
AFX

Client:

LumCAT: ARNS1318LAJD4LB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.030

LampCAT:

Current(A): 0.167

Lamp flux(lm): 1721.0

Power (W): 19.470

Number of Lamps: 1

PF: 0.974

Length(mm): 400

Width(mm): 200

Phm Type: C

Height(mm): 360

Photometric Results

Lumens(lm): 1720.99, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 88.39

Central intensity(cd): 159.698, Maximum intensity(cd): 161.493

Angle of maximum intensity: C=90.0 γ =70.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

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

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.29 C90_270=1.55

Maximum s/h(1/4): C0_180=1.38 C90_270=1.76

Up flux rate of lamp(%): 47.49%

Down flux rate of lamp(%): 52.51%

Up flux rate of LUM(%): 47.49%

Down flux rate of LUM(%): 52.51%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 27.087%

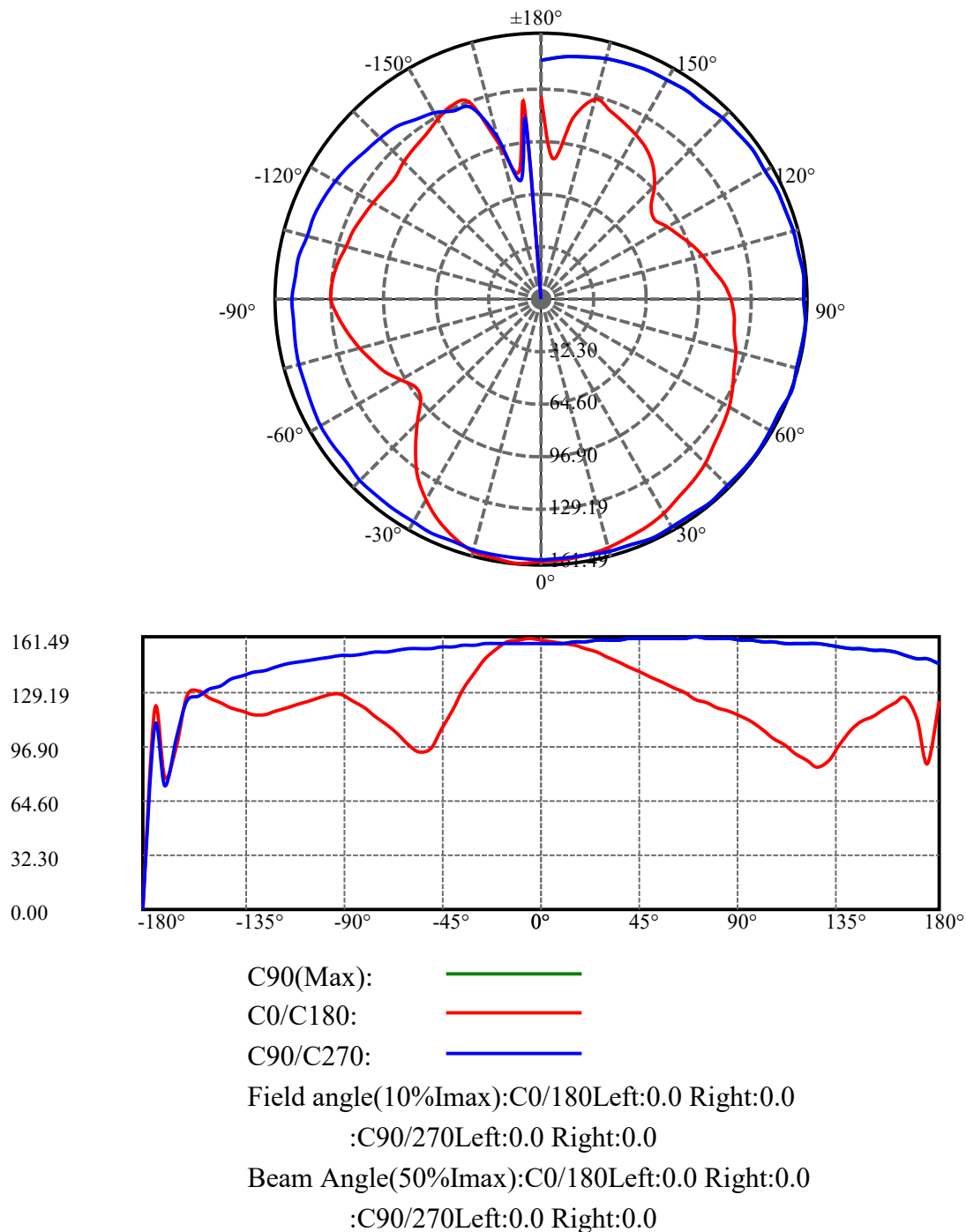
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	158.726	0.000	0	0.00%	0.00%
5.0	158.689	3.795	3.795	0.22%	0.22%
10.0	158.390	11.343	15.138	0.66%	0.88%
15.0	157.717	18.751	33.889	1.09%	1.97%
20.0	156.446	25.891	59.78	1.50%	3.47%
25.0	154.913	32.656	92.436	1.90%	5.37%
30.0	152.783	38.939	131.375	2.26%	7.63%
