AFX

Client:
LumCAT: ELZV2402LAJD4BK
Luminaire: LED Lamp
Report No:
Ballast type:

Test No:	Voltage(V): 119.980
LampCAT:	Current(A): 0.139
Lamp flux(lm): 1271.4	Power (W): 16.460
Number of Lamps: 1	PF: 0.987
Length(mm): 600	Width(mm): 15
Phm Type: C	Height(mm): 10

Photometric Results

Lumens(lm): 1271.35, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 77.24
Central intensity(cd): 376.293, Maximum intensity(cd): 380.827
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=108.8
[C90/270]Total=123.4
Field angle(10%Imax): [C0/180]Total=159.0
[C90/270]Total=233.3
Maximum s/h(1/2): C0_180=1.23 C90_270=1.35
Maximum s/h(1/4): C0_180=1.35 C90_270=1.49
Up flux rate of lamp(%): 9.82%
Down flux rate of lamp(%): 90.18%
Up flux rate of LUM(%): 9.82%
Down flux rate of LUM(%): 90.18%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 63.897%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	376.293	0.000	0	0.00%	0.00%
5.0	371.356	8.938	8.938	0.70%	0.70%
10.0	361.296	26.209	35.147	2.06%	2.76%
15.0	348.174	42.085	77.233	3.31%	6.07%
20.0	333.405	56.172	133.404	4.42%	10.49%
25.0	317.299	68.247	201.651	5.37%	15.86%
30.0	299.768	78.090	279.742	6.14%	22.00%
35.0	280.968	85.517	365.259	6.73%	28.73%
40.0	260.710	90.375	455.634	7.11%	35.84%
45.0	238.361	92.407	548.041	7.27%	43.11%
50.0	215.637	91.737	639.778	7.22%	50.32%
55.0	192.578	88.760	728.537	6.98%	57.30%
60.0	170.011	83.811	812.349	6.59%	63.90%
65.0	146.909	77.044	889.392	6.06%	69.96%
70.0	124.970	68.841	958.234	5.41%	75.37%
75.0	104.414	59.957	1018.191	4.72%	80.09%
80.0	86.440	51.067	1069.258	4.02%	84.10%
85.0	69.993	42.507	1111.765	3.34%	87.45%
90.0	56.683	34.685	1146.45	2.73%	90.18%
95.0	46.398	28.224	1174.674	2.22%	92.40%
100.0	38.018	22.938	1197.612	1.80%	94.20%
105.0	30.649	18.373	1215.986	1.45%	95.65%
110.0	24.701	14.468	1230.453	1.14%	96.78%
115.0	19.500	11.192	1241.645	0.88%	97.66%
120.0	15.383	8.480	1250.125	0.67%	98.33%
125.0	11.978	6.324	1256.45	0.50%	98.83%
130.0	9.170	4.598	1261.048	0.36%	99.19%
135.0	6.813	3.230	1264.277	0.25%	99.44%
140.0	5.315	2.246	1266.523	0.18%	99.62%
145.0	4.154	1.580	1268.103	0.12%	99.74%
150.0	3.330	1.102	1269.205	0.09%	99.83%
155.0	2.843	0.781	1269.986	0.06%	99.89%
160.0	2.393	0.549	1270.535	0.04%	99.94%
165.0	2.318	0.388	1270.924	0.03%	99.97%
170.0	2.019	0.257	1271.181	0.02%	99.99%
175.0	1.794	0.136	1271.317	0.01%	100.00%
180.0	0.897	0.032	1271.349	0.00%	100.00%

