
AFX

Client:

LumCAT: ARNS1318LAJD4LB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 119.930

LampCAT:

Current(A): 0.166

Lamp flux(lm): 1697.2

Power (W): 19.320

Number of Lamps: 1

PF: 0.973

Length(mm): 400

Width(mm): 200

Phm Type: C

Height(mm): 360

Photometric Results

Lumens(lm): 1697.22, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 87.85

Central intensity(cd): 157.456, Maximum intensity(cd): 159.070

Angle of maximum intensity: C=105.0 γ =50.0

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(%): 47.50%

Down flux rate of lamp(%): 52.50%

Up flux rate of LUM(%): 47.50%

Down flux rate of LUM(%): 52.50%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 27.089%

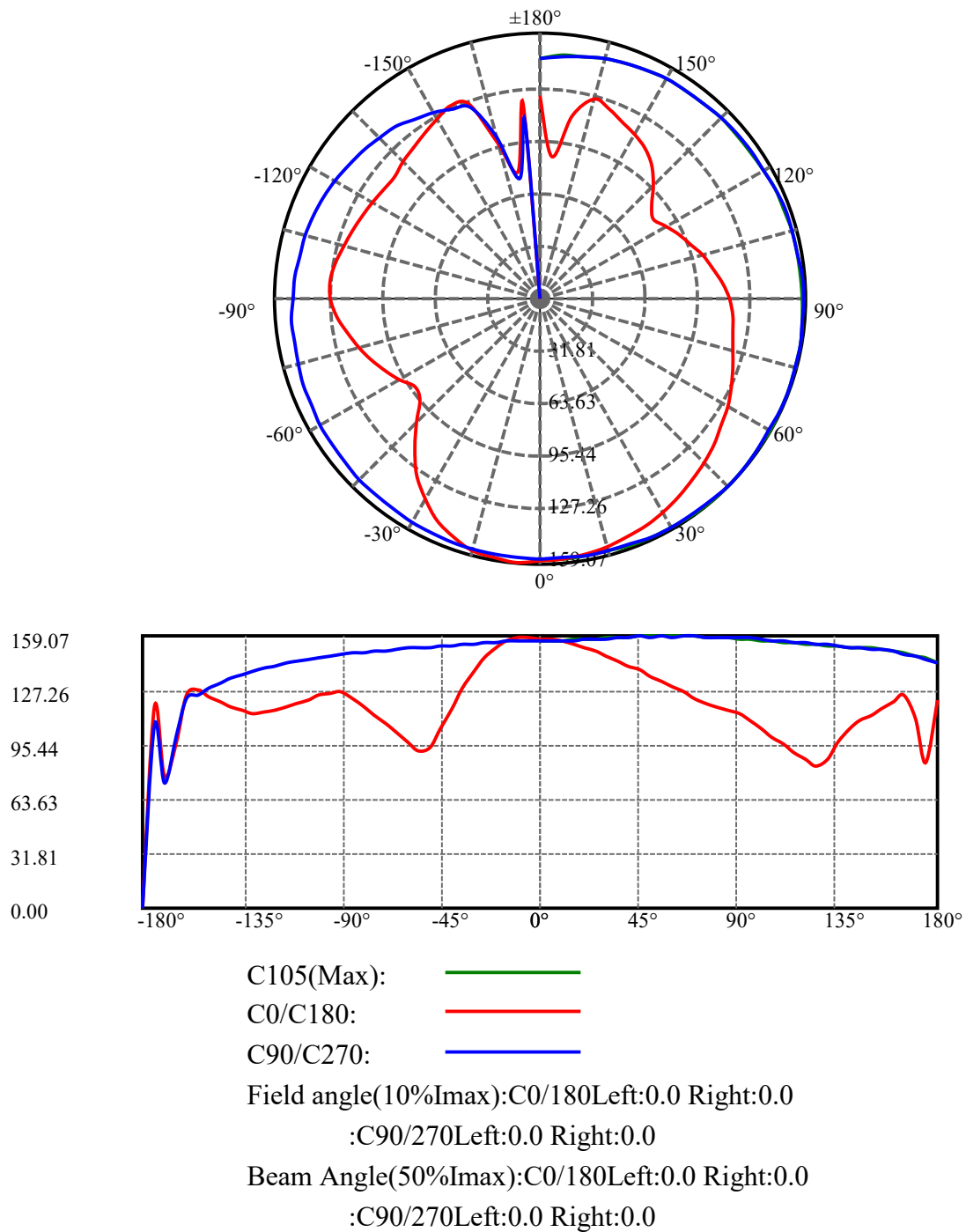
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	156.558	0.000	0	0.00%	0.00%
5.0	156.465	3.742	3.742	0.22%	0.22%
10.0	156.151	11.183	14.925	0.66%	0.88%
15.0	155.497	18.487	33.412	1.09%	1.97%
20.0	154.356	25.536	58.948	1.50%	3.47%
25.0	152.764	32.211	91.16	1.90%	5.37%
30.0	150.734	38.408	129.567	2.26%	7.63%
35.0	148.420	44.053	173.62	2.60%	10.23%
40.0	146.016	49.125	222.745	2.89%	13.12%
