28	128.02	98.76	72.24	47.55	25.60
255.0	235.92	211.23	182.88	156.36	127.10	96.93	69.49	63.09	23.77
270.0	235.20	208.56	181.91	174.56	124.03	94.63	66.15	42.26	22.05
285.0	233.00	206.29	178.66	150.11	121.57	90.25	64.47	39.60	20.26
300.0	229.86	204.02	177.25	148.63	118.16	88.62	60.93	36.93	18.46
315.0	226.71	200.80	173.97	145.28	115.67	86.06	59.22	35.16	17.58
330.0	223.40	199.40	172.63	143.09	112.62	83.08	56.31	33.23	17.54
345.0	222.48	195.71	169.86	141.24	109.86	82.16	55.39	32.31	16.62
360.0	242.53	214.58	191.14	164.09	134.34	103.68	76.63	50.49	27.95

Intensity data(cd)

C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	14.43	14.43	14.43	16.23	18.93	20.74	23.44	24.34	25.24
15.0	14.49	14.49	14.49	16.30	19.02	21.74	23.55	24.46	25.36
30.0	14.53	14.53	14.53	16.34	19.07	21.79	23.61	24.51	25.42
45.0	14.56	14.56	14.56	16.38	19.11	21.84	23.66	25.48	25.48
60.0	15.54	14.63	14.63	16.46	19.20	21.95	23.77	25.60	25.60
75.0	16.46	14.63	14.63	16.46	19.20	21.95	23.77	25.60	26.52
90.0	17.46	14.70	14.70	16.54	19.29	22.05	23.89	25.73	26.64
105.0	18.42	14.74	14.74	15.66	19.34	22.10	23.94	25.79	26.71
120.0	19.39	13.85	14.77	15.69	18.46	22.16	24.00	25.85	26.77
135.0	20.36	13.88	14.81	15.73	18.51	21.28	24.06	25.91	25.91
150.0	22.16	13.85	14.77	15.69	17.54	21.23	23.08	24.93	25.85
165.0	23.08	14.77	14.77	14.77	17.54	20.31	23.08	24.93	25.85
180.0	15.33	15.33	15.33	17.13	20.74	22.54	24.34	25.24	26.15
195.0	15.40	14.49	15.40	17.21	19.93	22.65	24.46	25.36	25.36
210.0	15.44	14.53	14.53	17.25	19.97	22.70	23.61	24.51	25.42
225.0	15.47	14.56	14.56	17.29	20.02	21.84	22.75	24.57	24.57
240.0	14.63	14.63	14.63	17.37	20.12	21.95	23.77	24.69	24.69
255.0	14.63	14.63	14.63	17.37	20.12	21.95	23.77	23.77	24.69
270.0	14.70	14.70	14.70	17.46	20.21	22.05	23.89	23.89	24.81
285.0	14.74	14.74	14.74	17.50	20.26	22.10	23.94	23.94	24.87
300.0	14.77	14.77	15.69	17.54	20.31	22.16	24.00	24.00	24.93
315.0	14.81	14.81	15.73	18.51	20.36	23.13	24.06	24.06	24.98
330.0	13.85	14.77	15.69	18.46	21.23	23.08	24.00	24.93	24.93
345.0	14.77	14.77	15.69	18.46	21.23	23.08	24.00	24.93	24.93
360.0	14.43	14.43	14.43	16.23	18.93	20.74	23.44	24.34	25.24
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	25.24	25.24	24.34	22.54	20.74	17.13	12.62	8.11	3.61
15.0	25.36	25.36	24.46	22.65	19.93	17.21	12.68	7.25	3.62
30.0	25.42	25.42	23.61	22.70	20.88	16.34	12.71	7.26	3.63
45.0	25.48	25.48	24.57	22.75	20.93	16.38	12.74	7.28	3.64
60.0	25.60	25.60	24.69	23.77	21.03	17.37	12.80	8.23	3.66
75.0	26.52	25.60	24.69	23.77	21.03	17.37	12.80	8.23	4.57
90.0	26.64	25.73	25.73	23.89	22.05	18.38	13.78	9.19	4.59
105.0	26.71	25.79	25.79	23.94	22.10	18.42	14.74	10.13	4.60
120.0	26.77	26.77	25.85	24.93	22.16	19.39	14.77	10.15	5.54
135.0	26.84	25.91	25.91	24.98	22.21	19.43	14.81	10.18	5.55
150.0	26.77	25.85	25.85	24.93	23.08	18.46	14.77	9.23	5.54
165.0	25.85	25.85	25.85	24.93	23.08	19.39	13.85	9.23	5.54
180.0	26.15	25.24	24.34	23.44	19.83	14.43	10.82	5.41	2.70
195.0	25.36	25.36	24.46	22.65	19.93	19.02	9.96	6.34	2.72
210.0	25.42	25.42	24.51	22.70	19.97	15.44	10.90	6.36	2.72
225.0	25.48	24.57	23.66	22.75	19.11	15.47	10.92	6.37	2.73
240.0	24.69	24.69	23.77	22.86	20.12	15.54	10.97	6.40	2.74
255.0	24.69	24.69	23.77	21.95	19.20	15.54	10.97	6.40	2.74
270.0	24.81	23.89	23.89	22.05	19.29	15.62	11.03	5.51	2.76
285.0	23.94	23.94	23.02	22.10	19.34	14.74	10.13	5.53	2.76
300.0	24.93	24.00	23.08	21.23	18.46	14.77	9.23	5.54	2.77
315.0	24.98	24.06	23.13	21.28	18.51	13.88	9.25	4.63	2.78
330.0	24.93	24.00	23.08	21.23	17.54	13.85	8.31	4.62	2.77
345.0	24.93	24.00	23.08	20.31	17.54	12.92	8.31	3.69	2.77
360.0	25.24	25.24	24.34	22.54	20.74	17.13	12.62	8.11	3.61

Intensity data(cd)

C/ γ (°)	180.0
0.0	2.70
15.0	2.72
30.0	1.82
45.0	1.82
60.0	1.83
75.0	2.74
90.0	2.76
105.0	2.76
120.0	2.77
135.0	2.78
150.0	2.77
165.0	2.77
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	2.70