Zonal flux distribution table

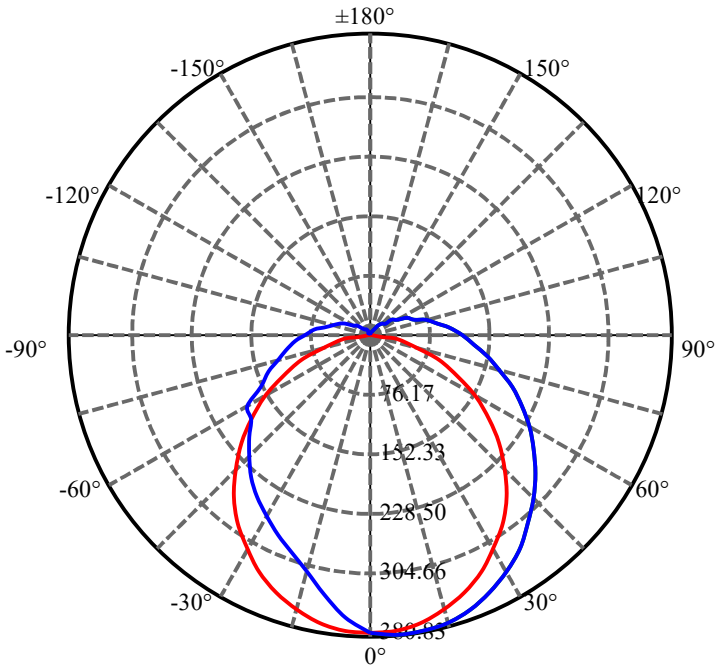
ZONAL LUMEN SUMMARY

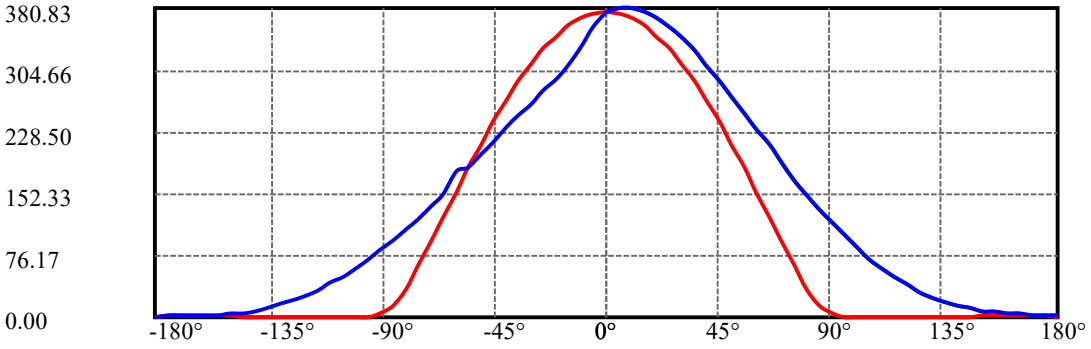
Zone	Lumens	%Lamp	%Fixt
0-30	279.74	22.00%	22.00%
0-40	455.63	35.84%	35.84%
0-60	812.35	63.90%	63.90%
0-90	1146.45	90.18%	90.18%
0-120	1250.13	98.33%	98.33%
0-180	1271.35	100.00%	100.00%
60-90	334.10	26.28%	26.28%
90-120	103.68	8.15%	8.15%
90-130	114.60	9.01%	9.01%
90-150	122.76	9.66%	9.66%
90-180	124.87	9.82%	9.82%
0-74.91	1017.08	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	35.15
10-20	98.26
20-30	146.34
30-40	175.89
40-50	184.14
50-60	172.57
60-70	145.89
70-80	111.02
80-90	77.19
90-100	51.16
100-110	32.84
110-120	19.67
120-130	10.92
130-140	5.48
140-150	2.68
150-160	1.33
160-170	0.65
170-180	0.14

Light Distribution Curve [Unit:cd]





C90(Max):

