AFX

Client:
LumCAT: ELZP42LAJD4BK
Luminaire: LED Lamp
Report No:
Ballast type:

Test No:	Voltage(V): 119.990
LampCAT:	Current(A): 0.201
Lamp flux(lm): 2090.7	Power (W): 23.790
Number of Lamps: 1	PF: 0.986
Length(mm): 1040	Width(mm): 15
Phm Type: C	Height(mm): 10

Photometric Results

Lumens(lm): 2090.73, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 87.88
Central intensity(cd): 560.290, Maximum intensity(cd): 568.307
Angle of maximum intensity: C=90.0 γ=10.0
Beam Angle(50%Imax): [C0/180]Total=109.2
[C90/270]Total=137.3
Field angle(10%Imax): [C0/180]Total=159.0
[C90/270]Total=238.1
Maximum s/h(1/2): C0_180=1.24 C90_270=1.41
Maximum s/h(1/4): C0_180=1.36 C90_270=1.55
Up flux rate of lamp(%): 10.66%
Down flux rate of lamp(%): 89.34%
Up flux rate of LUM(%): 10.66%
Down flux rate of LUM(%): 89.34%
CIE Type : Semidirect lighting
Output flux ratio in π solid angle : 62.186%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	560.290	0.000	0	0.00%	0.00%
5.0	557.564	13.364	13.364	0.64%	0.64%
10.0	550.274	39.631	52.994	1.90%	2.53%
15.0	538.273	64.572	117.566	3.09%	5.62%
20.0	522.011	87.382	204.949	4.18%	9.80%
25.0	501.036	107.299	312.247	5.13%	14.93%
30.0	476.773	123.743	435.99	5.92%	20.85%
35.0	449.183	136.354	572.344	6.52%	27.38%
40.0	419.983	145.014	717.357	6.94%	34.31%
45.0	386.412	149.310	866.668	7.14%	41.45%
50.0	352.465	149.301	1015.969	7.14%	48.59%
55.0	317.134	145.593	1161.562	6.96%	55.56%
60.0	282.396	138.580	1300.142	6.63%	62.19%
65.0	246.138	128.488	1428.629	6.15%	68.33%
70.0	211.331	115.834	1544.464	5.54%	73.87%
75.0	178.620	101.927	1646.39	4.88%	78.75%
80.0	148.716	87.586	1733.977	4.19%	82.94%
85.0	121.538	73.435	1807.411	3.51%	86.45%
90.0	99.555	60.537	1867.948	2.90%	89.34%
95.0	82.058	49.727	1917.675	2.38%	91.72%
100.0	67.818	40.725	1958.4	1.95%	93.67%
105.0	54.960	32.852	1991.252	1.57%	95.24%
110.0	44.348	25.958	2017.21	1.24%	96.48%
115.0	35.194	20.141	2037.35	0.96%	97.45%
120.0	27.759	15.304	2052.654	0.73%	98.18%
125.0	21.369	11.356	2064.01	0.54%	98.72%
130.0	16.289	8.188	2072.198	0.39%	99.11%
135.0	12.366	5.790	2077.988	0.28%	99.39%
140.0	9.527	4.054	2082.042	0.19%	99.58%
145.0	7.547	2.849	2084.891	0.14%	99.72%
150.0	6.203	2.025	2086.915	0.10%	99.82%
155.0	5.045	1.423	2088.339	0.07%	99.89%
160.0	4.298	0.980	2089.319	0.05%	99.93%
165.0	3.738	0.662	2089.981	0.03%	99.96%
170.0	3.514	0.430	2090.411	0.02%	99.98%
175.0	3.589	0.254	2090.665	0.01%	100.00%
180.0	1.794	0.064	2090.73	0.00%	100.00%