35.0	150.577	44.672	176.047	2.60%	10.23%
40.0	148.072	49.827	225.875	2.90%	13.12%
45.0	145.643	54.384	280.258	3.16%	16.28%
50.0	143.512	58.428	338.686	3.40%	19.68%
55.0	142.016	62.083	400.769	3.61%	23.29%
60.0	140.895	65.394	466.164	3.80%	27.09%
65.0	140.110	68.313	534.477	3.97%	31.06%
70.0	139.549	70.811	605.288	4.11%	35.17%
75.0	139.063	72.825	678.113	4.23%	39.40%
80.0	139.063	74.419	752.532	4.32%	43.73%
85.0	138.503	75.421	827.953	4.38%	48.11%
90.0	137.904	75.682	903.635	4.40%	52.51%
95.0	136.633	75.171	978.806	4.37%	56.87%
100.0	135.175	73.857	1052.663	4.29%	61.17%
105.0	133.531	71.898	1124.561	4.18%	65.34%
110.0	132.260	69.473	1194.034	4.04%	69.38%
115.0	130.839	66.618	1260.653	3.87%	73.25%
120.0	129.979	63.405	1324.058	3.68%	76.94%
125.0	128.895	59.838	1383.896	3.48%	80.41%
130.0	127.811	55.816	1439.713	3.24%	83.66%
135.0	127.176	51.524	1491.236	2.99%	86.65%
140.0	126.727	47.012	1538.249	2.73%	89.38%
145.0	126.316	42.218	1580.467	2.45%	91.83%
150.0	126.391	37.213	1617.68	2.16%	94.00%
155.0	126.428	31.994	1649.674	1.86%	95.86%
160.0	125.419	26.414	1676.088	1.53%	97.39%
165.0	118.615	20.112	1696.2	1.17%	98.56%
170.0	115.512	13.888	1710.088	0.81%	99.37%
175.0	125.718	8.630	1718.718	0.50%	99.87%
180.0	64.672	2.276	1720.994	0.13%	100.00%