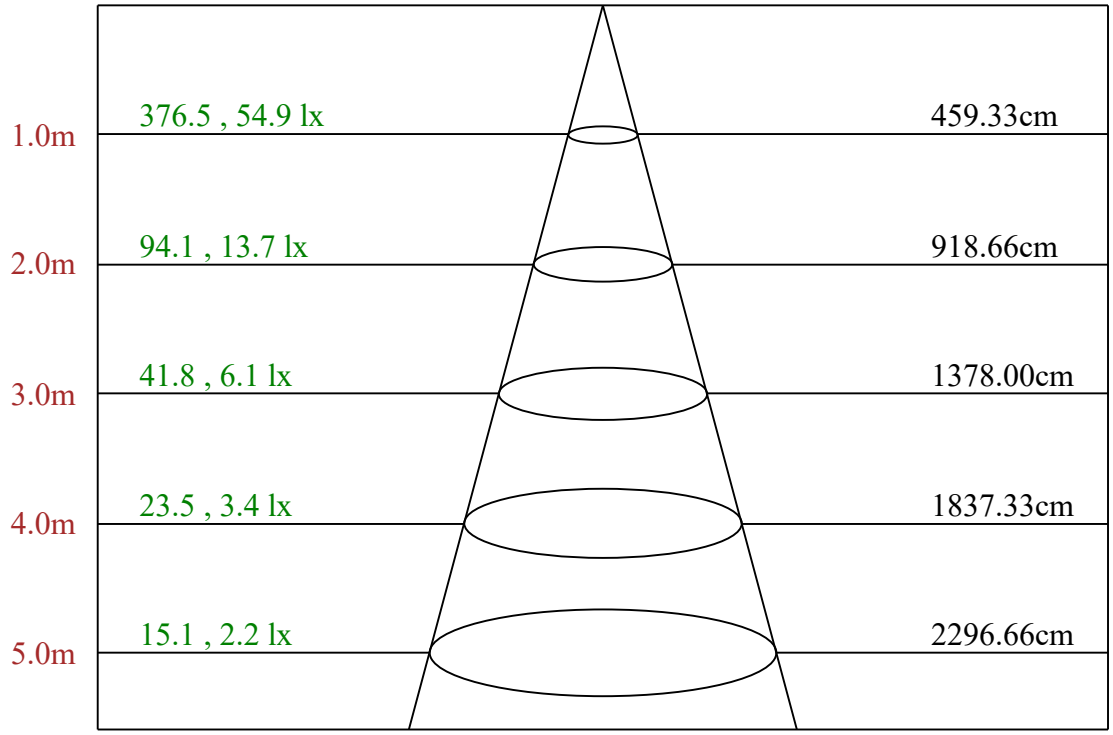
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:79.5 Right:79.5
:C90/270Left:117.2 Right:116.1