Zonal flux distribution table

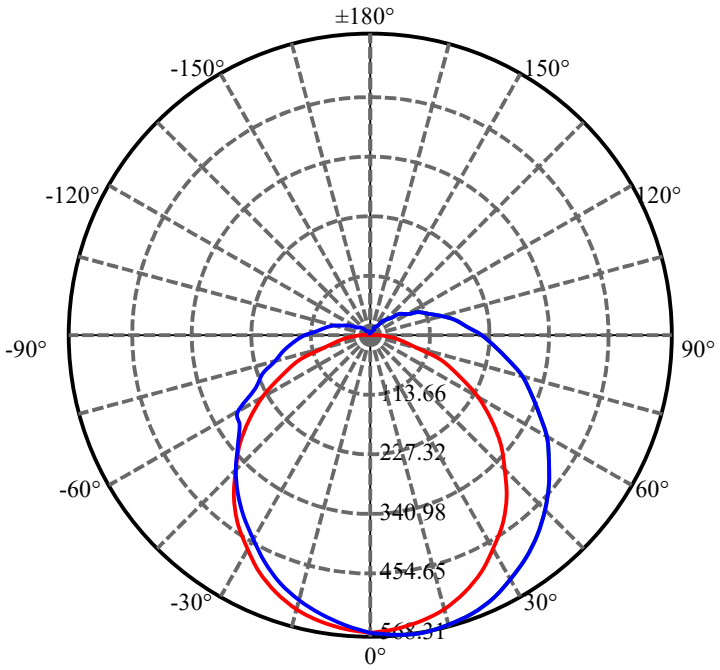
ZONAL LUMEN SUMMARY

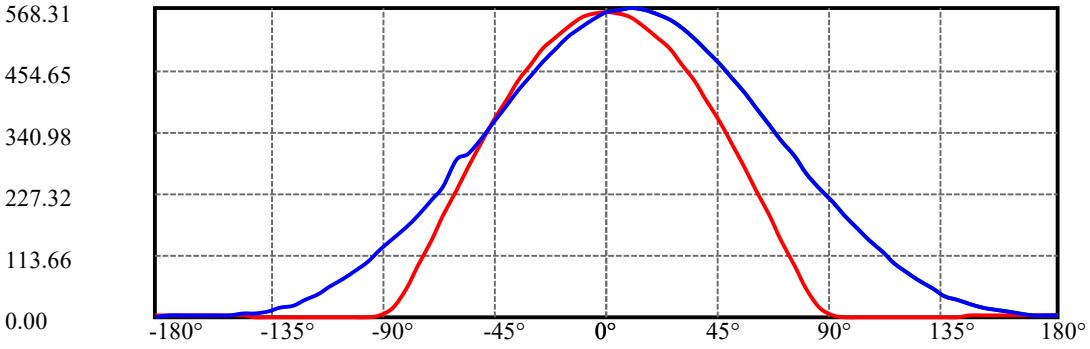
Zone	Lumens	%Lamp	%Fixt
0-30	435.99	20.85%	20.85%
0-40	717.36	34.31%	34.31%
0-60	1300.14	62.19%	62.19%
0-90	1867.95	89.34%	89.34%
0-120	2052.65	98.18%	98.18%
0-180	2090.73	100.00%	100.00%
60-90	567.81	27.16%	27.16%
90-120	184.71	8.83%	8.83%
90-130	204.25	9.77%	9.77%
90-150	218.97	10.47%	10.47%
90-180	222.72	10.65%	10.65%
0-76.50	1672.58	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	52.99
10-20	151.95
20-30	231.04
30-40	281.37
40-50	298.61
50-60	284.17
60-70	244.32
70-80	189.51
80-90	133.97
90-100	90.45
100-110	58.81
110-120	35.44
120-130	19.54
130-140	9.84
140-150	4.87
150-160	2.40
160-170	1.09
170-180	0.25

Light Distribution Curve [Unit:cd]





C90(Max):

C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:79.5 Right:79.5
:C90/270Left:119.8 Right:118.3