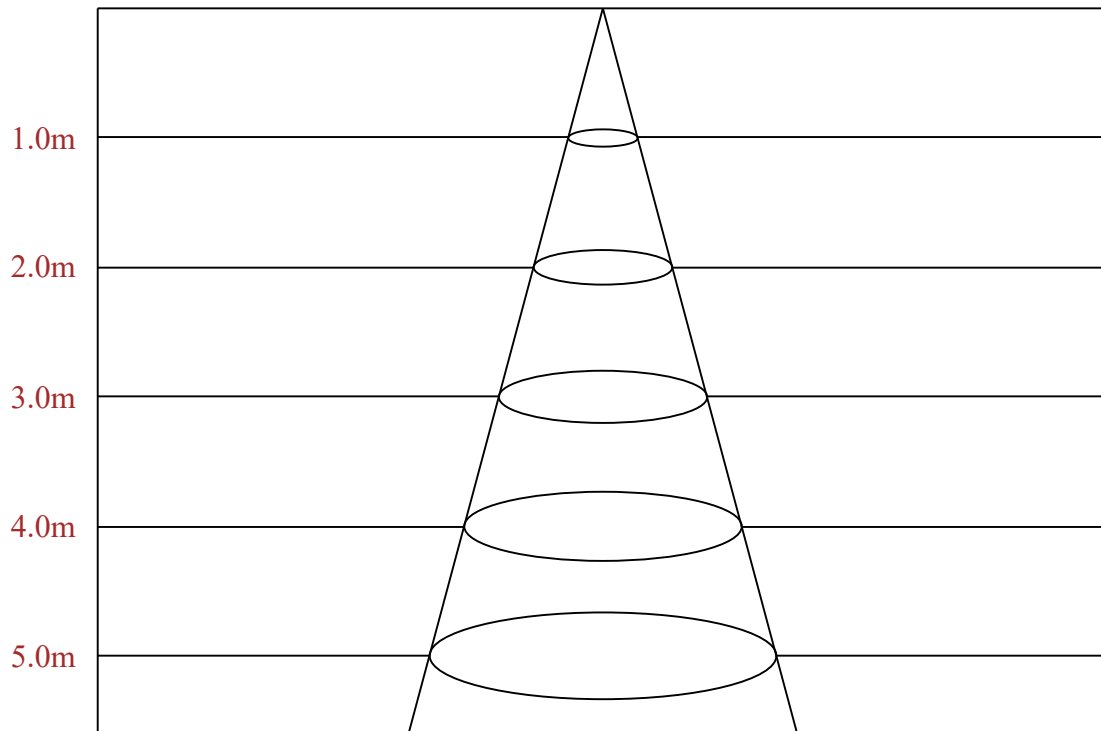
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	131.38	7.63%	7.63%
0-40	225.87	13.12%	13.12%
0-60	466.16	27.09%	27.09%
0-90	903.64	52.51%	52.51%
0-120	1324.06	76.94%	76.94%
0-180	1720.99	100.00%	100.00%
60-90	437.47	25.42%	25.42%
90-120	420.42	24.43%	24.43%
90-130	536.08	31.15%	31.15%
90-150	714.04	41.49%	41.49%
90-180	815.08	47.36%	47.36%
0-124.41	1376.80	80.00%	80.00%