Beam Angle(50%Imax):C0/180Left:54.4 Right:54.4
:C90/270Left:58.2 Right:65.2

Lux distance Curve



Max , Ave

Beam angle of C90 plane 132.94

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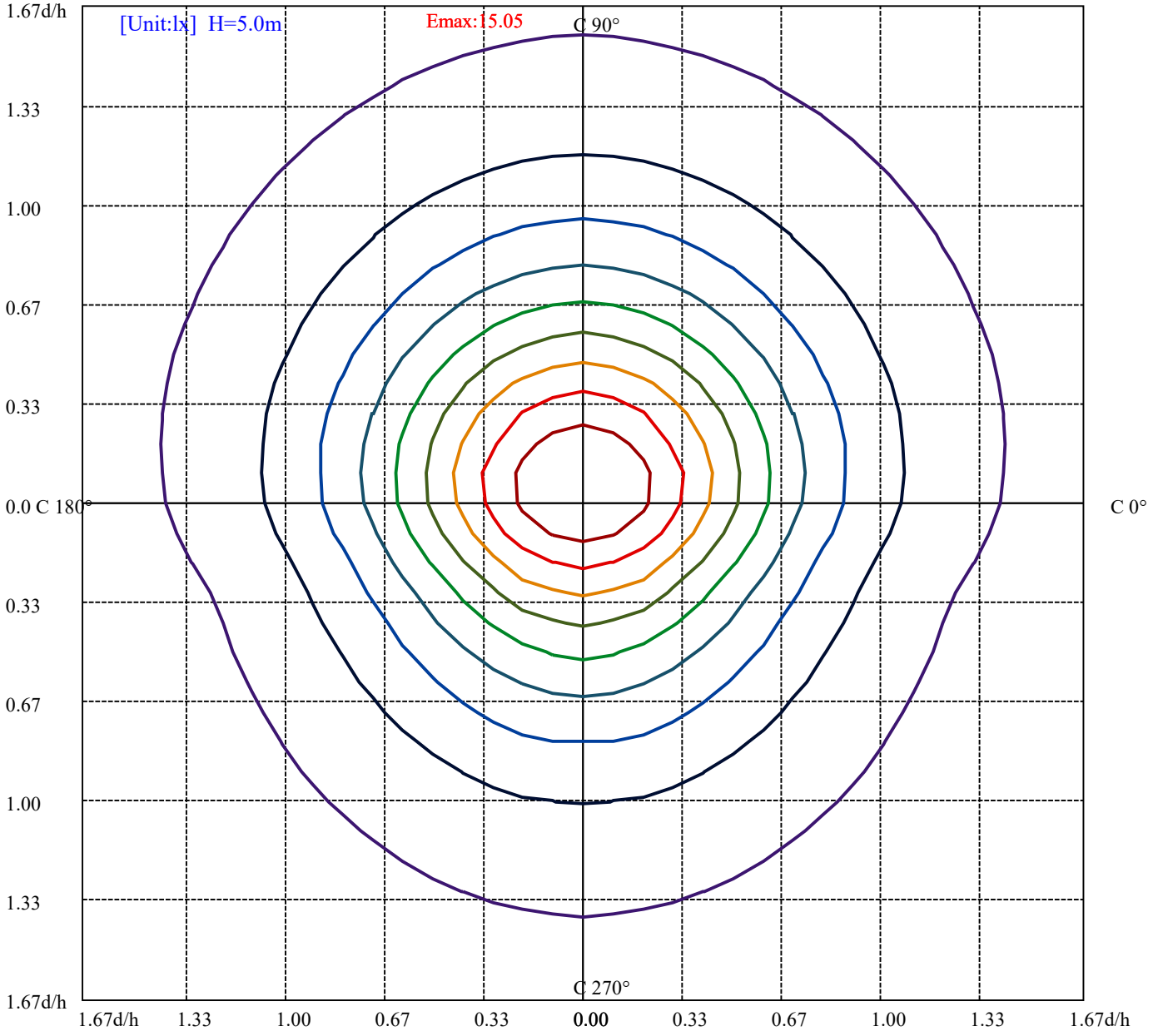
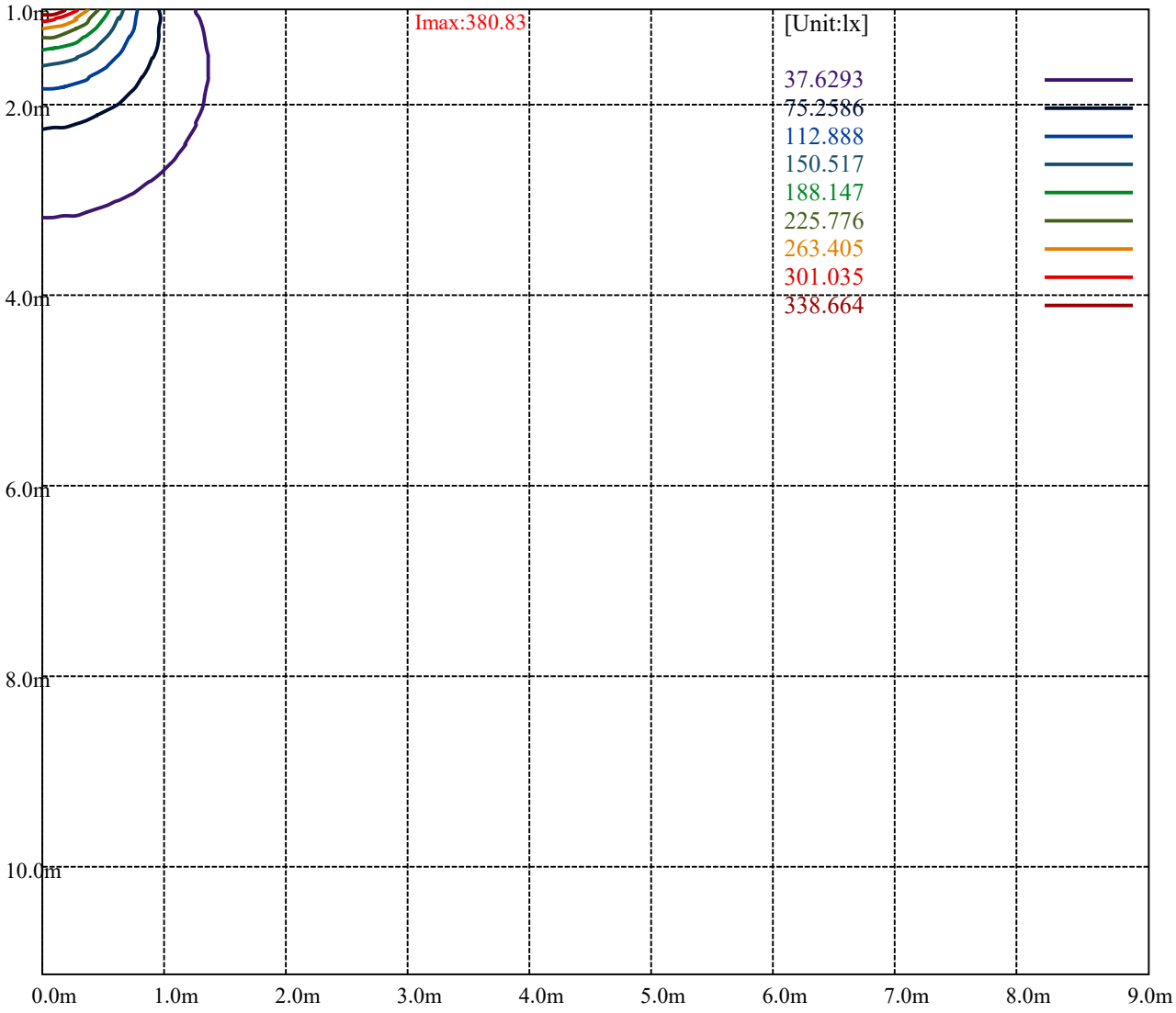
ISO illuminance diagram



