
乐达凯

Client:

LumCAT: VRNP2X4LAJUDSN

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.337

Lamp flux(lm): 3246.6

Power (W): 40.030

Number of Lamps: 1

PF: 0.991

Length(mm): 740

Width(mm): 180

Phm Type: C

Height(mm): 180

Photometric Results

Lumens(lm): 3246.61, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 81.10

Central intensity(cd): 246.426, Maximum intensity(cd): 354.678

Angle of maximum intensity: C=0.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=352.8

[C90/270]Total=359.6

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.74 C90_270=1.29

Maximum s/h(1/4): C0_180=1.98 C90_270=1.58

Up flux rate of lamp(%): 48.77%

Down flux rate of lamp(%): 51.23%

Up flux rate of LUM(%): 48.77%

Down flux rate of LUM(%): 51.23%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 24.446%

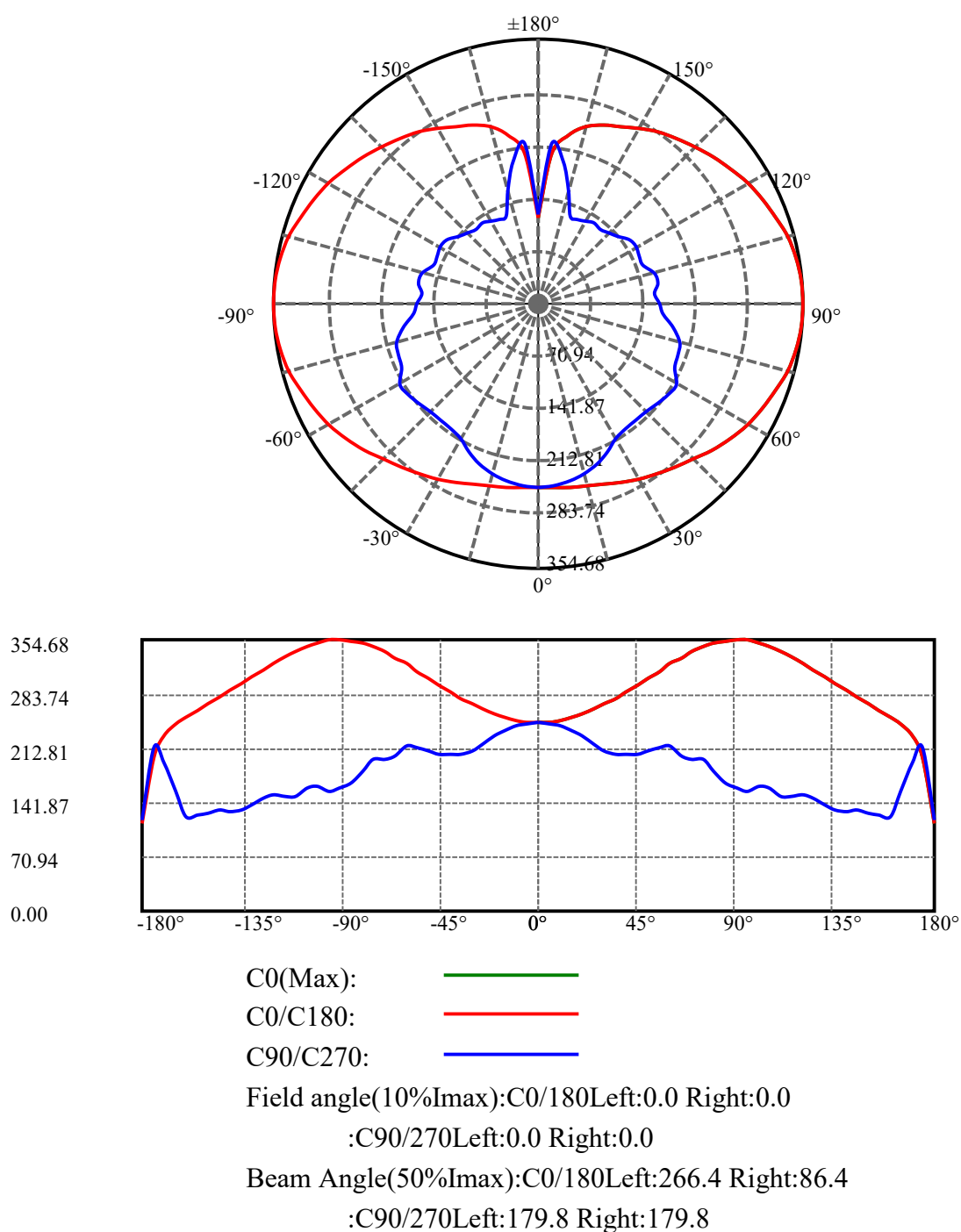
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	246.426	0.000	0	0.00%	0.00%
5.0	246.085	5.888	5.888	0.18%	0.18%
10.0	245.619	17.590	23.478	0.54%	0.72%
15.0	244.882	29.096	52.574	0.90%	1.62%
20.0	244.326	40.318	92.891	1.24%	2.86%
25.0	243.646	51.179	144.071	1.58%	4.44%
30.0	243.827	61.690	205.761	1.90%	6.34%
35.0	245.699	72.086	277.847	2.22%	8.56%