ZONAL LUMEN SUMMARY

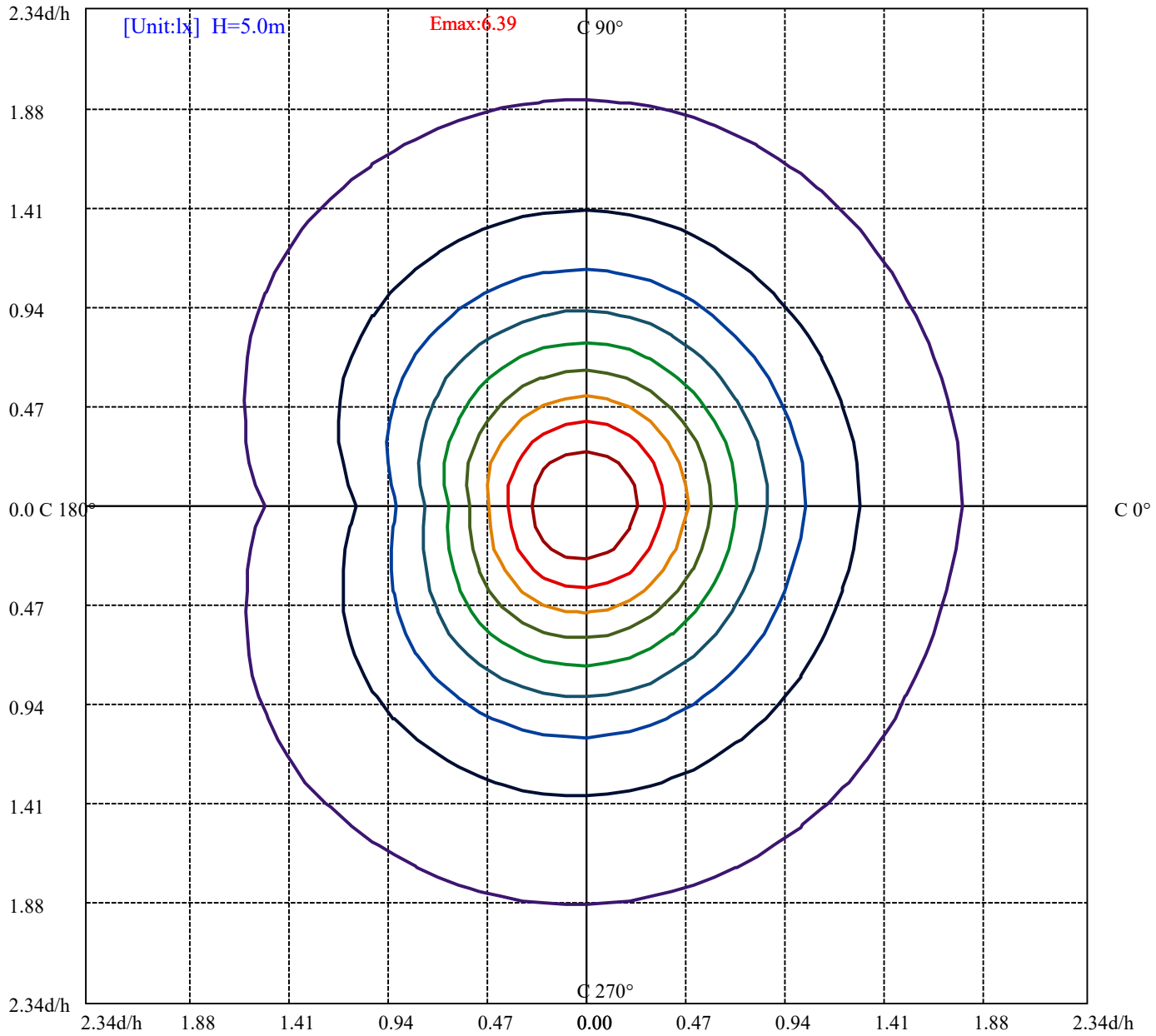
0-10	15.14
10-20	44.64
20-30	71.60
30-40	94.50
40-50	112.81
50-60	127.48
60-70	139.12
70-80	147.24
80-90	151.10
90-100	149.03
100-110	141.37
110-120	130.02
120-130	115.65
130-140	98.54
140-150	79.43
150-160	58.41
160-170	34.00
170-180	8.63