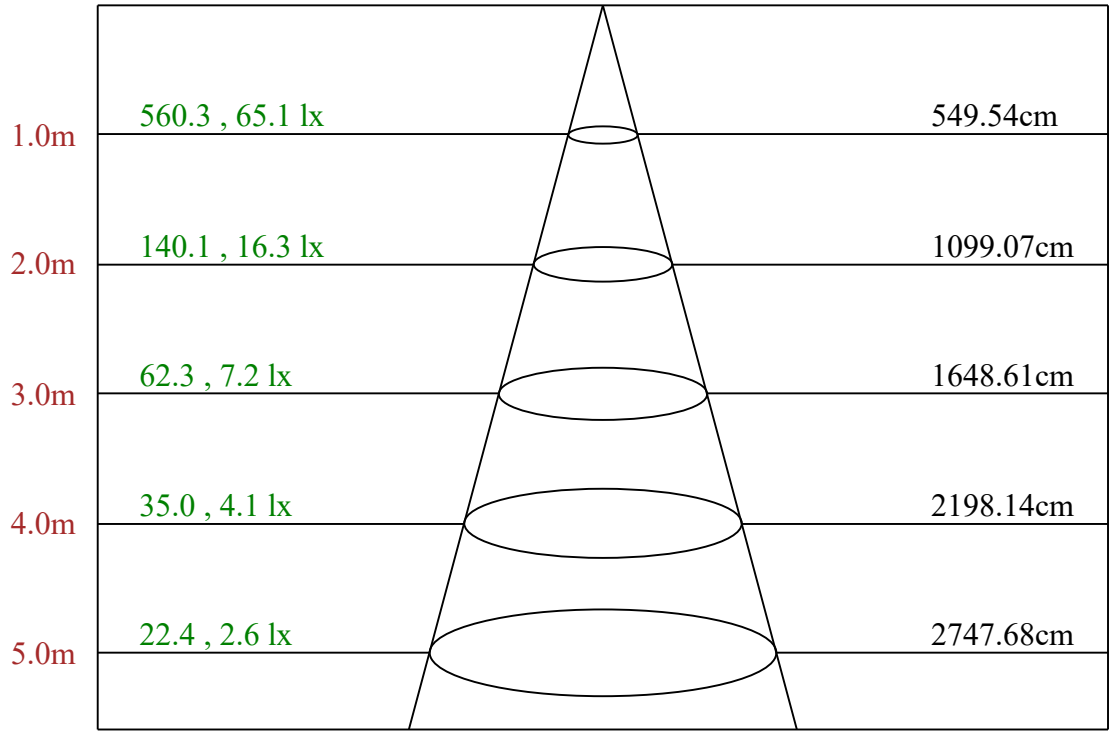
Beam Angle(50%Imax):C0/180Left:54.6 Right:54.6
:C90/270Left:70.5 Right:66.8

Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1

Date: 2025/8/2
Humidity(%): 59.9%

Operator: JUN WANG
Distance(m): 29.95

Lux distance Curve



Max , Ave

Beam angle of C90 plane 140.00

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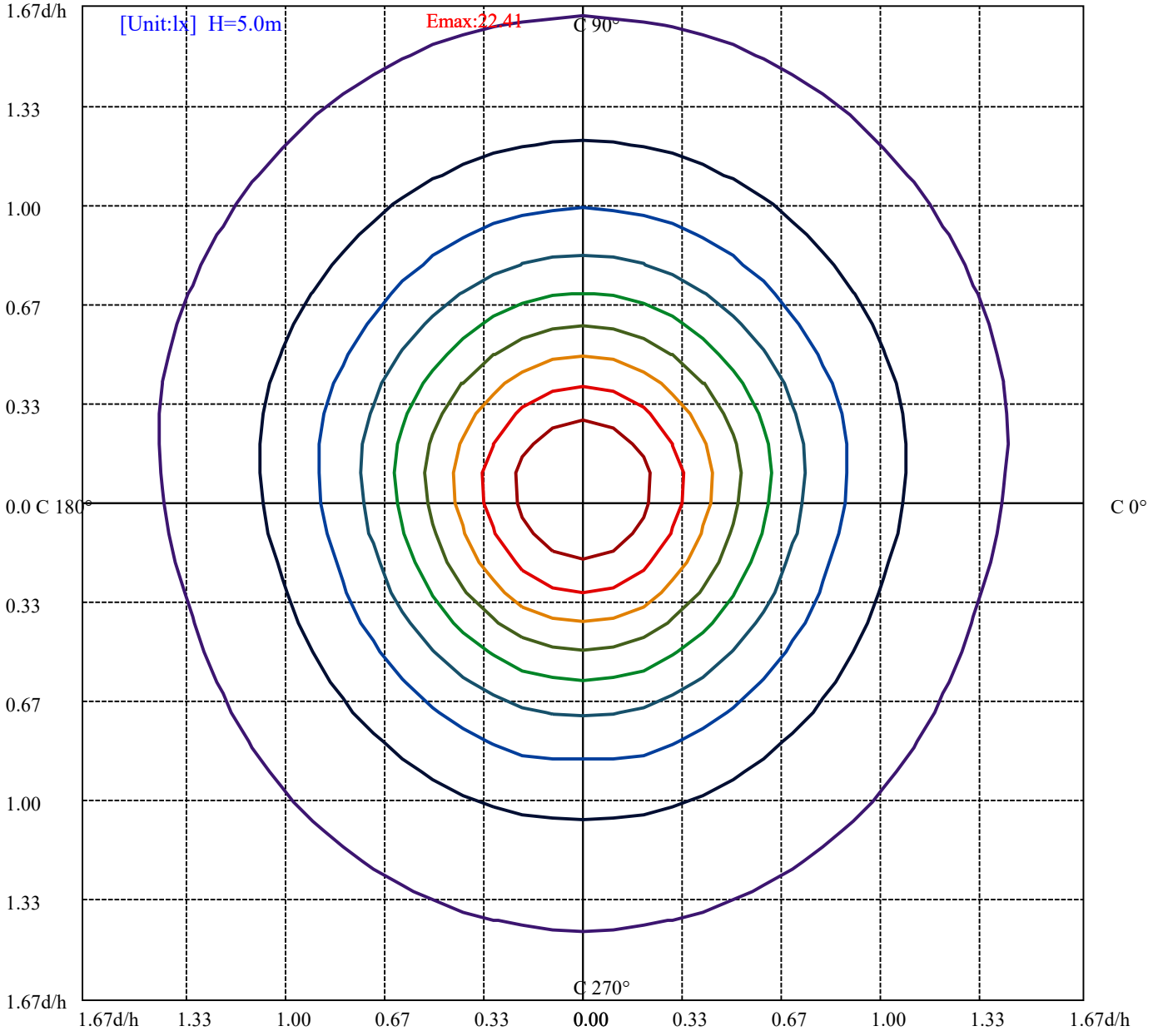
ISO illuminance diagram



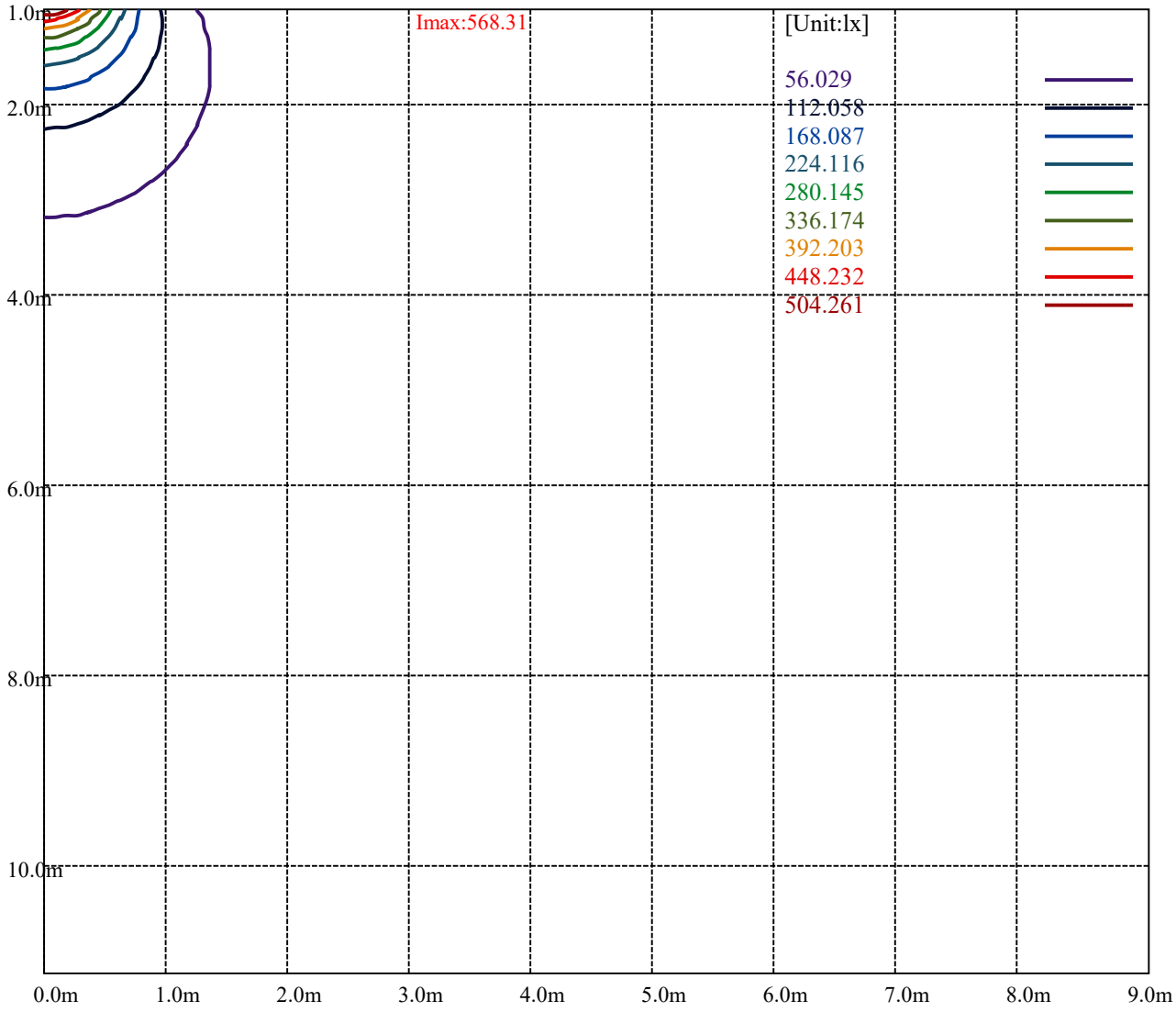
(10%Emax) 2.24116
(20%Emax) 4.48232
(30%Emax) 6.72348
(40%Emax) 8.96464
(50%Emax) 11.2058
(60%Emax) 13.44696
(70%Emax) 15.68812
(80%Emax) 17.92928
(90%Emax) 20.17044

Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1

Date: 2025/8/2
Humidity(%): 59.9%

Operator: JUN WANG
Distance(m): 29.95

Space ISO Lux diagram



Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1

Date: 2025/8/2
Humidity(%): 59.9%

Operator: JUN WANG
Distance(m): 29.95

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Luminance Limitting Curve(no luminous side)

Luminance Table

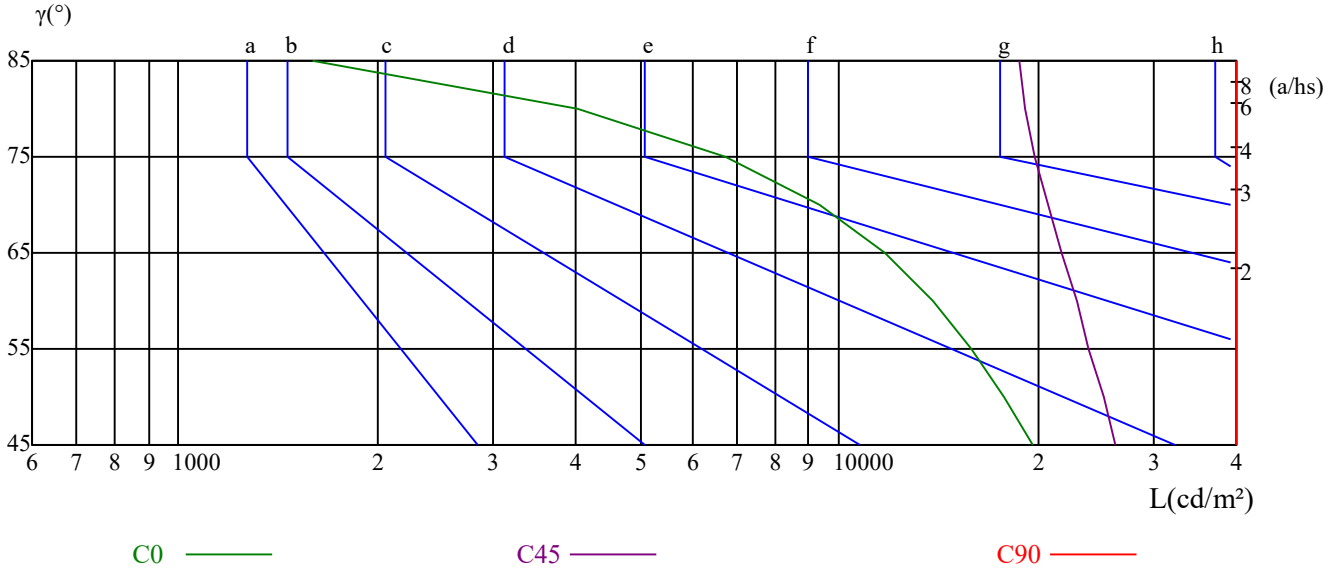
γ	45	50	55	60	65	70	75	80	85
C0	19623	17846	15860	13886	11733	9345	6736	4024	1596
C45	26231	25122	23943	22896	21734	20715	19838	19198	18799
C90	41751	43386	45468	48302	52423	59206	70495	92923	157604