40.0	248.508	82.455	360.301	2.54%	11.10%
45.0	253.009	92.860	453.161	2.86%	13.96%
50.0	258.604	103.379	556.54	3.18%	17.14%
55.0	264.424	113.724	670.264	3.50%	20.65%
60.0	269.453	123.404	793.668	3.80%	24.45%
65.0	272.486	131.746	925.415	4.06%	28.50%
70.0	275.677	138.799	1064.213	4.28%	32.78%
75.0	278.427	144.834	1209.047	4.46%	37.24%
80.0	279.301	149.233	1358.28	4.60%	41.84%
85.0	279.584	151.863	1510.142	4.68%	46.51%
90.0	279.123	152.978	1663.121	4.71%	51.23%
95.0	277.469	152.399	1815.52	4.69%	55.92%
100.0	275.862	150.353	1965.873	4.63%	60.55%
105.0	272.838	146.817	2112.69	4.52%	65.07%
110.0	268.123	141.398	2254.088	4.36%	69.43%
115.0	264.360	134.828	2388.916	4.15%	73.58%
120.0	259.322	127.308	2516.225	3.92%	77.50%
125.0	253.349	118.503	2634.727	3.65%	81.15%
130.0	246.359	108.653	2743.38	3.35%	84.50%
135.0	239.753	98.226	2841.606	3.03%	87.53%
140.0	234.277	87.770	2929.377	2.70%	90.23%
145.0	228.531	77.216	3006.593	2.38%	92.61%
150.0	220.531	66.128	3072.72	2.04%	94.64%
155.0	211.228	54.639	3127.36	1.68%	96.33%
160.0	202.187	43.360	3170.719	1.34%	97.66%
165.0	201.514	33.271	3203.99	1.02%	98.69%
170.0	204.766	24.100	3228.09	0.74%	99.43%
175.0	207.668	14.754	3242.844	0.45%	99.88%
180.0	107.380	3.766	3246.611	0.12%	100.00%