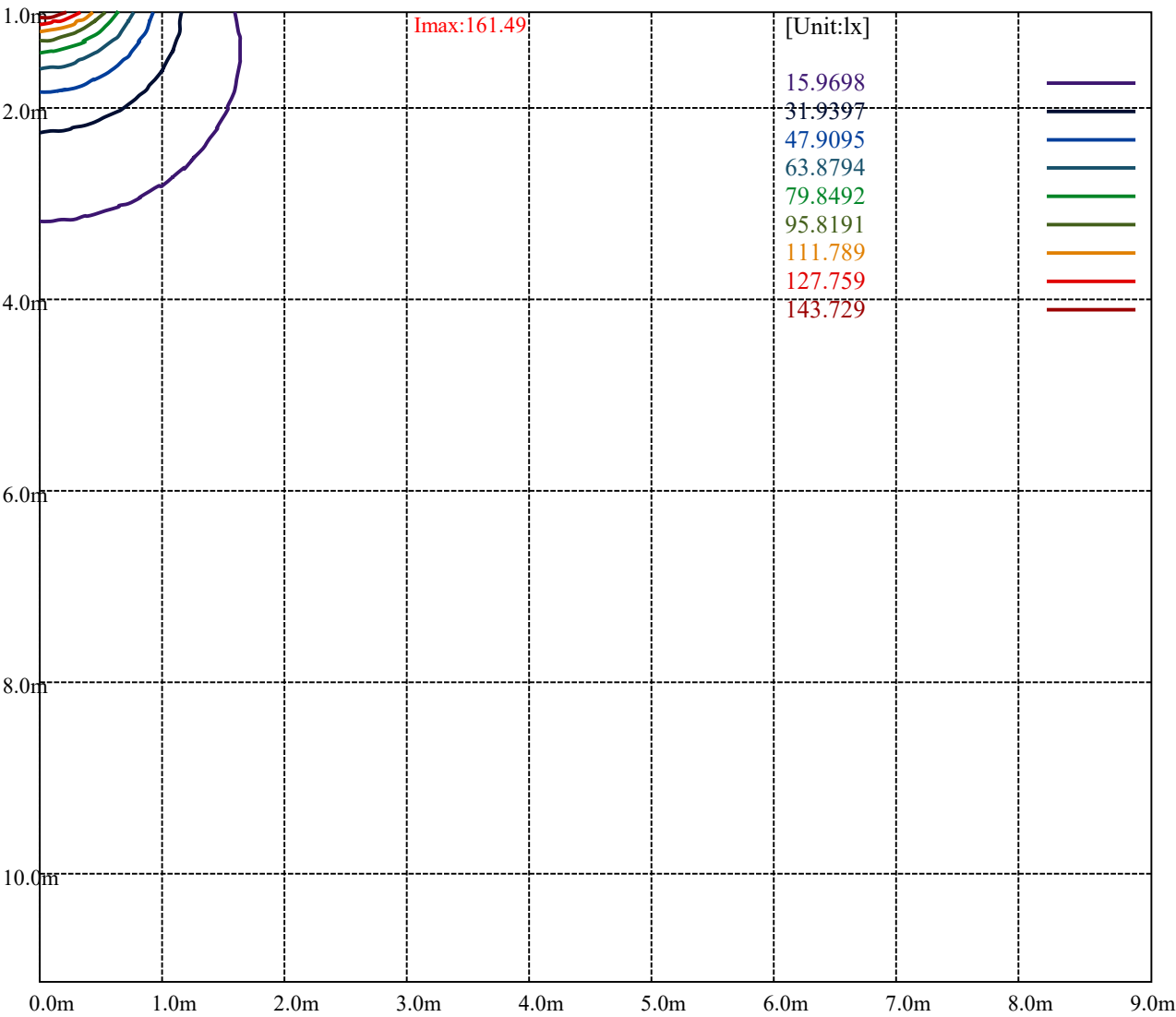


Max , Ave

Beam angle of C90 plane 349.06



(10%Emax) 0.638792	—
(20%Emax) 1.277584	—
(30%Emax) 1.91638	—
(40%Emax) 2.555172	—
(50%Emax) 3.193964	—
(60%Emax) 3.832756	—
(70%Emax) 4.47156	—
(80%Emax) 5.11036	—
(90%Emax) 5.74912	—



Luminance Table

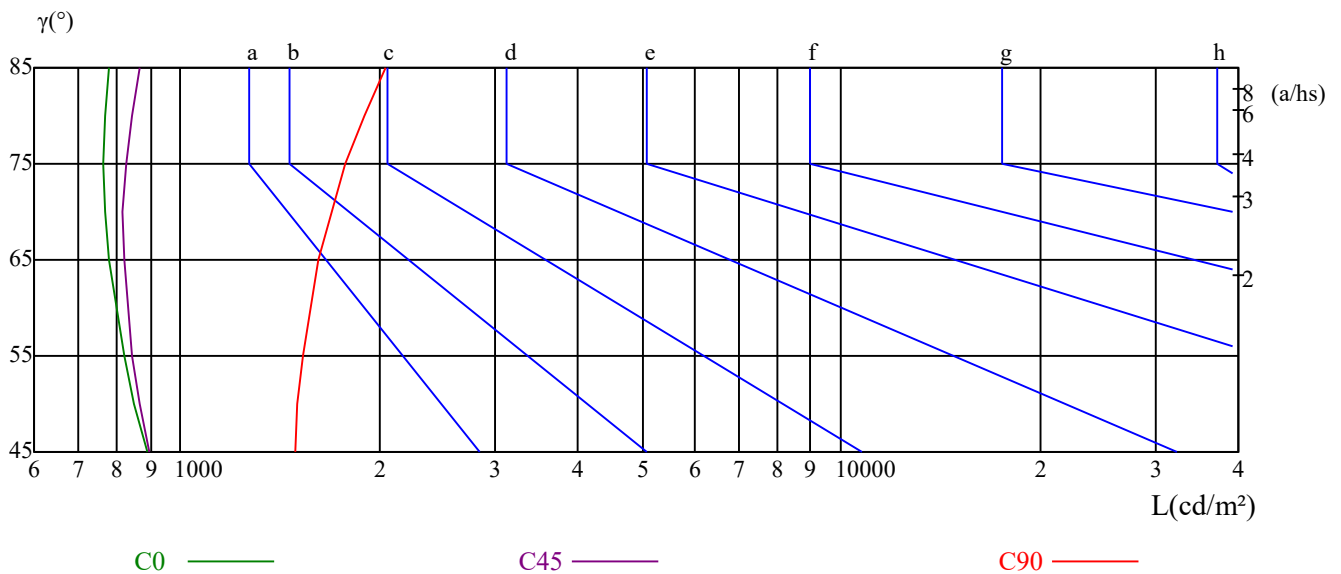
γ	45	50	55	60	65	70	75	80	85
C0	889	849	821	801	781	767	764	766	781
C45	900	868	845	833	823	819	827	846	868
C90	1494	1507	1531	1569	1621	1700	1779	1894	2041