45.0	143.687	53.641	276.386	3.16%	16.28%
50.0	141.568	57.640	334.026	3.40%	19.68%
55.0	140.039	61.231	395.256	3.61%	23.29%
60.0	138.992	64.497	459.754	3.80%	27.09%
65.0	138.215	67.390	527.143	3.97%	31.06%
70.0	137.560	69.828	596.971	4.11%	35.17%
75.0	137.146	71.804	668.775	4.23%	39.40%
80.0	137.026	73.361	742.135	4.32%	43.73%
85.0	136.626	74.358	816.493	4.38%	48.11%
90.0	135.901	74.620	891.113	4.40%	52.50%
95.0	134.749	74.106	965.219	4.37%	56.87%
100.0	133.340	72.846	1038.065	4.29%	61.16%
105.0	131.751	70.931	1108.996	4.18%	65.34%
110.0	130.398	68.522	1177.518	4.04%	69.38%
115.0	129.056	65.695	1243.213	3.87%	73.25%
120.0	128.207	62.541	1305.755	3.68%	76.93%
125.0	127.063	59.005	1364.76	3.48%	80.41%
130.0	126.121	55.051	1419.81	3.24%	83.65%
135.0	125.471	50.838	1470.648	3.00%	86.65%
140.0	124.992	46.375	1517.024	2.73%	89.38%
145.0	124.656	41.652	1558.676	2.45%	91.84%
150.0	124.540	36.696	1595.372	2.16%	94.00%
155.0	124.682	31.539	1626.911	1.86%	95.86%
160.0	123.583	26.038	1652.949	1.53%	97.39%
165.0	116.944	19.823	1672.772	1.17%	98.56%
170.0	113.938	13.696	1686.468	0.81%	99.37%
175.0	124.017	8.512	1694.98	0.50%	99.87%
180.0	63.756	2.245	1697.225	0.13%	100.00%