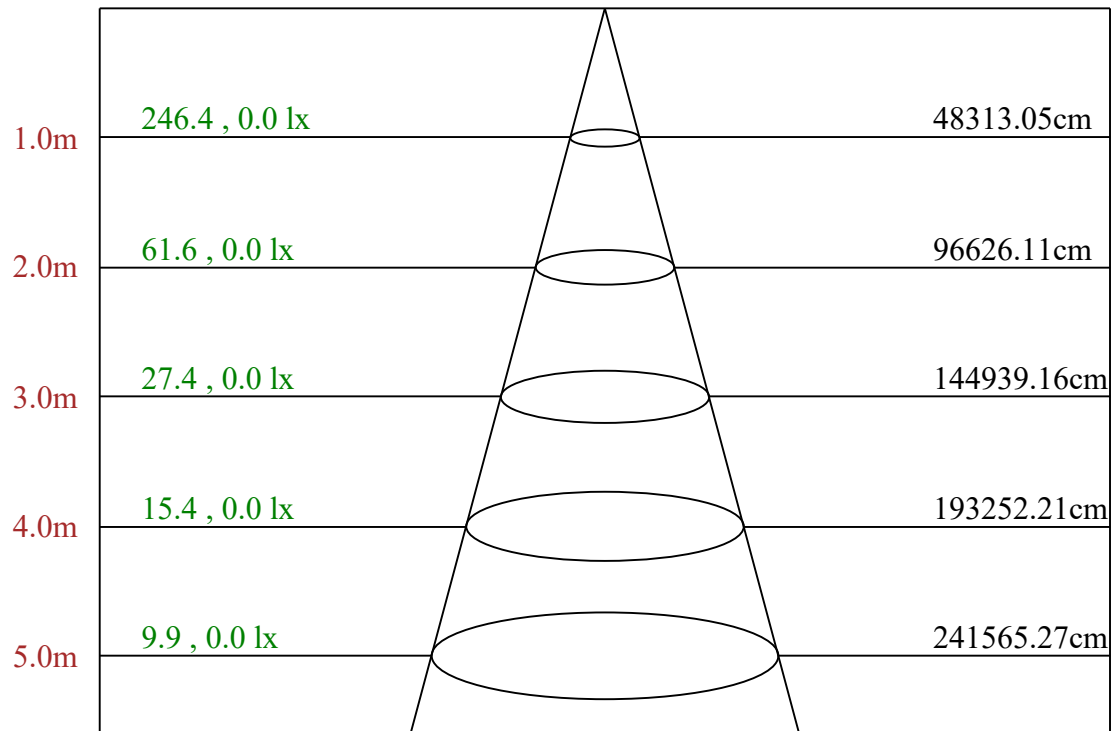
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	205.76	6.34%	6.34%
0-40	360.30	11.10%	11.10%
0-60	793.67	24.45%	24.45%
0-90	1663.12	51.23%	51.23%
0-120	2516.22	77.50%	77.50%
0-180	3246.61	100.00%	100.00%
60-90	869.45	26.78%	26.78%
90-120	853.10	26.28%	26.28%
90-130	1080.26	33.27%	33.27%
90-150	1409.60	43.42%	43.42%
90-180	1579.72	48.66%	48.66%
0-123.42	2597.29	80.00%	80.00%

