AFX

Client:
LumCAT: ELZP42LAJD4LB
Luminaire: LED Lamp
Report No:
Ballast type:

Test No: LCZP25070007	Voltage(V): 120.000
LampCAT:	Current(A): 0.201
Lamp flux(lm): 2048.1	Power (W): 23.740
Number of Lamps: 1	PF: 0.986
Length(mm): 1040	Width(mm): 15
Phm Type: C	Height(mm): 10

Photometric Results

Lumens(lm): 2048.09, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 86.27
Central intensity(cd): 556.724, Maximum intensity(cd): 557.751
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=109.2
[C90/270]Total=133.4
Field angle(10%Imax): [C0/180]Total=159.0
[C90/270]Total=237.8
Maximum s/h(1/2): C0_180=1.24 C90_270=1.30
Maximum s/h(1/4): C0_180=1.36 C90_270=1.44
Up flux rate of lamp(%): 10.27%
Down flux rate of lamp(%): 89.73%
Up flux rate of LUM(%): 10.27%
Down flux rate of LUM(%): 89.73%
CIE Type : Semidirect lighting
Output flux ratio in π solid angle : 62.736%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	556.724	0.000	0	0.00%	0.00%
5.0	554.546	13.285	13.285	0.65%	0.65%
10.0	547.057	39.408	52.693	1.92%	2.57%
15.0	534.860	64.179	116.871	3.13%	5.71%
20.0	518.048	86.774	203.646	4.24%	9.94%
25.0	497.152	106.476	310.121	5.20%	15.14%
30.0	472.750	122.742	432.863	5.99%	21.13%
35.0	444.917	135.133	567.996	6.60%	27.73%
40.0	413.770	143.265	711.262	7.00%	34.73%
45.0	381.816	147.309	858.571	7.19%	41.92%
50.0	347.051	147.278	1005.849	7.19%	49.11%
55.0	312.024	143.305	1149.154	7.00%	56.11%
60.0	275.227	135.741	1284.896	6.63%	62.74%
65.0	240.879	125.466	1410.362	6.13%	68.86%
70.0	207.500	113.533	1523.895	5.54%	74.41%
75.0	173.829	99.673	1623.568	4.87%	79.27%
80.0	142.970	84.767	1708.335	4.14%	83.41%
85.0	117.431	70.757	1779.092	3.45%	86.87%
90.0	96.433	58.558	1837.65	2.86%	89.73%
95.0	78.373	47.863	1885.513	2.34%	92.06%
100.0	64.055	38.701	1924.214	1.89%	93.95%
105.0	51.849	31.013	1955.227	1.51%	95.47%
110.0	41.848	24.491	1979.717	1.20%	96.66%
115.0	32.934	18.935	1998.652	0.92%	97.59%
120.0	25.697	14.253	2012.906	0.70%	98.28%
125.0	19.727	10.500	2023.405	0.51%	98.79%
130.0	14.865	7.521	2030.927	0.37%	99.16%
135.0	11.201	5.267	2036.194	0.26%	99.42%
140.0	8.563	3.660	2039.853	0.18%	99.60%
145.0	6.870	2.575	2042.428	0.13%	99.72%
150.0	5.789	1.864	2044.292	0.09%	99.81%
155.0	5.099	1.378	2045.67	0.07%	99.88%
160.0	4.472	1.004	2046.674	0.05%	99.93%
165.0	3.987	0.697	2047.371	0.03%	99.96%
170.0	3.397	0.438	2047.809	0.02%	99.99%
175.0	2.953	0.227	2048.036	0.01%	100.00%
180.0	1.488	0.053	2048.089	0.00%	100.00%