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
28508	44924	37738	23496	59898	46037	13758	140202	97677

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	1.05	1.05	1.05	0.98	0.98	0.98	0.92	0.92	0.92	0.89
1	0.98	0.93	0.88	0.95	0.90	0.86	0.89	0.85	0.81	0.83	0.80	0.77	0.77	0.75	0.73	0.70
2	0.84	0.77	0.70	0.82	0.75	0.69	0.76	0.70	0.65	0.71	0.67	0.62	0.67	0.63	0.59	0.56
3	0.74	0.65	0.58	0.71	0.63	0.56	0.67	0.60	0.54	0.62	0.57	0.52	0.58	0.54	0.49	0.47
4	0.65	0.55	0.48	0.63	0.54	0.47	0.59	0.51	0.46	0.55	0.49	0.44	0.52	0.46	0.42	0.39
5	0.58	0.48	0.41	0.56	0.47	0.41	0.52	0.45	0.39	0.49	0.43	0.38	0.46	0.41	0.36	0.34
6	0.52	0.42	0.36	0.50	0.41	0.35	0.47	0.40	0.34	0.45	0.38	0.33	0.42	0.36	0.32	0.29
7	0.47	0.38	0.31	0.45	0.37	0.31	0.43	0.35	0.30	0.41	0.34	0.29	0.38	0.32	0.28	0.26
8	0.43	0.34	0.28	0.41	0.33	0.27	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.29	0.25	0.23
9	0.39	0.31	0.25	0.38	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.23	0.32	0.27	0.23	0.21
10	0.36	0.28	0.23	0.35	0.27	0.22	0.33	0.26	0.22	0.32	0.25	0.21	0.30	0.24	0.20	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	560.29	559.40	552.27	539.80	523.77	501.50	476.56	444.49	412.42
15.0	560.29	562.09	557.60	546.82	533.35	513.60	488.46	459.73	427.40
30.0	560.29	563.89	561.19	553.99	540.50	523.42	500.03	475.75	445.17
45.0	560.29	564.79	563.89	557.59	546.80	531.51	511.73	486.54	458.66
60.0	560.29	563.89	564.79	561.19	551.30	537.81	520.72	498.24	475.75
75.0	560.29	566.60	567.50	563.89	556.69	544.98	529.66	510.75	488.23
90.0	560.29	565.63	568.31	565.63	557.62	546.04	531.79	512.19	491.70
105.0	560.29	565.67	568.36	564.77	558.50	545.05	528.91	510.98	487.68
120.0	560.29	566.57	566.57	562.98	554.02	540.57	521.74	502.02	476.02
135.0	560.29	561.18	559.40	554.04	542.45	528.17	508.54	485.35	457.69
150.0	560.29	562.98	560.29	553.12	526.22	521.74	499.33	472.44	442.85
165.0	560.29	562.10	557.57	548.50	533.09	512.24	488.67	459.66	425.20
180.0	560.29	554.95	546.04	529.11	508.63	484.58	454.29	421.33	384.81
195.0	560.29	554.90	543.23	526.17	504.62	478.58	449.85	416.63	379.81
210.0	560.29	553.10	540.50	523.42	502.73	474.85	445.17	412.80	378.62
225.0	560.29	552.20	538.71	520.72	498.24	472.15	443.38	413.70	378.62
240.0	560.29	548.60	536.01	518.92	496.44	471.26	444.28	414.60	384.02
255.0	560.29	550.38	535.97	517.95	496.33	472.01	447.69	417.06	388.24
270.0	560.29	548.71	534.46	516.64	495.26	471.21	444.49	415.99	387.48
285.0	560.29	550.43	535.19	517.26	497.54	470.64	445.54	415.96	409.68
300.0	560.29	550.43	536.09	518.16	512.78	471.54	441.96	414.17	382.79
315.0	560.29	546.91	532.63	514.79	492.48	466.61	437.17	405.05	372.93
330.0	560.29	552.22	537.88	519.95	497.54	470.64	439.27	405.20	369.34
345.0	560.29	553.94	542.16	523.12	501.36	474.16	443.34	409.79	374.43
360.0	560.29	559.40	552.27	539.80	523.77	501.50	476.56	444.49	412.42