(10%Emax) 1.505172
(20%Emax) 3.010344
(30%Emax) 4.51552
(40%Emax) 6.02068
(50%Emax) 7.52588
(60%Emax) 9.03104
(70%Emax) 10.5362
(80%Emax) 12.0414
(90%Emax) 13.54656

Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.2
Date: 2025/8/2
Humidity(%): 59.8%
Operator: JUN WANG
Distance(m): 29.95

Space ISO Lux diagram



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Temperature(°C): 25.2

Date: 2025/8/2
Humidity(%): 59.8%

Operator: JUN WANG
Distance(m): 29.95

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Luminance Limitting Curve(no luminous side)

Luminance Table

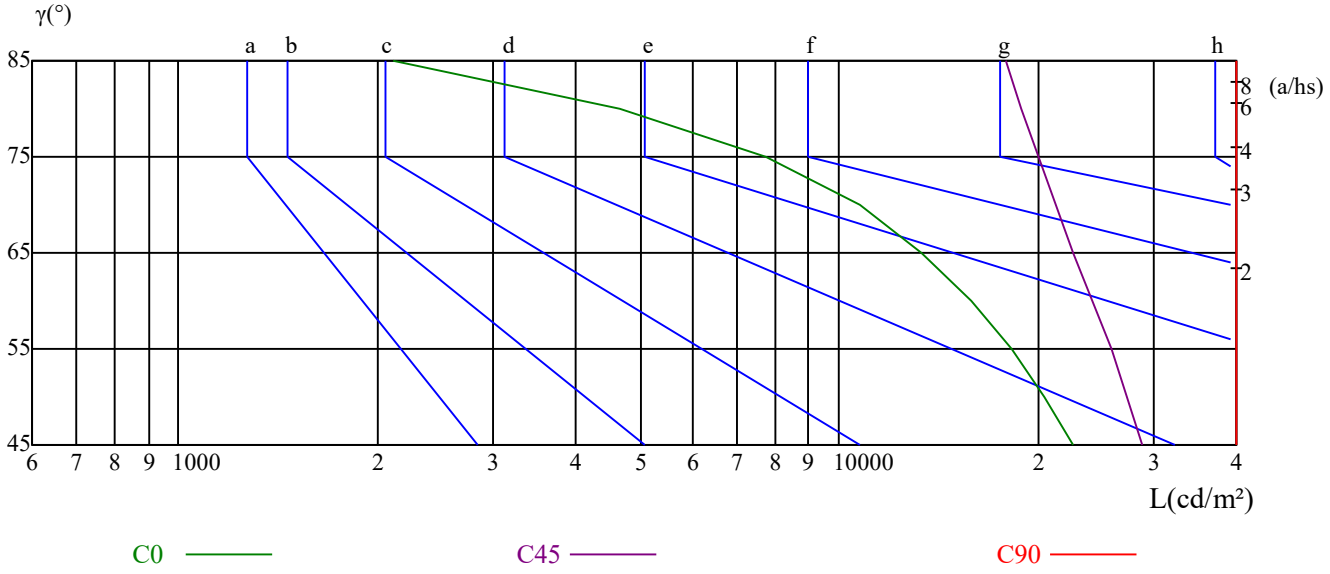
γ	45	50	55	60	65	70	75	80	85
C0	22699	20529	18317	15910	13364	10742	7737	4654	2110
C45	28820	27386	25796	24249	22704	21357	20007	18829	17926
C90	44986	45951	47523	50136	53858	59432	68163	87993	141763