Zonal flux distribution table

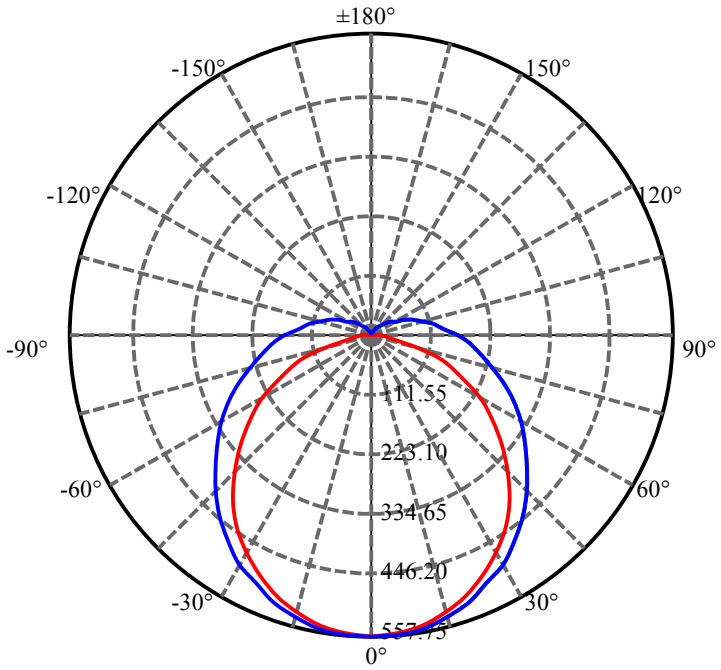
ZONAL LUMEN SUMMARY

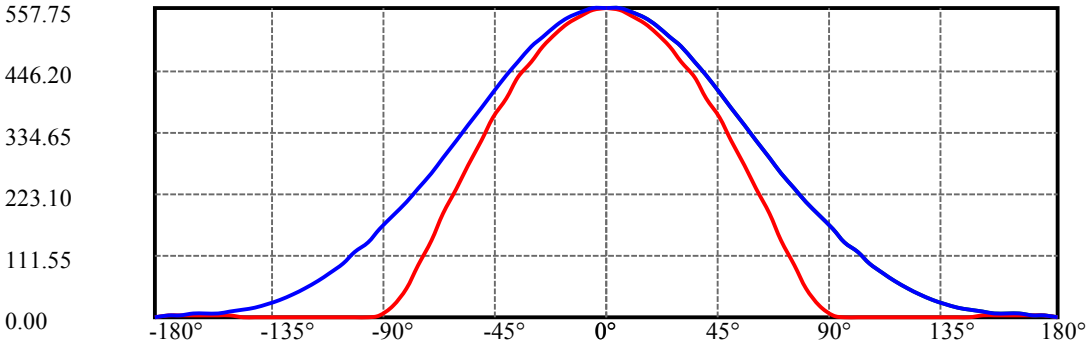
Zone	Lumens	%Lamp	%Fixt
0-30	432.86	21.13%	21.13%
0-40	711.26	34.73%	34.73%
0-60	1284.90	62.74%	62.74%
0-90	1837.65	89.73%	89.73%
0-120	2012.91	98.28%	98.28%
0-180	2048.09	100.00%	100.00%
60-90	552.75	26.99%	26.99%
90-120	175.26	8.56%	8.56%
90-130	193.28	9.44%	9.44%
90-150	206.64	10.09%	10.09%
90-180	210.39	10.27%	10.27%
0-75.88	1638.47	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	52.69
10-20	150.95
20-30	229.22
30-40	278.40
40-50	294.59
50-60	279.05
60-70	239.00
70-80	184.44
80-90	129.31
90-100	86.56
100-110	55.50
110-120	33.19
120-130	18.02
130-140	8.93
140-150	4.44
150-160	2.38
160-170	1.14
170-180	0.23

Light Distribution Curve [Unit:cd]





C90(Max):

C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:79.5 Right:79.5
:C90/270Left:123.9 Right:113.9