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	375.01	335.82	293.06	249.41	204.88	157.67	110.45	65.92	27.61
15.0	391.48	352.88	312.47	268.47	224.48	179.58	138.28	96.08	65.55
30.0	411.00	375.03	336.35	295.88	255.41	217.64	180.77	147.49	116.91
45.0	428.09	396.61	361.54	327.36	291.39	257.21	224.84	195.16	166.38
60.0	447.87	418.19	387.62	356.14	323.76	292.29	263.51	233.83	206.85
75.0	461.20	435.08	405.35	378.33	348.61	318.88	288.25	261.23	230.60
90.0	464.98	440.04	412.42	383.03	352.74	324.24	294.84	265.45	237.83
105.0	462.58	433.89	406.99	375.62	346.93	315.56	286.87	257.29	231.29
120.0	449.13	419.55	388.17	355.90	323.62	293.14	262.66	232.18	204.39
135.0	427.36	394.34	359.55	325.65	289.07	254.27	221.26	190.93	164.16
150.0	407.89	371.14	332.59	293.14	254.60	214.26	178.40	144.33	114.75
165.0	392.57	354.49	312.78	271.99	228.47	183.14	138.71	97.01	63.46
180.0	346.51	306.42	260.99	217.35	171.03	124.71	79.28	38.30	9.80
195.0	341.20	299.90	256.80	215.50	172.40	131.09	93.38	61.96	36.81
210.0	343.55	303.08	265.31	225.73	189.76	155.59	124.11	96.23	71.95
225.0	345.35	311.17	277.00	242.82	210.45	179.87	152.89	125.91	104.32
240.0	351.64	321.07	287.79	258.11	228.43	199.65	174.47	149.29	127.71
255.0	358.51	327.89	297.26	268.43	240.51	211.69	187.36	180.16	142.32
270.0	357.20	327.80	298.41	289.50	239.62	214.67	188.84	165.68	143.41
285.0	355.00	325.42	295.83	265.35	236.67	208.88	183.78	159.57	137.16
300.0	350.52	317.35	285.97	253.70	223.22	196.33	169.43	145.23	122.82
315.0	339.92	303.34	270.33	236.43	204.31	173.08	144.53	119.55	96.36
330.0	331.69	294.04	254.60	216.05	181.98	145.23	115.64	87.85	64.55
345.0	333.64	294.65	252.04	207.62	165.00	123.30	84.32	52.58	29.92
360.0	375.01	335.82	293.06	249.41	204.88	157.67	110.45	65.92	27.61