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
32469	47916	38466	26988	62087	46387	18188	144494	96968

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 Limitting Curve



Utilization factor table for indoor luminaire

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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	0.99	0.99	0.99	0.93	0.93	0.93	0.90
1	0.99	0.94	0.89	0.95	0.91	0.87	0.89	0.86	0.82	0.84	0.81	0.78	0.79	0.76	0.74	0.71
2	0.85	0.78	0.71	0.82	0.75	0.70	0.77	0.71	0.66	0.72	0.68	0.63	0.68	0.64	0.61	0.58
3	0.74	0.66	0.59	0.72	0.64	0.57	0.67	0.61	0.55	0.63	0.58	0.53	0.60	0.55	0.51	0.48
4	0.66	0.56	0.49	0.64	0.55	0.48	0.60	0.52	0.47	0.56	0.50	0.45	0.53	0.48	0.43	0.41
5	0.58	0.49	0.42	0.57	0.48	0.41	0.53	0.46	0.40	0.50	0.44	0.39	0.48	0.42	0.37	0.35
6	0.52	0.43	0.37	0.51	0.42	0.36	0.48	0.41	0.35	0.46	0.39	0.34	0.43	0.37	0.33	0.30
7	0.47	0.39	0.32	0.46	0.38	0.32	0.44	0.36	0.31	0.41	0.35	0.30	0.39	0.33	0.29	0.27
8	0.43	0.35	0.29	0.42	0.34	0.28	0.40	0.33	0.28	0.38	0.31	0.27	0.36	0.30	0.26	0.24
9	0.40	0.31	0.26	0.39	0.31	0.25	0.37	0.30	0.25	0.35	0.29	0.24	0.33	0.28	0.23	0.22
10	0.37	0.29	0.23	0.36	0.28	0.23	0.34	0.27	0.22	0.32	0.26	0.22	0.31	0.25	0.21	0.19

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	376.29	377.18	374.51	367.38	358.46	344.19	327.25	307.63	284.45
15.0	376.29	378.97	376.29	370.93	361.10	348.59	331.60	313.73	291.38
30.0	376.29	378.97	378.08	372.73	362.92	352.22	337.06	318.33	296.04
45.0	376.29	380.76	379.87	376.29	367.36	354.84	340.54	322.66	302.11
60.0	376.29	379.86	379.86	375.40	367.38	356.68	342.41	325.47	305.85
75.0	376.29	378.99	378.99	374.50	366.41	355.64	342.17	326.90	308.94
90.0	376.29	380.83	379.92	376.29	368.13	358.16	344.56	328.24	309.20
105.0	376.29	378.09	377.19	372.70	363.72	352.94	338.57	322.41	304.45
120.0	376.29	378.99	377.19	371.80	361.92	350.25	335.88	317.02	297.26
135.0	376.29	376.29	374.50	368.23	358.37	345.83	330.60	309.99	290.28
150.0	376.29	376.29	373.57	367.23	346.37	341.84	325.52	306.47	284.71
165.0	376.29	376.29	371.79	364.59	351.99	338.48	318.68	298.87	273.67
180.0	376.29	370.94	362.03	349.54	334.38	316.55	295.15	273.75	247.89
195.0	376.29	370.93	360.20	343.22	323.56	301.21	275.29	249.37	220.77
210.0	376.29	366.48	350.43	329.03	304.96	279.10	254.13	229.16	208.66
225.0	376.29	362.89	342.33	319.09	294.96	271.72	253.84	234.18	212.73
240.0	376.29	360.24	336.17	310.31	288.91	270.18	254.13	237.19	219.36
255.0	376.29	359.23	332.29	308.94	288.28	273.91	258.65	244.28	229.01
270.0	376.29	358.16	333.68	310.10	292.87	278.37	262.05	248.44	233.03
285.0	376.29	356.54	333.19	308.04	289.18	274.81	260.44	246.97	243.38
300.0	376.29	360.13	336.78	313.43	308.04	274.81	258.65	242.48	225.42
315.0	376.29	362.85	344.04	321.64	297.45	275.05	256.24	238.32	218.61
330.0	376.29	369.95	354.53	334.58	312.82	288.34	263.86	240.28	217.62
345.0	376.29	372.69	363.69	350.19	332.18	311.48	287.17	261.06	232.26
360.0	376.29	377.18	374.51	367.38	358.46	344.19	327.25	307.63	284.45