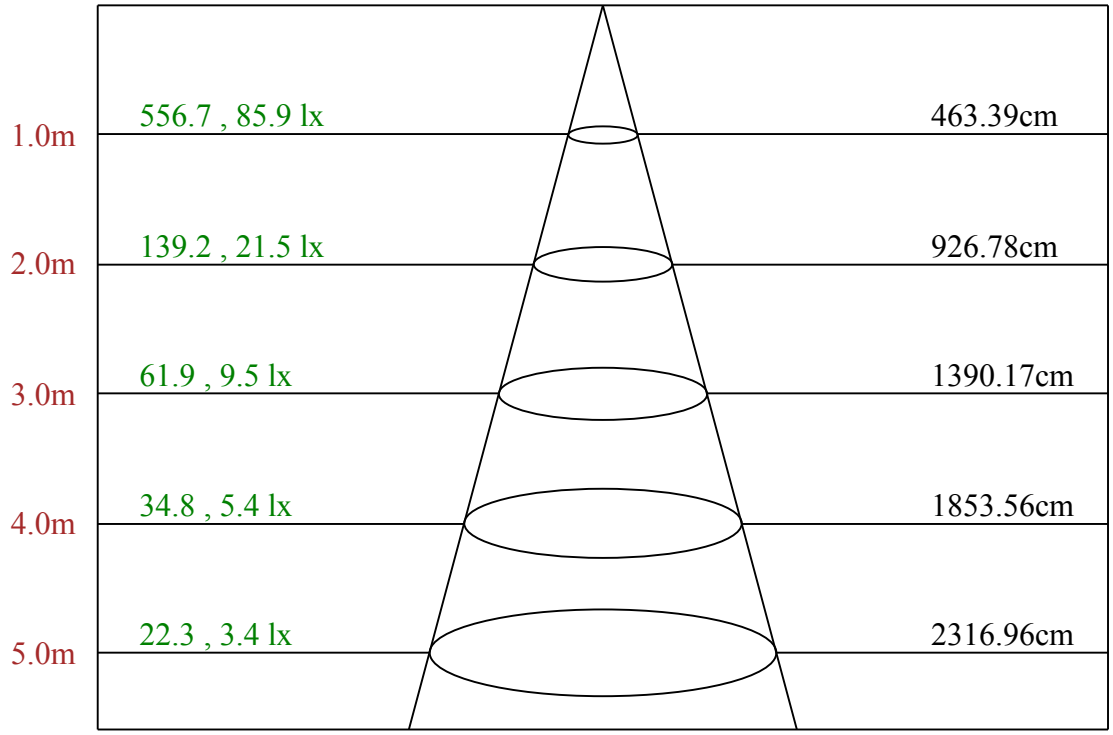
Beam Angle(50%Imax):C0/180Left:54.6 Right:54.6
:C90/270Left:71.7 Right:61.7