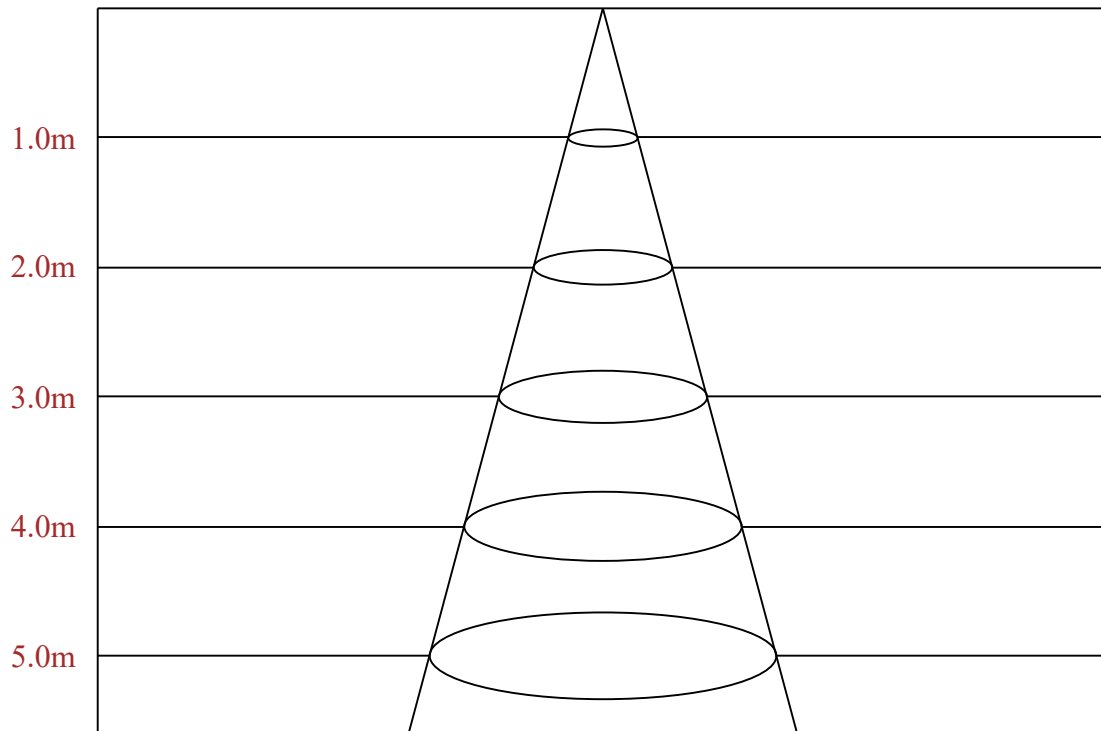
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	129.57	7.63%	7.63%
0-40	222.74	13.12%	13.12%
0-60	459.75	27.09%	27.09%
0-90	891.11	52.50%	52.50%
0-120	1305.75	76.93%	76.93%
0-180	1697.22	100.00%	100.00%
60-90	431.36	25.42%	25.42%
90-120	414.64	24.43%	24.43%
90-130	528.70	31.15%	31.15%
90-150	704.26	41.49%	41.49%
90-180	803.87	47.36%	47.36%
0-124.41	1357.78	80.00%	80.00%