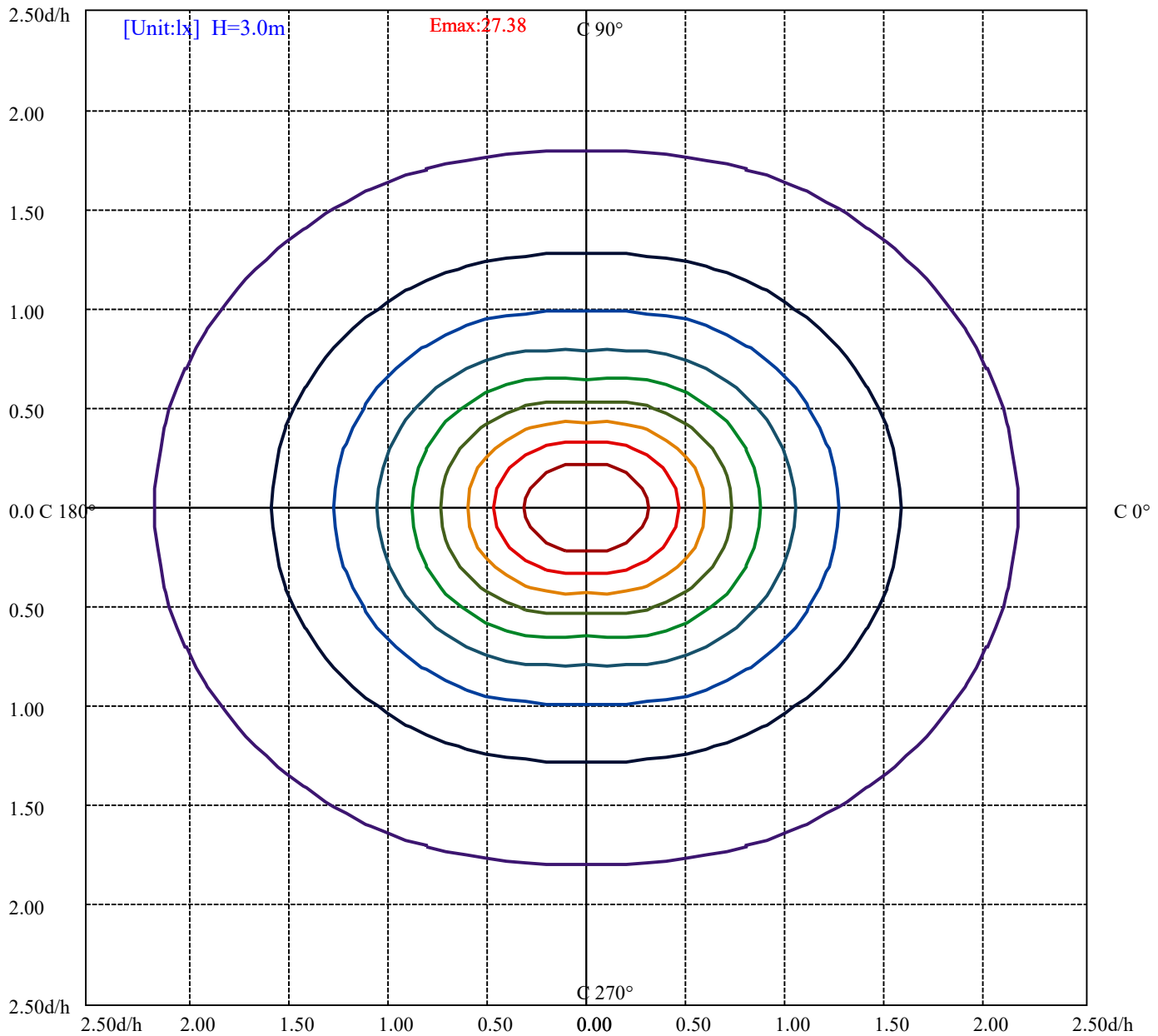
ZONAL LUMEN SUMMARY

0-10	23.48
10-20	69.41
20-30	112.87
30-40	154.54
40-50	196.24
50-60	237.13
60-70	270.54
70-80	294.07
80-90	304.84
90-100	302.75
100-110	288.22
110-120	262.14
120-130	227.16
130-140	186.00
140-150	143.34
150-160	98.00
160-170	57.37
170-180	14.75