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3436	4644	4259	5698	7561	6835	17307	22325	20009

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	1.08	1.08	1.08	1.00	1.00	1.00	0.85	0.85	0.85	0.71	0.71	0.71	0.58	0.58	0.58	0.53
1	0.88	0.82	0.78	0.81	0.76	0.72	0.68	0.64	0.61	0.56	0.53	0.51	0.45	0.43	0.41	0.36
2	0.75	0.67	0.60	0.69	0.62	0.56	0.57	0.52	0.47	0.47	0.43	0.39	0.37	0.34	0.32	0.27
3	0.64	0.56	0.48	0.59	0.51	0.45	0.49	0.43	0.38	0.40	0.36	0.32	0.32	0.28	0.25	0.21
4	0.56	0.47	0.40	0.52	0.44	0.37	0.43	0.37	0.32	0.35	0.30	0.26	0.28	0.24	0.21	0.17
5	0.50	0.40	0.34	0.46	0.37	0.31	0.38	0.32	0.27	0.31	0.26	0.22	0.25	0.21	0.18	0.14
6	0.44	0.35	0.29	0.41	0.33	0.27	0.34	0.28	0.23	0.28	0.23	0.19	0.22	0.18	0.15	0.12
7	0.40	0.31	0.25	0.37	0.29	0.23	0.31	0.24	0.20	0.25	0.20	0.16	0.20	0.16	0.13	0.10
8	0.36	0.27	0.22	0.33	0.26	0.20	0.28	0.22	0.17	0.23	0.18	0.14	0.19	0.15	0.12	0.09
9	0.33	0.25	0.19	0.30	0.23	0.18	0.26	0.20	0.15	0.21	0.16	0.13	0.17	0.13	0.10	0.08
10	0.30	0.22	0.17	0.28	0.21	0.16	0.23	0.18	0.14	0.20	0.15	0.11	0.16	0.12	0.09	0.07