ZONAL LUMEN SUMMARY

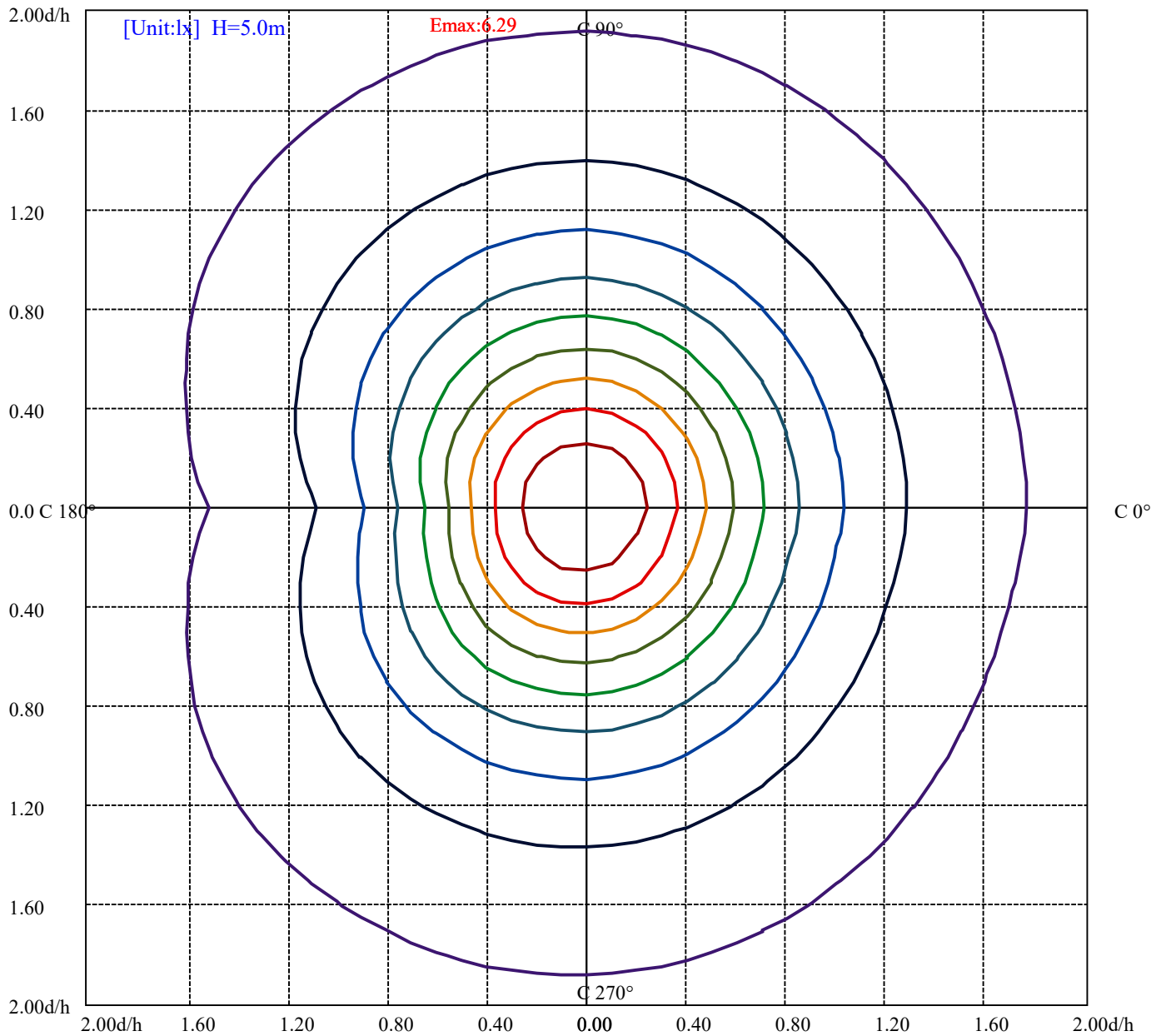
0-10	14.93
10-20	44.02
20-30	70.62
30-40	93.18
40-50	111.28
50-60	125.73
60-70	137.22
70-80	145.16
80-90	148.98
90-100	146.95
100-110	139.45
110-120	128.24
120-130	114.06
130-140	97.21
140-150	78.35
150-160	57.58
160-170	33.52
170-180	8.51