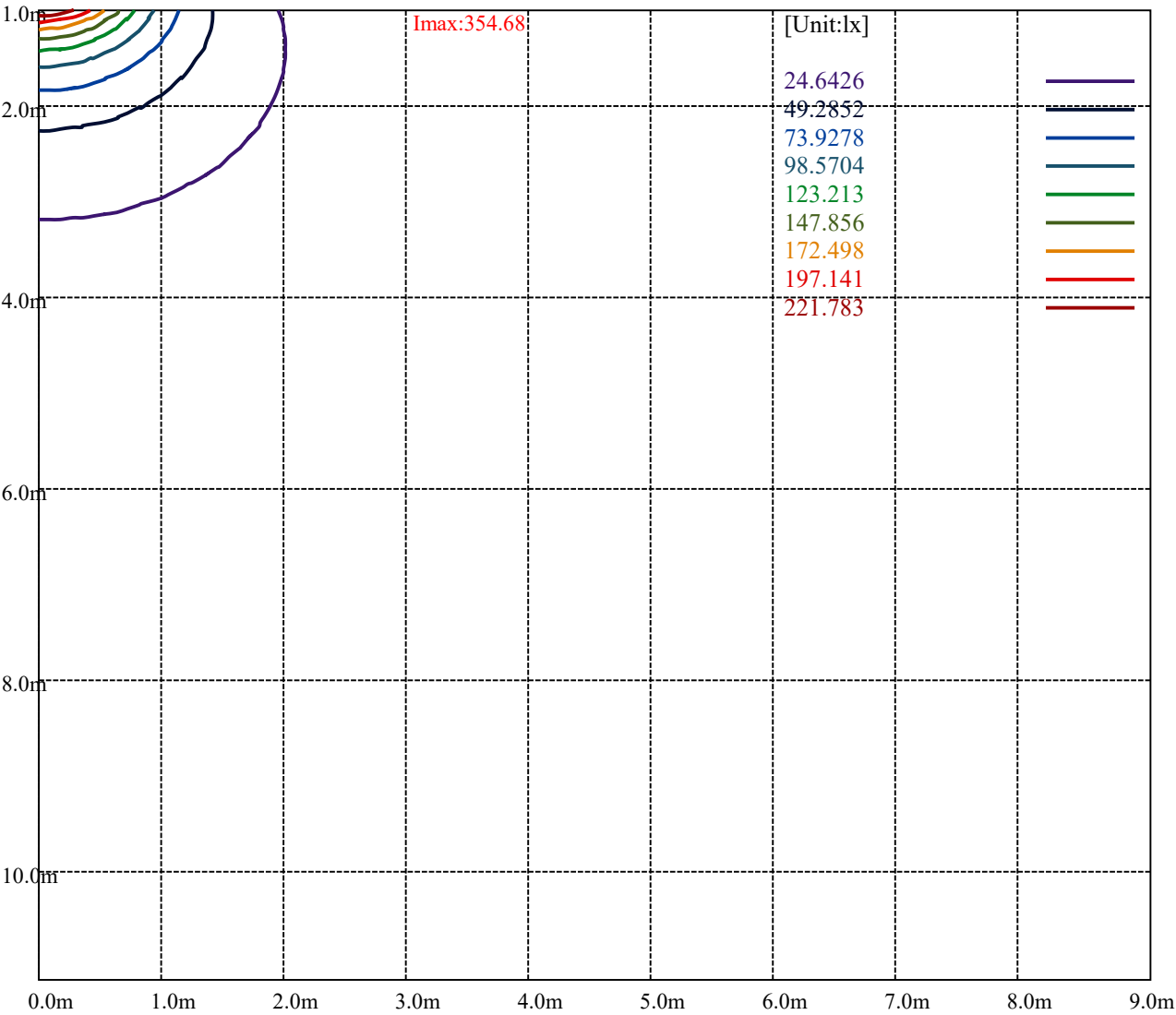




Max , Ave Beam angle of C0 plane 179.53



(10%Emax) 2.738067	—
(20%Emax) 5.476133	—
(30%Emax) 8.2142	—
(40%Emax) 10.95227	—
(50%Emax) 13.69033	—
(60%Emax) 16.42844	—
(70%Emax) 19.16644	—
(80%Emax) 21.90456	—
(90%Emax) 24.64256	—



Luminance Table

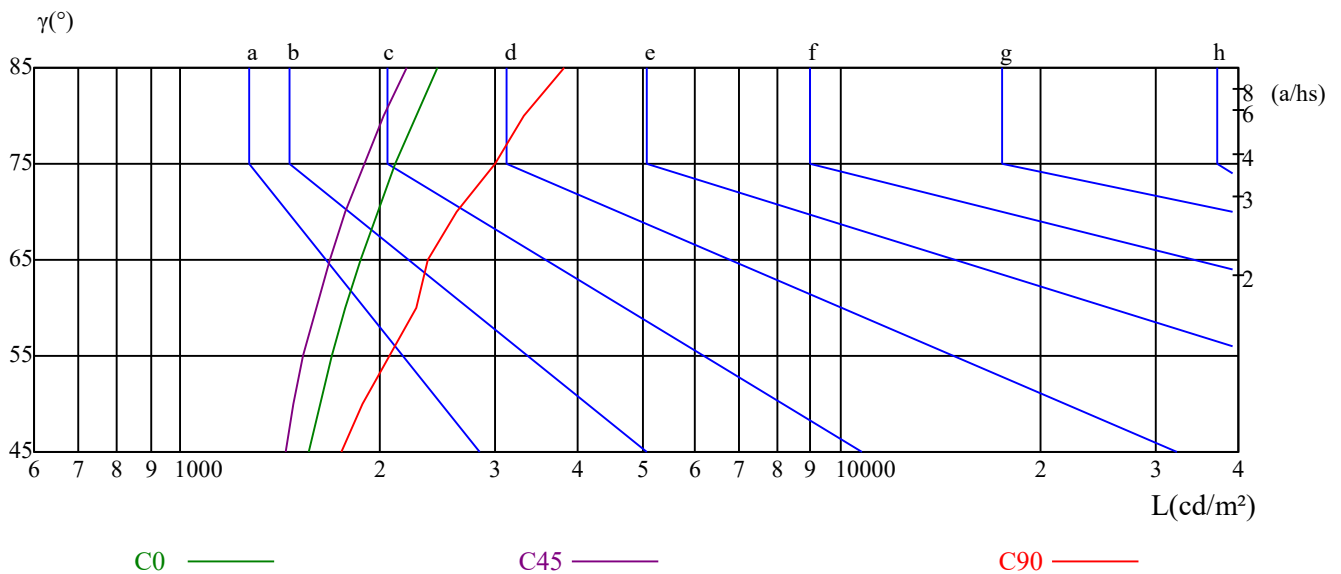
γ	45	50	55	60	65	70	75	80	85
C0	1565	1623	1691	1778	1872	1990	2120	2270	2449
C45	1443	1483	1535	1601	1681	1778	1894	2029	2199
C90	1756	1891	2068	2273	2364	2617	3003	3317	3819