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	4.45	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
15.0	41.30	25.14	16.16	9.88	7.18	5.39	4.49	3.59	2.69
30.0	92.63	71.95	55.76	43.17	32.38	24.28	18.89	14.39	10.79
45.0	141.20	118.71	98.03	80.94	64.75	52.16	40.47	31.48	24.28
60.0	178.97	157.38	133.10	113.32	94.43	78.24	62.95	50.36	38.67
75.0	204.48	181.06	156.74	134.22	114.40	95.48	78.37	63.06	48.64
90.0	211.11	186.17	161.23	139.85	118.47	98.87	81.95	66.81	51.66
105.0	203.50	177.50	155.09	132.68	112.95	93.23	77.10	61.86	48.41
120.0	178.40	153.30	131.78	111.16	92.34	76.20	60.96	48.41	37.65
135.0	139.18	115.98	95.46	77.62	62.45	49.96	39.26	30.33	23.20
150.0	89.65	69.03	51.99	40.34	30.48	22.41	17.03	13.45	10.76
165.0	38.98	22.67	13.60	9.07	6.35	4.53	3.63	2.72	2.72
180.0	1.78	1.78	1.78	1.78	1.78	1.78	0.89	0.89	0.89
195.0	20.65	11.67	6.29	4.49	3.59	2.69	1.80	1.80	0.90
210.0	53.06	36.87	26.08	17.99	11.69	8.09	6.30	4.50	3.60
225.0	83.64	65.65	50.36	37.77	27.88	19.79	17.99	9.89	7.19
240.0	105.22	88.14	82.74	55.76	44.07	31.48	23.38	16.19	11.69
255.0	118.90	99.99	83.77	67.56	53.15	41.44	29.73	20.72	15.31
270.0	122.93	103.33	85.51	70.37	56.12	43.65	31.18	22.27	16.03
285.0	118.33	97.71	81.58	65.44	51.99	39.44	28.69	20.62	14.34
300.0	103.09	83.37	67.23	51.99	41.24	28.69	20.62	15.24	10.76
315.0	77.62	60.67	45.50	34.80	23.20	16.95	12.49	8.92	6.25
330.0	45.72	32.27	22.41	14.34	9.86	7.17	5.38	3.59	2.69
345.0	14.51	8.16	4.53	3.63	2.72	1.81	1.81	0.91	0.91
360.0	4.45	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.89	1.78	2.67	2.67	3.56	3.56	3.56	3.56	3.56
15.0	2.69	2.69	2.69	3.59	3.59	3.59	3.59	3.59	3.59
30.0	8.99	7.19	6.30	5.40	5.40	4.50	3.60	3.60	3.60
45.0	18.89	14.39	11.69	8.99	7.19	6.30	4.50	3.60	3.60
60.0	29.68	22.48	17.09	13.49	9.89	7.19	5.40	4.50	3.60
75.0	37.83	28.83	22.52	16.21	12.61	9.01	6.31	4.50	3.60
90.0	40.08	31.18	23.16	17.82	13.36	8.91	7.13	4.45	3.56
105.0	36.76	28.69	21.52	16.14	11.65	8.96	6.28	4.48	3.59
120.0	28.69	22.41	17.03	12.55	9.86	7.17	5.38	4.48	3.59
135.0	17.84	13.38	10.71	8.92	7.14	5.35	4.46	3.57	3.57
150.0	8.07	6.28	5.38	5.38	4.48	4.48	3.59	3.59	3.59
165.0	1.81	1.81	2.72	2.72	3.63	3.63	3.63	3.63	3.63
180.0	0.89	0.89	0.89	1.78	1.78	2.67	2.67	2.67	3.56
195.0	0.90	0.90	1.80	1.80	1.80	1.80	2.69	3.59	3.59
210.0	2.70	2.70	1.80	1.80	1.80	2.70	2.70	2.70	3.60
225.0	5.40	3.60	2.70	2.70	1.80	1.80	2.70	3.60	3.60
240.0	8.09	5.40	4.50	3.60	2.70	2.70	2.70	2.70	3.60
255.0	10.81	7.21	5.40	4.50	3.60	2.70	2.70	2.70	3.60
270.0	11.58	8.02	5.34	4.45	3.56	2.67	2.67	2.67	3.56
285.0	9.86	7.17	5.38	4.48	3.59	2.69	2.69	3.59	3.59
300.0	7.17	5.38	4.48	3.59	2.69	2.69	2.69	2.69	3.59
315.0	4.46	3.57	2.68	2.68	1.78	2.68	2.68	2.68	3.57
330.0	1.79	1.79	1.79	1.79	1.79	2.69	2.69	3.59	3.59
345.0	0.91	0.91	0.91	1.81	1.81	2.72	2.72	3.63	3.63
360.0	0.89	1.78	2.67	2.67	3.56	3.56	3.56	3.56	3.56

Intensity data(cd)

C/γ(°)	180.0
0.0	3.56
15.0	3.59
30.0	3.60
45.0	3.60
60.0	3.60
75.0	3.60
90.0	3.56
105.0	3.59
120.0	3.59
135.0	3.57
150.0	3.59
165.0	3.63
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	3.56