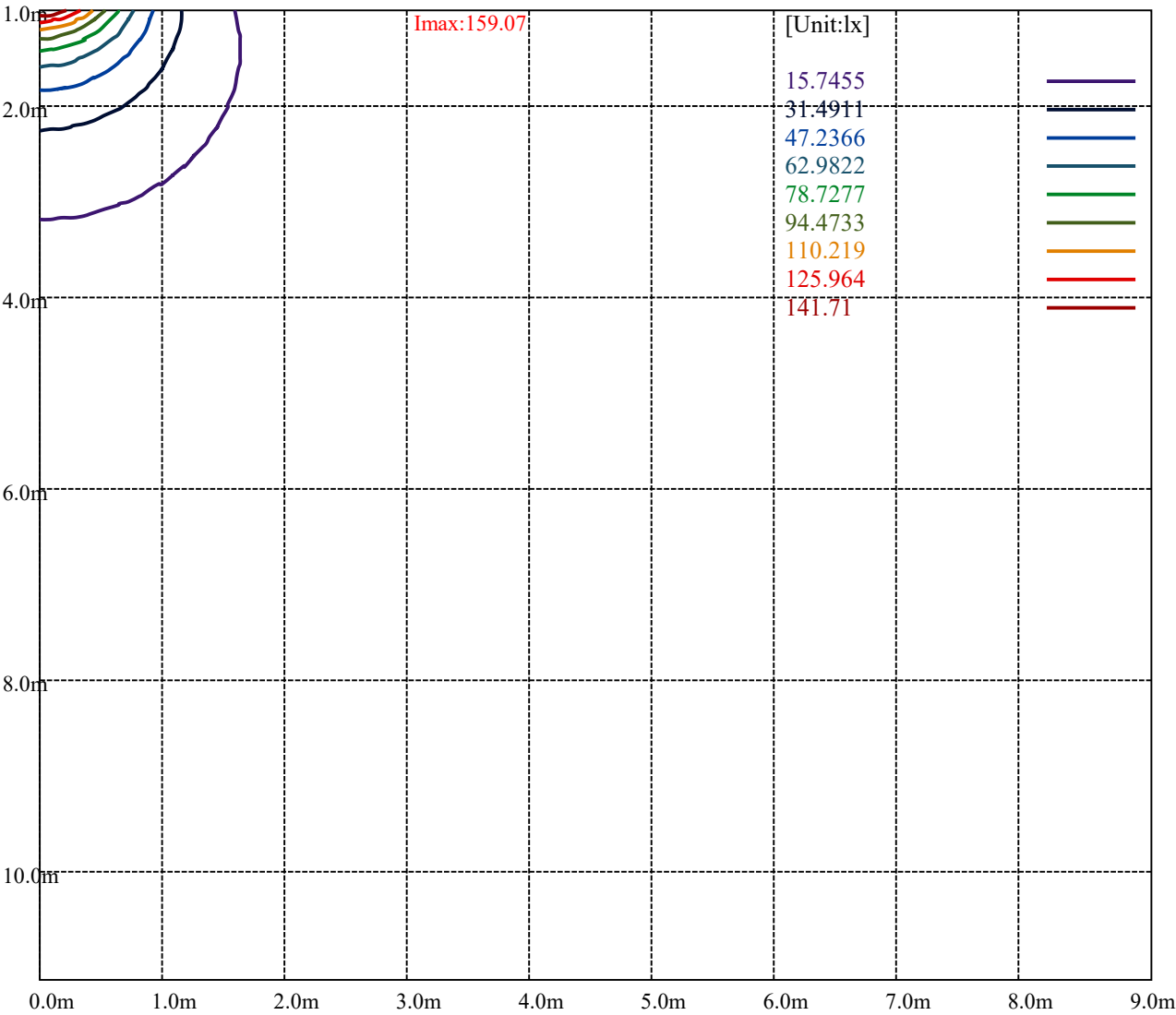


Max , Ave

Beam angle of C105 plane 348.86



(10%Emax)	0.629104	
(20%Emax)	1.258208	
(30%Emax)	1.887312	
(40%Emax)	2.516416	
(50%Emax)	3.145516	
(60%Emax)	3.77462	
(70%Emax)	4.40372	
(80%Emax)	5.03284	
(90%Emax)	5.66192	