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5886	3597	4851	10033	5729	8109	30438	14437	24293

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



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	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.70	0.70	0.70	0.57	0.57	0.57	0.51
1	0.87	0.81	0.76	0.80	0.75	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.43	0.41	0.39	0.34
2	0.74	0.66	0.59	0.68	0.60	0.54	0.56	0.51	0.46	0.45	0.41	0.38	0.36	0.33	0.30	0.25
3	0.63	0.54	0.47	0.58	0.50	0.44	0.48	0.42	0.37	0.39	0.34	0.30	0.30	0.27	0.24	0.19
4	0.55	0.46	0.39	0.51	0.42	0.36	0.42	0.35	0.30	0.34	0.29	0.25	0.26	0.22	0.19	0.15
5	0.49	0.39	0.32	0.45	0.36	0.30	0.37	0.30	0.25	0.30	0.25	0.21	0.23	0.19	0.16	0.13
6	0.43	0.34	0.28	0.40	0.32	0.26	0.33	0.26	0.22	0.27	0.22	0.18	0.21	0.17	0.14	0.11
7	0.39	0.30	0.24	0.36	0.28	0.22	0.30	0.23	0.19	0.24	0.19	0.15	0.19	0.15	0.12	0.09
8	0.35	0.27	0.21	0.32	0.25	0.19	0.27	0.21	0.16	0.22	0.17	0.13	0.17	0.13	0.10	0.08
9	0.32	0.24	0.18	0.29	0.22	0.17	0.25	0.19	0.14	0.20	0.15	0.12	0.16	0.12	0.09	0.07
10	0.29	0.21	0.16	0.27	0.20	0.15	0.23	0.17	0.13	0.19	0.14	0.10	0.15	0.11	0.08	0.06