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	159.70	158.80	157.90	156.11	154.32	152.52	149.83	146.24	143.55
15.0	159.70	158.80	157.90	156.11	154.32	152.52	149.83	147.14	144.45
30.0	159.70	158.80	157.90	157.01	155.21	153.42	151.62	148.93	146.24
45.0	159.70	158.80	158.80	157.01	157.01	155.21	153.42	151.62	149.83
60.0	158.80	158.80	158.80	157.90	157.90	157.01	156.11	155.21	154.32
75.0	158.80	158.80	158.80	158.80	158.80	158.80	158.80	158.80	158.80
90.0	157.90	157.90	157.90	158.80	158.80	159.70	159.70	159.70	160.60
105.0	157.90	158.80	158.80	158.80	158.80	159.70	159.70	160.60	160.60
120.0	157.90	158.80	158.80	159.70	158.80	159.70	159.70	159.70	158.80
135.0	158.80	158.80	159.70	159.70	158.80	157.90	156.11	155.21	155.21
150.0	157.90	158.80	159.70	158.80	156.11	156.11	152.52	148.93	145.34
165.0	157.90	158.80	159.70	158.80	157.90	154.32	148.93	142.65	134.58
180.0	159.70	160.60	159.70	158.80	154.32	148.04	139.96	130.09	118.43
195.0	159.70	159.70	159.70	158.80	155.21	149.83	143.55	136.37	128.30
210.0	159.70	160.60	159.70	158.80	157.01	153.42	148.93	145.34	141.75
225.0	159.70	159.70	159.70	158.80	157.90	156.11	155.21	154.32	153.42
240.0	158.80	159.70	158.80	159.70	158.80	158.80	157.90	157.90	157.01
255.0	158.80	158.80	158.80	158.80	157.90	157.90	157.90	157.01	157.01
270.0	157.90	157.90	157.90	157.90	157.01	157.01	156.11	156.11	155.21
285.0	157.90	157.90	157.90	157.01	156.11	156.11	154.32	154.32	153.42
300.0	157.90	157.90	157.01	156.11	156.11	153.42	152.52	150.73	149.83
315.0	158.80	157.01	156.11	155.21	153.42	151.62	149.83	148.04	145.34
330.0	157.90	157.01	156.11	154.32	152.52	149.83	148.04	145.34	141.75
345.0	157.90	157.01	155.21	153.42	151.62	148.93	146.24	143.55	139.96
360.0	159.70	158.80	157.90	156.11	154.32	152.52	149.83	146.24	143.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	140.86	137.27	134.58	131.89	128.30	124.71	122.02	119.33	117.53
15.0	141.75	138.17	135.47	132.78	129.19	126.50	123.81	122.02	120.22
30.0	143.55	141.75	139.06	136.37	133.68	131.89	130.09	128.30	126.50
45.0	148.04	146.24	144.45	143.55	141.75	139.96	139.06	139.06	138.17
60.0	153.42	152.52	151.62	151.62	150.73	149.83	148.93	148.93	148.04
75.0	157.90	157.90	157.90	157.90	157.01	157.01	157.01	157.01	156.11
90.0	160.60	160.60	160.60	160.60	160.60	161.49	160.60	160.60	160.60
105.0	160.60	161.49	160.60	160.60	161.49	160.60	160.60	160.60	159.70
120.0	158.80	158.80	158.80	157.90	157.90	157.01	156.11	156.11	155.21
135.0	153.42	153.42	152.52	151.62	151.62	150.73	149.83	148.04	147.14
150.0	142.65	140.86	139.06	137.27	136.37	136.37	136.37	137.27	137.27
165.0	127.40	121.12	117.53	114.84	113.94	114.84	117.53	121.12	124.71
180.0	106.76	95.10	93.31	97.79	104.07	109.46	113.94	119.33	123.81
195.0	122.02	117.53	114.84	113.94	115.74	118.43	121.12	124.71	127.40
210.0	139.96	137.27	136.37	135.47	134.58	135.47	135.47	135.47	133.68
225.0	151.62	150.73	149.83	148.93	148.04	147.14	145.34	144.45	141.75
240.0	156.11	155.21	154.32	153.42	152.52	151.62	150.73	149.83	148.04
255.0	156.11	156.11	156.11	155.21	154.32	154.32	153.42	153.42	151.62
270.0	155.21	154.32	154.32	154.32	153.42	152.52	152.52	151.62	150.73
285.0	152.52	151.62	150.73	149.83	148.93	148.93	148.04	148.04	147.14
300.0	148.04	146.24	145.34	143.55	142.65	141.75	140.86	140.86	139.96
315.0	142.65	140.86	138.17	136.37	134.58	132.78	131.89	131.89	130.99
330.0	139.06	135.47	132.78	129.19	127.40	124.71	122.91	122.02	121.12
345.0	136.37	133.68	130.09	126.50	123.81	121.12	119.33	117.53	116.63
360.0	140.86	137.27	134.58	131.89	128.30	124.71	122.02	119.33	117.53

Intensity data(cd)