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	260.37	233.62	206.87	177.45	147.13	115.92	85.60	53.50	26.75
15.0	266.35	239.54	211.83	184.12	154.63	122.45	93.85	67.04	42.90
30.0	271.07	245.21	219.36	192.61	164.96	138.21	113.24	90.95	69.55
45.0	277.97	254.74	230.60	206.47	181.44	158.20	135.86	114.41	95.64
60.0	285.34	262.16	240.76	217.57	196.17	174.77	153.37	132.86	115.03
75.0	290.08	270.32	248.77	227.21	206.56	185.90	166.14	146.39	128.42
90.0	291.06	271.11	251.16	232.12	212.17	191.32	168.65	150.52	132.38
105.0	284.69	264.93	244.28	222.72	202.96	181.41	162.55	142.79	123.93
120.0	276.61	255.05	232.60	211.05	188.60	167.04	146.39	128.42	108.67
135.0	266.09	244.59	219.50	194.42	170.23	147.83	125.43	105.72	87.80
150.0	261.14	233.94	206.73	179.53	153.24	126.94	102.46	79.79	61.66
165.0	252.06	224.16	197.15	167.44	136.83	107.13	80.12	54.01	33.31
180.0	221.14	192.61	162.29	131.08	99.87	71.34	40.13	16.05	1.78
195.0	192.17	160.89	134.07	105.47	78.66	53.63	34.86	22.35	13.41
210.0	185.47	161.40	137.32	114.14	93.63	75.79	61.53	47.26	36.56
225.0	192.17	173.40	151.05	131.39	114.41	99.21	84.02	70.61	59.89
240.0	200.63	182.80	164.96	148.02	131.08	116.81	100.76	89.17	76.69
255.0	211.95	194.88	178.72	161.65	146.39	129.32	115.85	111.36	88.91
270.0	215.80	200.39	184.97	180.44	152.33	136.01	120.60	107.90	94.30
285.0	213.74	196.68	178.72	162.55	147.28	131.12	115.85	102.38	88.91
300.0	207.46	190.39	169.74	152.67	135.61	119.44	105.07	89.81	78.13
315.0	199.79	179.19	157.68	138.87	119.16	103.03	86.91	73.47	60.92
330.0	194.95	170.47	148.70	125.13	102.46	83.42	66.19	51.68	39.90
345.0	202.55	172.84	144.04	116.13	90.02	63.02	40.51	26.11	14.40
360.0	260.37	233.62	206.87	177.45	147.13	115.92	85.60	53.50	26.75