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

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

Operator: JUN WANG
Distance(m): 29.95

Lux distance Curve



Max , Ave

Beam angle of C90 plane 133.31

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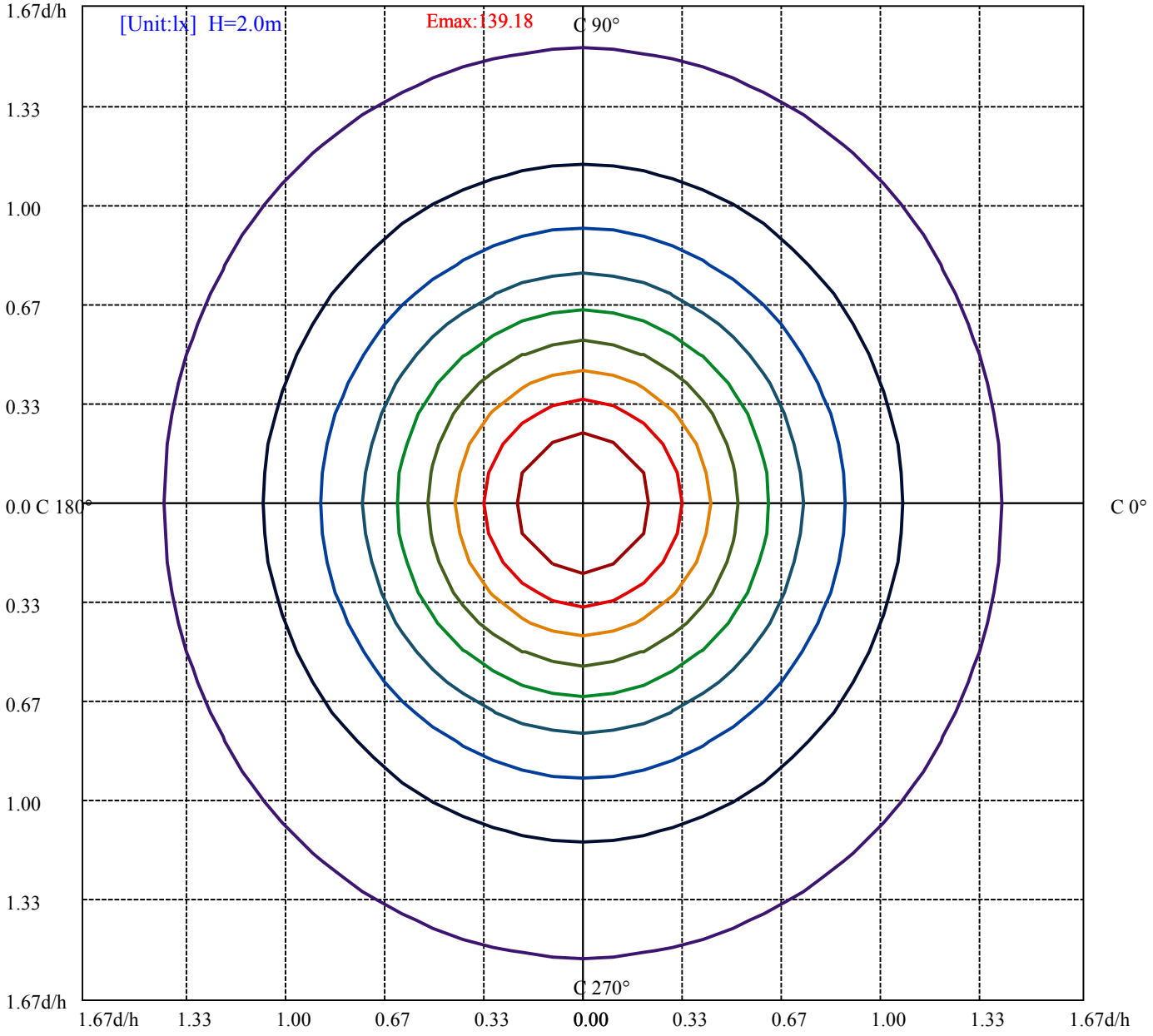
ISO illuminance diagram