Appendix Page: 11 Total:12

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	114.84	111.25	105.87	101.38	96.90	92.41	87.92	84.34	87.92
15.0	119.33	116.63	113.04	110.35	106.76	104.97	104.07	104.97	107.66
30.0	126.50	125.61	125.61	124.71	123.81	123.81	123.81	125.61	127.40
45.0	138.17	138.17	138.17	138.17	139.06	139.06	139.96	139.96	140.86
60.0	148.04	148.04	148.04	148.04	148.04	148.04	148.04	148.93	148.93
75.0	156.11	156.11	155.21	155.21	155.21	155.21	154.32	154.32	153.42
90.0	159.70	159.70	158.80	158.80	157.90	157.90	157.01	157.01	156.11
105.0	159.70	158.80	158.80	157.90	157.90	157.01	157.01	156.11	155.21
120.0	154.32	154.32	153.42	153.42	153.42	152.52	152.52	152.52	152.52
135.0	147.14	146.24	146.24	145.34	145.34	145.34	145.34	145.34	145.34
150.0	137.27	136.37	136.37	136.37	136.37	136.37	137.27	138.17	138.17
165.0	128.30	130.09	130.09	130.09	129.19	129.19	128.30	128.30	128.30
180.0	127.40	127.40	125.61	122.91	121.12	119.33	117.53	115.74	115.74
195.0	126.50	123.81	120.22	115.74	112.15	108.56	104.97	101.38	99.59
210.0	129.19	124.71	119.33	114.84	109.46	104.97	100.48	96.00	92.41
225.0	138.17	133.68	130.09	125.61	122.02	117.53	115.74	109.46	104.07
240.0	145.34	142.65	141.75	136.37	133.68	130.09	127.40	122.91	119.33
255.0	149.83	148.04	146.24	144.45	142.65	139.96	138.17	135.47	131.89
270.0	150.73	149.83	148.93	147.14	146.24	145.34	143.55	141.75	139.96
285.0	147.14	146.24	146.24	145.34	144.45	143.55	143.55	142.65	141.75
300.0	139.96	139.06	139.06	139.06	139.96	139.06	139.06	139.06	136.37
315.0	130.99	130.99	130.99	130.99	131.89	131.89	132.78	132.78	126.50
330.0	121.12	121.12	119.33	118.43	118.43	118.43	119.33	118.43	114.84
345.0	113.94	110.35	106.76	104.07	102.28	100.48	101.38	103.18	103.18
360.0	114.84	111.25	105.87	101.38	96.90	92.41	87.92	84.34	87.92
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	97.79	105.87	111.25	114.84	118.43	122.02	125.61	112.15	86.13
15.0	112.15	118.43	124.71	129.19	131.89	135.47	136.37	133.68	103.18
30.0	129.19	131.89	135.47	139.06	141.75	143.55	143.55	144.45	124.71
45.0	141.75	143.55	144.45	146.24	147.14	148.04	148.04	148.04	142.65
60.0	148.93	149.83	149.83	150.73	150.73	151.62	149.83	149.83	148.04
75.0	153.42	153.42	152.52	152.52	152.52	151.62	150.73	149.83	148.04
90.0	155.21	154.32	154.32	153.42	153.42	152.52	150.73	148.93	148.04
105.0	155.21	154.32	154.32	154.32	153.42	152.52	150.73	149.83	148.04
120.0	152.52	152.52	152.52	152.52	152.52	151.62	150.73	149.83	148.04
135.0	146.24	147.14	147.14	148.04	148.04	148.04	148.04	148.04	147.14
150.0	138.17	139.06	139.06	140.86	141.75	143.55	144.45	145.34	145.34
165.0	128.30	130.09	131.89	133.68	135.47	137.27	139.06	141.75	141.75
180.0	117.53	119.33	122.02	125.61	129.19	126.50	97.79	78.05	118.43
195.0	100.48	103.18	106.76	111.25	117.53	117.53	82.54	86.13	124.71
210.0	89.72	89.72	91.51	96.00	100.48	89.72	77.16	91.51	114.84
225.0	98.69	93.31	89.72	90.62	93.31	86.13	80.75	92.41	94.20
240.0	113.94	110.35	107.66	106.76	104.97	98.69	95.10	84.34	82.54
255.0	129.19	125.61	122.91	122.02	121.12	115.74	104.07	76.26	89.72
270.0	138.17	136.37	132.78	130.09	126.50	123.81	102.28	73.57	108.56
285.0	139.96	135.47	130.99	125.61	120.22	117.53	92.41	74.47	120.22
300.0	131.89	126.50	121.12	113.04	104.97	100.48	84.34	82.54	129.19
315.0	120.22	113.94	107.66	99.59	90.62	87.92	82.54	91.51	131.89
330.0	108.56	103.18	97.79	94.20	92.41	96.00	96.90	103.18	135.47
345.0	104.97	104.07	103.18	103.18	105.87	112.15	113.04	116.63	136.37
360.0	97.79	105.87	111.25	114.84	118.43	122.02	125.61	112.15	86.13

Intensity data(cd)

C/ γ (°)	180.0
0.0	123.81
15.0	99.59
30.0	91.51
45.0	105.87
60.0	125.61
75.0	138.17
90.0	145.34
105.0	145.34
120.0	145.34
135.0	145.34
150.0	144.45
165.0	141.75
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	123.81