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	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.0	25.03	14.30	8.04	4.47	2.68	2.68	1.79	1.79	1.79
30.0	53.50	39.23	28.53	20.51	15.16	11.59	8.03	6.24	5.35
45.0	78.66	64.35	50.95	41.12	32.18	24.13	18.77	14.30	10.73
60.0	98.98	83.82	69.55	57.07	47.26	36.56	29.43	23.18	17.83
75.0	111.36	96.09	82.62	69.15	56.58	45.80	36.82	28.74	22.45
90.0	116.97	100.65	86.14	71.63	59.84	49.87	39.90	31.74	24.48
105.0	107.77	93.40	79.93	67.36	55.68	44.90	35.92	28.74	22.45
120.0	93.40	79.03	66.46	54.78	44.90	35.02	28.74	22.45	17.06
135.0	71.67	58.24	46.59	37.63	28.67	22.40	17.02	13.44	10.75
150.0	45.34	34.46	25.39	18.13	13.60	9.97	7.25	6.35	4.53
165.0	18.00	9.90	6.30	3.60	2.70	1.80	1.80	1.80	1.80
180.0	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
195.0	7.15	4.47	2.68	1.79	1.79	1.79	0.89	0.89	0.89
210.0	25.86	19.62	13.38	9.81	7.13	5.35	4.46	2.68	1.78
225.0	48.27	39.33	30.39	24.13	17.88	13.41	12.51	8.04	6.26
240.0	65.99	54.39	51.72	36.56	30.32	24.08	17.83	14.27	10.70
255.0	77.23	65.56	53.88	46.70	38.62	30.53	24.25	18.86	13.47
270.0	82.51	70.72	59.84	50.78	41.71	33.55	26.30	20.85	15.41
285.0	77.23	66.46	56.58	46.70	38.62	31.43	24.25	17.96	13.47
300.0	66.46	56.58	45.80	37.72	30.53	21.55	17.06	13.47	9.88
315.0	48.38	38.53	30.46	24.19	17.02	13.44	10.75	7.17	5.38
330.0	26.30	19.04	13.60	9.07	7.25	5.44	3.63	2.72	1.81
345.0	7.20	4.50	2.70	1.80	1.80	1.80	0.90	0.90	0.90
360.0	6.24	0.00	0.00	0.00	0.00	0.00	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	0.00	0.89	0.89	1.78	1.78	1.78	1.78	1.78	1.78
15.0	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
30.0	3.57	3.57	3.57	3.57	2.68	2.68	2.68	1.78	1.78
45.0	8.04	6.26	5.36	4.47	4.47	3.58	2.68	2.68	1.79
60.0	13.38	9.81	8.03	6.24	5.35	4.46	3.57	2.68	1.78
75.0	17.06	12.57	9.88	7.18	6.29	4.49	3.59	2.69	1.80
90.0	19.04	14.51	10.88	8.16	6.35	4.53	3.63	2.72	1.81
105.0	17.06	12.57	9.88	7.18	6.29	4.49	3.59	2.69	1.80
120.0	12.57	9.88	8.08	6.29	5.39	4.49	3.59	2.69	1.80
135.0	8.06	6.27	5.38	4.48	3.58	3.58	2.69	1.79	1.79
150.0	3.63	3.63	3.63	2.72	2.72	2.72	2.72	1.81	1.81
165.0	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
180.0	0.00	0.89	0.89	0.89	0.89	0.89	1.78	1.78	1.78
195.0	0.89	0.89	0.89	0.89	0.89	0.89	1.79	1.79	1.79
210.0	1.78	1.78	0.89	0.89	0.89	0.89	1.78	1.78	1.78
225.0	3.58	2.68	1.79	1.79	1.79	1.79	1.79	1.79	1.79
240.0	7.13	5.35	3.57	2.68	1.78	1.78	1.78	1.78	1.78
255.0	9.88	7.18	5.39	3.59	2.69	1.80	1.80	1.80	1.80
270.0	10.88	8.16	5.44	3.63	2.72	1.81	1.81	1.81	1.81
285.0	9.88	7.18	4.49	3.59	2.69	1.80	1.80	1.80	1.80
300.0	7.18	5.39	3.59	2.69	1.80	1.80	1.80	1.80	1.80
315.0	3.58	2.69	1.79	1.79	1.79	1.79	1.79	1.79	1.79
330.0	1.81	0.91	0.91	0.91	0.91	0.91	1.81	1.81	1.81
345.0	0.90	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80
360.0	0.00	0.89	0.89	1.78	1.78	1.78	1.78	1.78	1.78

Intensity data(cd)

C/γ(°)	180.0
0.0	1.78
15.0	1.79
30.0	1.78
45.0	1.79
60.0	1.78
75.0	1.80
90.0	1.81
105.0	1.80
120.0	1.80
135.0	1.79
150.0	1.81
165.0	1.80
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	1.78