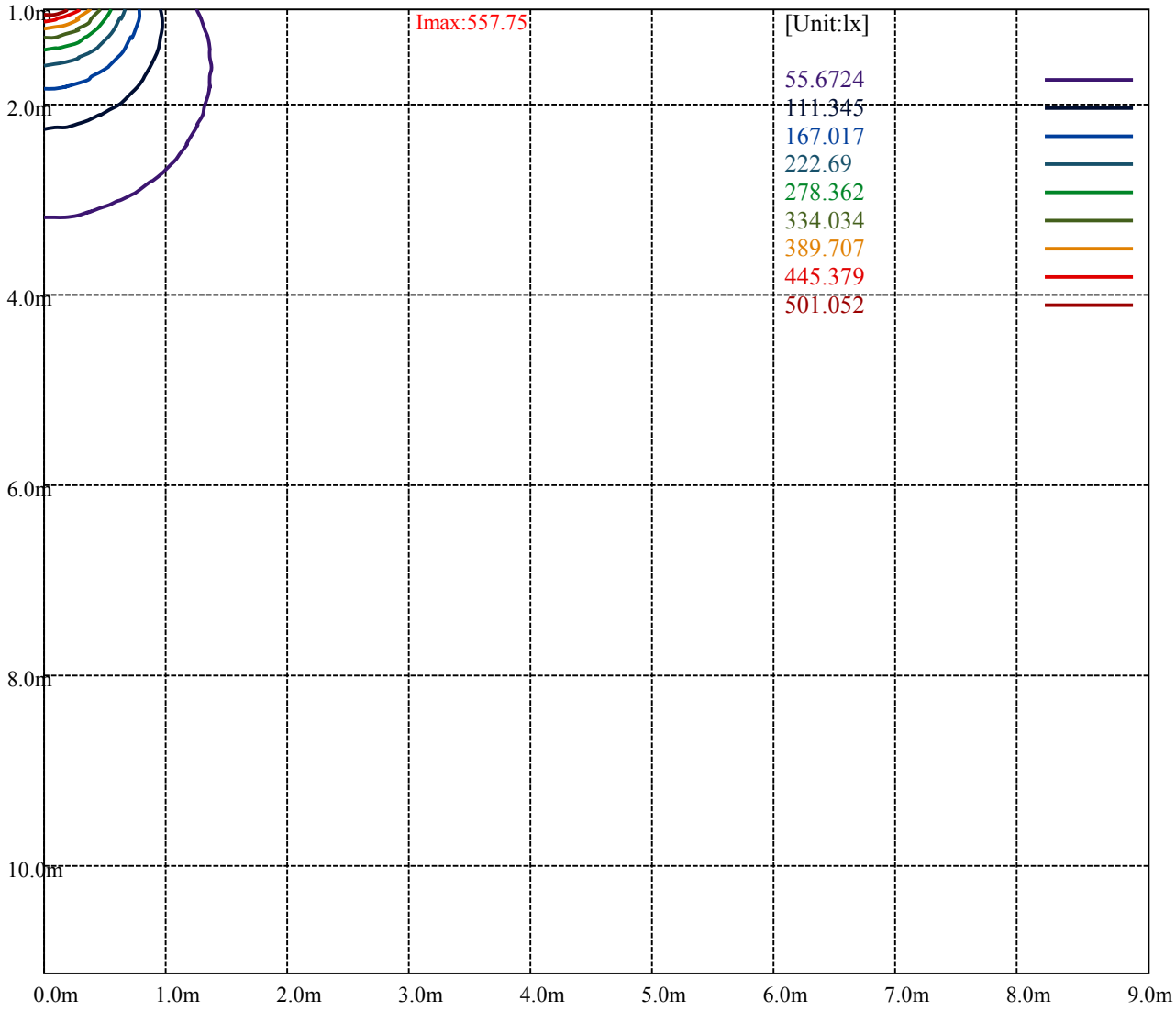
(10%Emax) 13.9181
(20%Emax) 27.83625
(30%Emax) 41.75425
(40%Emax) 55.6725
(50%Emax) 69.5905
(60%Emax) 83.5085
(70%Emax) 97.42675
(80%Emax) 111.3447
(90%Emax) 125.263

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

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

Operator: JUN WANG
Distance(m): 29.95

Space ISO Lux diagram



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

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

Operator: JUN WANG
Distance(m): 29.95

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Luminance Limitting Curve(no luminous side)