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	246.43	247.31	249.95	254.35	258.75	264.91	270.19	276.35	283.39
15.0	246.43	247.31	249.96	254.38	258.79	264.09	270.27	276.46	282.64
30.0	246.43	248.21	249.98	253.54	257.99	261.55	266.00	271.34	276.67
45.0	246.43	247.32	248.21	250.89	253.57	256.25	259.82	262.50	266.07
60.0	246.43	247.33	249.12	250.02	250.92	251.82	252.72	253.62	253.62
75.0	246.43	247.33	248.23	247.33	246.43	243.72	241.01	238.30	235.59
90.0	246.43	247.33	246.43	244.61	240.99	234.65	227.40	219.25	212.00
105.0	246.43	247.34	247.34	244.61	239.15	230.97	219.15	207.33	193.69
120.0	246.43	246.43	246.43	243.72	239.20	231.98	222.96	215.74	210.32
135.0	246.43	246.43	246.43	246.43	243.73	241.03	237.43	236.53	236.53
150.0	246.43	246.43	247.33	248.22	250.02	250.92	252.72	256.32	261.72
165.0	246.43	246.43	247.33	250.04	253.65	259.06	265.38	270.80	280.73
180.0	246.43	246.43	249.07	251.71	256.11	262.27	270.19	278.99	288.67
195.0	246.43	246.43	248.19	251.73	256.14	262.32	268.51	276.46	284.41
210.0	246.43	246.43	247.32	248.21	250.87	256.21	262.44	269.56	275.78
225.0	246.43	244.64	243.75	242.85	241.96	243.75	246.43	250.89	256.25
240.0	246.43	243.73	240.13	235.63	232.94	232.04	232.04	232.94	235.63
255.0	246.43	242.82	236.50	229.28	222.05	215.74	213.03	213.93	216.64
270.0	246.43	242.80	236.46	226.49	215.62	202.94	192.07	190.26	195.69
285.0	246.43	243.70	237.33	228.24	217.33	206.42	196.41	196.41	196.41
300.0	246.43	244.62	240.11	233.79	231.98	222.05	221.15	222.96	226.57
315.0	246.43	245.53	243.73	241.03	239.23	238.33	240.13	242.83	246.43
330.0	246.43	246.43	246.43	247.33	249.12	251.82	255.42	259.92	265.31
345.0	246.43	247.33	249.13	252.74	257.26	262.67	268.99	277.12	283.44
360.0	246.43	247.31	249.95	254.35	258.75	264.91	270.19	276.35	283.39
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	290.43	298.35	306.27	315.07	322.99	331.80	338.84	344.12	348.52
15.0	289.71	296.77	303.84	311.79	319.74	325.92	332.10	337.40	340.93
30.0	282.01	287.35	292.69	298.02	302.47	306.92	311.37	314.93	317.60
45.0	268.75	272.32	275.00	277.68	280.35	282.14	283.93	284.82	286.60
60.0	254.52	255.42	257.22	258.12	259.02	259.92	259.02	259.02	259.02
75.0	234.69	233.79	235.59	237.40	237.40	235.59	232.89	228.37	226.57
90.0	206.56	204.75	206.56	210.19	214.72	216.53	210.19	193.88	186.63
105.0	183.68	191.87	197.32	198.23	200.05	203.69	207.33	211.87	216.42
120.0	209.42	211.22	214.83	220.25	228.37	238.30	247.33	253.65	255.45
135.0	238.33	241.93	247.33	255.42	264.41	273.41	279.70	281.50	282.40
150.0	268.01	276.11	286.00	295.89	303.09	308.48	312.08	314.78	315.68
165.0	290.66	299.68	309.61	318.64	326.76	333.98	340.30	343.91	345.72
180.0	299.23	310.67	321.23	331.80	339.72	347.64	352.92	356.44	358.20
195.0	295.00	303.84	313.55	323.27	332.10	339.17	343.58	348.00	348.88
210.0	282.01	288.24	297.13	302.47	308.70	314.93	319.38	322.04	322.93
225.0	263.39	270.53	274.10	277.68	281.25	283.93	286.60	288.39	289.28
240.0	240.13	245.53	250.92	254.52	257.22	258.12	259.92	260.82	261.72
255.0	221.15	225.66	228.37	230.18	229.28	227.47	227.47	226.57	227.47
270.0	204.75	212.90	219.25	220.15	190.26	181.20	184.82	171.23	148.58
285.0	206.42	212.78	218.24	220.06	215.51	209.14	203.69	203.69	203.69
300.0	231.08	235.59	241.01	244.62	247.33	247.33	247.33	248.23	249.13
315.0	250.92	255.42	261.72	265.31	266.21	267.11	268.01	268.91	269.81
330.0	271.61	278.80	284.20	287.80	293.19	296.79	300.39	303.99	307.58
345.0	289.75	296.97	304.20	312.32	319.54	326.76	333.08	336.69	341.21
360.0	290.43	298.35	306.27	315.07	322.99	331.80	338.84	344.12	348.52