Luminance Table

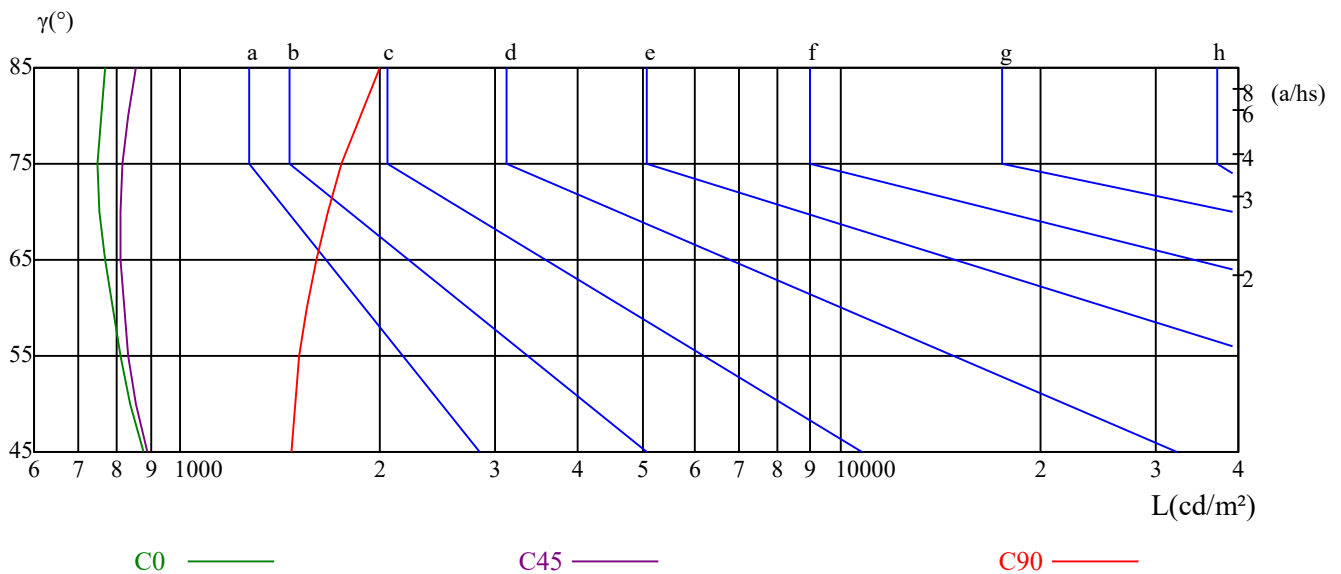
γ	45	50	55	60	65	70	75	80	85
C0	877	839	810	788	771	756	751	756	770
C45	888	857	835	820	812	810	817	833	855
C90	1477	1487	1514	1548	1602	1672	1755	1867	2009

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3386	4587	4199	5618	7449	6743	17069	22023	19719

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

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Intensity data(cd)