Luminance Table

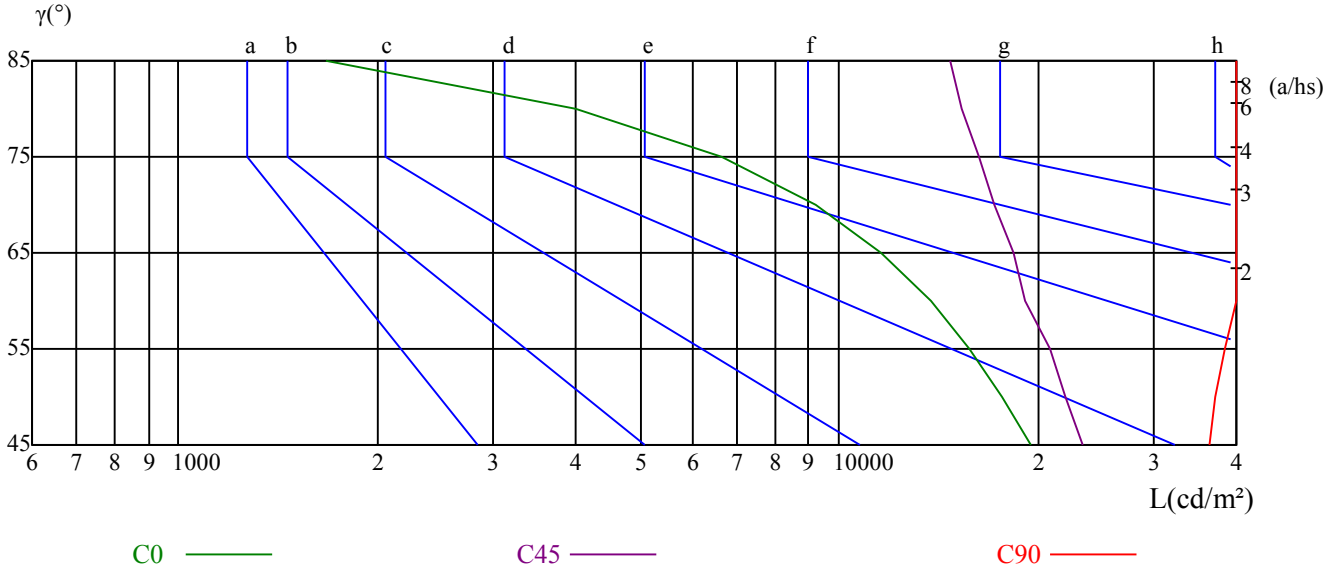
γ	45	50	55	60	65	70	75	80	85
C0	19535	17628	15736	13814	11582	9220	6639	3999	1671
C45	23416	22064	20845	19095	18335	17215	16265	15384	14718
C90	36467	37111	38369	40245	42849	47436	55514	72368	120922

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
28141	43732	37137	23158	57506	45292	14400	134212	95162

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	0.99	0.99	0.99	0.93	0.93	0.93	0.90
1	0.98	0.93	0.89	0.95	0.90	0.86	0.89	0.85	0.82	0.83	0.80	0.77	0.78	0.75	0.73	0.70
2	0.85	0.77	0.71	0.82	0.75	0.69	0.77	0.71	0.66	0.72	0.67	0.63	0.67	0.63	0.60	0.57
3	0.74	0.65	0.58	0.71	0.63	0.57	0.67	0.60	0.54	0.63	0.57	0.52	0.59	0.54	0.50	0.47
4	0.65	0.56	0.49	0.63	0.54	0.48	0.59	0.52	0.46	0.55	0.49	0.44	0.52	0.47	0.42	0.40
5	0.58	0.48	0.41	0.56	0.47	0.41	0.53	0.45	0.39	0.50	0.43	0.38	0.47	0.41	0.37	0.34
6	0.52	0.43	0.36	0.50	0.42	0.35	0.47	0.40	0.34	0.45	0.38	0.33	0.42	0.37	0.32	0.30
7	0.47	0.38	0.32	0.46	0.37	0.31	0.43	0.36	0.30	0.41	0.34	0.29	0.39	0.33	0.28	0.26
8	0.43	0.34	0.28	0.42	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.30	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	0.33	0.27	0.23	0.21
10	0.36	0.28	0.23	0.35	0.28	0.22	0.33	0.27	0.22	0.32	0.26	0.21	0.30	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	556.72	556.28	549.47	538.44	522.40	499.11	474.64	444.36	411.11
15.0	556.72	555.82	549.61	537.28	520.90	497.68	471.66	441.87	410.18
30.0	556.72	554.84	547.46	536.04	520.49	496.30	469.96	443.17	410.80
45.0	556.72	555.20	548.37	535.88	519.35	498.68	473.70	444.77	413.41
60.0	556.72	554.12	544.78	535.18	517.67	499.62	475.20	448.54	420.26
75.0	556.72	554.48	546.85	535.90	520.73	501.07	479.08	453.31	425.40
90.0	556.72	555.56	547.88	537.43	523.14	504.65	483.66	457.67	429.98
105.0	556.72	553.24	546.36	534.20	505.52	500.16	477.46	453.24	424.38
120.0	556.72	553.51	545.21	532.72	517.82	495.69	474.09	446.34	394.32
135.0	556.72	553.77	546.33	533.15	515.40	495.68	470.41	441.81	409.99
150.0	556.72	554.39	545.87	533.68	515.65	492.16	465.25	433.60	402.39
165.0	556.72	552.74	545.69	531.57	514.11	490.76	465.43	434.12	400.37
180.0	556.72	551.97	541.22	524.29	504.21	478.86	449.29	418.82	382.17
195.0	556.72	553.12	543.49	528.46	508.93	484.17	455.73	424.77	390.38
210.0	556.72	552.86	544.32	531.37	511.50	489.92	463.85	433.46	402.17
225.0	556.72	555.83	547.74	535.25	519.17	497.51	471.18	442.79	412.06
240.0	556.72	554.21	548.19	535.72	519.91	502.77	478.62	453.66	426.45
255.0	556.72	556.45	549.27	538.77	535.63	504.48	485.90	460.68	435.81
270.0	556.72	559.94	554.85	543.68	528.23	510.10	490.00	465.62	441.15
285.0	556.72	555.20	550.47	540.73	525.54	509.45	488.00	463.61	438.50
300.0	556.72	555.03	549.23	538.52	523.17	504.97	482.48	458.03	428.76
315.0	556.72	554.12	547.85	536.20	520.87	499.18	475.96	449.25	419.13
330.0	556.72	554.84	545.78	532.51	513.23	490.99	465.34	435.84	404.99
345.0	556.72	551.57	543.06	529.67	509.58	487.69	459.10	428.69	396.30
360.0	556.72	556.28	549.47	538.44	522.40	499.11	474.64	444.36	411.11