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	351.16	352.04	350.28	346.76	341.48	334.44	325.63	315.95	305.39
15.0	343.58	344.47	343.58	340.05	335.63	327.68	319.74	310.90	301.19
30.0	319.38	319.38	319.38	315.82	311.37	306.92	300.69	294.47	287.35
45.0	286.60	285.71	284.82	283.03	281.25	278.57	274.10	272.32	268.75
60.0	258.12	257.22	257.22	255.42	255.42	253.62	250.02	250.02	245.53
75.0	224.76	222.05	214.83	211.22	206.71	204.00	200.39	189.56	165.19
90.0	165.79	150.39	163.08	163.08	135.90	136.80	149.49	150.39	134.08
105.0	215.51	212.78	210.05	209.14	208.23	209.14	206.42	202.78	195.50
120.0	254.55	253.65	252.74	251.84	250.94	249.13	243.72	237.40	231.08
135.0	281.50	280.60	279.70	277.90	276.11	273.41	270.71	264.41	257.22
150.0	314.78	312.98	310.28	307.58	303.09	299.49	294.99	290.49	286.00
165.0	345.72	344.82	341.21	335.79	329.47	323.15	315.93	308.71	302.39
180.0	358.20	355.56	352.04	345.00	337.96	330.91	322.99	314.19	307.15
195.0	348.88	346.23	342.70	337.40	331.22	324.15	317.09	309.14	302.07
210.0	322.93	321.15	319.38	315.82	311.37	307.81	302.47	298.02	292.69
225.0	290.18	289.28	289.28	287.50	285.71	283.93	283.03	277.68	274.10
240.0	262.61	262.61	262.61	263.51	263.51	262.61	259.92	252.72	247.33
255.0	227.47	227.47	224.76	222.05	216.64	212.12	211.22	208.51	204.00
270.0	157.64	162.17	161.26	159.45	163.98	163.08	154.02	146.77	144.05
285.0	200.96	192.78	182.77	171.86	159.13	151.86	136.40	126.40	121.85
300.0	246.43	243.72	241.01	236.50	231.08	225.66	216.64	212.12	212.12
315.0	270.71	271.61	270.71	270.71	268.91	268.01	265.31	259.92	256.32
330.0	309.38	309.38	307.58	305.78	301.29	296.79	290.49	284.20	277.90
345.0	342.11	341.21	339.40	334.89	328.57	321.35	312.32	303.29	293.36
360.0	351.16	352.04	350.28	346.76	341.48	334.44	325.63	315.95	305.39
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	294.83	284.27	276.35	265.79	258.75	253.47	247.31	221.78	165.46
15.0	292.35	281.76	272.92	264.09	258.79	252.61	248.19	244.66	224.34
30.0	280.23	273.11	266.89	257.99	252.65	245.54	243.76	238.42	235.75
45.0	262.50	255.35	249.10	242.85	238.39	229.46	224.10	224.10	226.78
60.0	234.73	228.44	224.84	216.75	204.16	191.56	198.76	202.36	211.35
75.0	149.84	137.20	139.01	143.52	127.27	129.08	134.50	179.63	200.39
90.0	115.97	106.91	114.15	132.27	125.93	122.31	131.37	178.48	194.79
105.0	184.59	177.32	171.86	173.68	166.41	133.67	140.04	172.77	190.96
120.0	223.86	220.25	219.35	215.74	214.83	179.63	152.55	166.99	188.66
135.0	250.92	247.33	243.73	240.13	237.43	232.94	186.17	158.29	187.07
150.0	277.90	270.71	265.31	258.12	250.92	246.43	240.13	190.67	150.19
165.0	295.17	288.85	282.53	275.31	263.58	253.65	248.23	241.01	204.90
180.0	299.23	291.31	284.27	277.23	266.67	255.23	243.79	237.63	236.75
195.0	294.12	287.94	279.99	274.69	262.32	258.79	239.36	220.81	168.70
210.0	286.46	283.79	274.00	266.89	255.32	245.54	217.07	155.68	155.68
225.0	270.53	266.07	259.82	250.89	242.85	206.25	157.14	164.28	209.82
240.0	241.93	236.53	233.83	226.64	187.07	156.49	163.68	186.17	231.14
255.0	202.20	203.10	197.68	169.70	137.20	138.11	175.12	198.59	234.69
270.0	149.49	154.02	148.58	124.12	124.12	125.93	180.29	207.47	234.65
285.0	128.21	140.04	126.40	106.39	113.67	125.49	178.23	212.78	233.70
300.0	212.12	204.90	194.97	176.02	171.51	178.73	200.39	219.35	232.89
315.0	250.92	244.63	233.83	223.94	214.95	214.05	218.55	228.44	234.73
330.0	271.61	263.51	257.22	249.12	240.13	232.04	229.34	232.04	223.04
345.0	284.34	275.31	268.09	260.87	254.55	245.52	238.30	231.98	207.61
360.0	294.83	284.27	276.35	265.79	258.75	253.47	247.31	221.78	165.46

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	230.58
15.0	171.35
30.0	226.85
45.0	236.60
60.0	238.33
75.0	237.40
90.0	237.37
105.0	235.51
120.0	222.96
135.0	205.06
150.0	188.87
165.0	146.23
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	230.58