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C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	157.46	156.65	155.75	153.96	152.34	150.10	147.50	144.63	141.58
15.0	157.28	156.65	155.57	154.14	152.52	150.10	147.95	144.89	142.02
30.0	157.46	156.47	155.75	154.58	153.15	151.35	149.20	146.96	144.36
45.0	157.28	156.56	156.29	155.21	154.41	153.15	151.44	149.74	147.77
60.0	156.65	156.65	156.20	155.84	155.39	155.21	154.14	153.33	152.61
75.0	156.56	156.20	156.20	156.29	156.38	156.56	156.74	156.65	156.29
90.0	155.93	156.02	156.02	156.56	156.83	157.19	157.46	157.81	158.26
105.0	156.02	156.20	156.47	156.65	157.01	157.46	157.90	158.17	158.53
120.0	156.11	156.65	156.83	157.19	156.92	157.28	157.19	157.28	156.83
135.0	156.65	156.56	157.37	157.28	156.47	155.30	154.23	153.42	152.79
150.0	155.93	156.83	157.37	156.83	154.32	153.60	150.73	146.51	143.10
165.0	155.39	156.38	157.19	156.74	155.30	151.80	146.78	140.41	132.87
180.0	157.46	158.17	157.90	156.56	152.25	146.42	138.17	128.21	116.81
195.0	157.28	157.63	157.55	156.74	153.42	148.12	141.93	134.31	126.41
210.0	157.46	158.08	157.55	156.65	154.85	150.91	146.96	143.10	140.14
225.0	157.28	157.72	157.46	156.56	155.48	154.14	153.24	152.16	150.91
240.0	156.65	157.46	157.01	157.10	156.92	156.65	156.11	155.30	154.76
255.0	156.56	156.56	156.29	156.29	156.02	155.93	155.39	154.94	154.41
270.0	155.93	156.02	155.66	155.66	155.21	154.67	154.14	153.69	153.33
285.0	156.02	155.48	155.48	154.85	154.32	153.69	152.61	151.80	151.71
300.0	156.11	155.66	154.94	154.05	153.87	151.71	150.10	148.75	147.50
315.0	156.65	155.03	154.14	152.70	151.71	149.92	148.04	145.70	143.55
330.0	155.93	155.03	153.69	152.16	150.37	148.04	145.61	142.92	139.96
345.0	155.39	154.49	152.97	151.35	149.11	147.05	144.09	141.40	137.90
360.0	157.46	156.65	155.75	153.96	152.34	150.10	147.50	144.63	141.58
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	138.88	135.74	132.69	129.82	126.68	122.91	119.95	117.71	115.83
15.0	139.51	136.46	133.68	130.54	127.67	124.44	121.93	120.40	118.79
30.0	141.93	139.51	136.91	134.49	132.07	129.82	127.94	126.14	125.16
45.0	146.15	144.27	142.83	141.31	139.78	138.44	137.45	136.82	136.10
60.0	151.44	150.46	149.74	149.29	148.21	147.41	147.14	146.78	146.24
75.0	155.93	155.84	155.66	155.30	155.21	154.94	154.58	154.58	153.96
90.0	158.71	158.53	158.80	158.44	158.71	158.89	158.35	158.35	158.08
105.0	158.62	159.07	158.80	158.80	158.89	158.62	158.35	158.08	157.72
120.0	156.92	156.56	156.20	156.02	155.48	154.94	154.14	153.78	153.15
135.0	151.71	150.91	150.28	149.74	149.20	148.30	147.32	146.42	145.52
150.0	140.68	138.61	137.09	135.47	134.67	134.13	134.22	134.94	135.65
165.0	125.70	119.86	116.10	113.49	112.33	113.58	116.10	119.15	122.91
180.0	105.06	94.02	91.60	96.72	102.28	107.57	112.69	117.62	122.20
195.0	120.31	116.27	113.67	112.69	114.12	116.54	119.50	123.09	125.52
210.0	137.90	135.65	134.22	133.32	133.05	133.23	133.95	134.04	131.71
225.0	149.56	148.48	147.68	146.96	146.06	144.89	143.55	142.11	139.42
240.0	153.96	153.06	152.61	151.71	150.55	149.65	148.75	147.59	145.97
255.0	154.14	153.78	153.60	153.15	152.52	151.80	151.18	150.91	149.20
270.0	152.79	152.52	151.80	152.07	151.44	150.64	150.10	149.56	149.02
285.0	150.01	149.38	148.57	147.86	147.23	146.51	146.06	145.70	145.25
300.0	145.88	144.36	143.10	141.75	140.86	139.96	139.06	138.61	137.99
315.0	141.04	138.79	136.55	134.31	132.78	131.35	130.18	129.64	128.93
330.0	136.91	134.04	130.54	127.67	125.34	123.27	121.57	120.31	119.77
345.0	134.76	131.44	128.21	124.89	122.02	119.59	117.44	116.27	114.93
360.0	138.88	135.74	132.69	129.82	126.68	122.91	119.95	117.71	115.83

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	113.49	109.46	104.61	100.22	95.64	91.15	86.85	82.81	86.85
15.0	117.71	115.11	111.79	108.47	105.51	103.09	102.28	103.53	106.59
30.0	124.35	124.26	124.17	123.18	122.47	122.20	122.47	123.63	125.25
45.0	135.83	135.92	135.92	136.37	136.91	137.27	137.90	138.35	139.15
60.0	145.79	146.15	145.97	145.97	145.97	146.15	146.42	146.51	146.69
75.0	153.78	153.60	153.24	153.06	152.70	152.34	152.16	151.71	151.53
90.0	157.63	157.63	156.83	156.56	155.93	155.57	154.85	154.41	153.87
105.0	157.28	156.74	156.38	155.93	155.57	155.03	154.49	153.87	153.51
120.0	152.52	152.07	151.71	151.26	151.00	150.73	150.46	150.55	150.28
135.0	144.72	144.36	143.91	143.46	143.55	143.55	143.01	143.64	143.55
150.0	135.12	134.67	134.49	134.22	134.13	134.40	135.30	135.92	136.55
165.0	126.23	128.30	128.21	128.30	127.85	127.04	126.41	126.32	126.50
180.0	126.05	125.96	124.08	121.66	119.50	117.26	115.56	114.12	114.03
195.0	124.98	121.84	118.25	114.03	110.44	106.94	103.53	100.22	98.51
210.0	127.58	122.82	117.89	112.87	107.84	103.27	98.87	94.47	91.06
225.0	136.28	131.98	127.94	123.90	120.04	115.56	114.48	107.57	103.00
240.0	143.37	140.86	140.05	134.67	131.71	128.57	125.70	121.39	117.26
255.0	147.95	146.42	144.45	142.74	140.59	138.44	136.64	133.23	130.09
270.0	148.30	147.68	146.60	145.52	144.45	142.92	141.75	140.05	138.08
285.0	144.72	144.09	143.82	143.10	142.74	141.93	141.40	140.50	139.96
300.0	137.81	137.36	137.54	137.54	137.63	137.45	137.54	137.54	134.40
315.0	128.75	128.93	129.01	129.37	130.00	130.00	130.72	130.63	125.07
330.0	119.41	119.33	118.07	117.17	116.90	117.08	117.80	117.08	113.31
345.0	111.97	108.47	105.24	102.46	100.48	99.41	100.39	101.47	101.83
360.0	113.49	109.46	104.61	100.22	95.64	91.15	86.85	82.81	86.85
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	96.45	104.43	109.55	113.04	116.45	120.67	124.17	110.98	85.32
15.0	110.80	116.72	123.36	127.31	129.64	133.23	134.22	131.53	101.74
30.0	127.76	130.27	133.32	136.73	139.42	141.22	141.40	142.29	123.09
45.0	139.78	141.40	142.83	144.09	145.52	146.06	145.61	146.33	140.59
60.0	146.96	147.50	148.04	148.48	149.02	149.38	148.12	147.50	146.15
75.0	151.18	150.91	150.73	150.37	150.10	149.38	148.30	147.41	145.88
90.0	153.15	152.52	151.98	151.62	150.91	150.10	148.57	147.14	145.70
105.0	152.88	152.52	151.89	151.80	151.09	150.10	148.93	147.59	146.33
120.0	150.01	150.01	150.37	150.55	150.37	149.65	148.57	147.41	146.06
135.0	144.36	144.98	145.34	145.88	145.88	146.24	146.24	146.15	145.34
150.0	136.55	136.82	137.54	138.88	140.23	141.49	142.02	143.37	143.01
165.0	126.32	128.21	129.64	131.44	133.41	135.12	137.18	139.78	139.51
180.0	115.47	117.89	120.76	123.90	127.22	124.35	96.54	77.07	117.17
195.0	99.50	101.83	105.24	109.55	115.74	116.27	81.02	84.51	122.82
210.0	88.73	88.28	89.81	94.47	99.50	88.19	75.81	89.81	113.13
225.0	97.61	92.32	88.55	89.27	92.23	84.60	79.31	91.51	93.31
240.0	112.78	108.74	105.96	104.97	103.36	97.25	93.85	83.44	81.19
255.0	127.40	123.99	121.57	120.13	119.59	114.21	102.55	75.00	88.91
270.0	136.46	134.31	131.35	128.39	124.98	122.38	100.66	72.85	106.76
285.0	137.63	133.77	129.46	123.99	118.79	115.56	91.24	73.75	118.43
300.0	130.45	125.07	119.06	111.07	103.89	99.32	83.08	81.37	127.58
315.0	118.70	112.51	106.59	98.15	89.36	86.40	81.64	90.62	130.45
330.0	107.30	101.92	96.81	92.68	91.06	94.29	95.82	101.92	133.68
345.0	103.09	102.91	102.01	102.19	104.61	110.53	111.79	115.20	134.22
360.0	96.45	104.43	109.55	113.04	116.45	120.67	124.17	110.98	85.32

Intensity data(cd)

C/ γ (°)	180.0
0.0	122.02
15.0	97.88
30.0	89.81
45.0	104.07
60.0	123.45
75.0	136.64
90.0	143.37
105.0	143.46
120.0	143.37
135.0	143.37
150.0	142.47
165.0	140.23
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	122.02