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	375.72	333.78	292.03	249.91	205.38	156.90	109.86	66.31	29.75
15.0	372.20	333.13	289.84	246.45	203.61	158.78	117.65	79.03	48.16
30.0	375.29	336.53	295.62	253.82	216.77	178.74	143.95	112.03	86.40
45.0	380.16	345.84	310.44	275.22	238.65	206.66	174.58	147.72	122.29
60.0	388.93	356.25	323.84	291.51	262.07	231.72	202.99	177.67	150.92
75.0	397.48	365.61	337.34	307.54	278.00	250.00	221.81	195.33	170.28
90.0	400.68	370.76	342.00	314.04	282.60	253.84	226.16	200.52	176.85
105.0	397.39	367.46	337.07	307.14	277.83	250.39	222.06	195.34	170.41
120.0	386.65	357.65	324.18	293.31	261.81	231.56	203.27	177.04	151.52
135.0	376.38	341.87	307.99	247.12	238.70	205.80	177.66	149.33	124.50
150.0	364.09	327.51	288.50	249.58	211.19	177.20	144.29	94.70	87.88
165.0	361.29	321.93	283.66	238.96	196.70	153.27	115.18	78.08	51.39
180.0	342.56	300.63	257.71	214.43	165.68	121.69	77.15	37.28	9.41
195.0	353.75	310.36	270.67	228.81	184.88	142.58	103.42	68.77	41.95
210.0	366.29	329.79	290.41	251.57	215.07	179.73	144.94	116.34	89.73
225.0	382.23	346.92	314.12	279.44	246.73	215.47	185.54	156.52	131.63
240.0	395.93	365.40	333.62	303.01	273.38	265.48	214.03	187.55	163.13
255.0	407.80	378.81	349.19	318.58	289.04	261.58	233.39	208.17	182.40
270.0	411.58	382.02	354.06	324.23	294.04	265.72	238.21	212.94	188.11
285.0	409.46	380.41	349.85	321.35	290.69	261.65	235.56	209.11	184.35
300.0	401.64	369.07	339.98	308.92	278.14	248.34	219.07	191.85	167.40
315.0	388.48	354.69	323.05	287.46	255.28	222.21	193.70	165.20	139.11
330.0	367.68	333.87	297.02	259.26	222.76	187.34	154.79	124.74	99.09
345.0	359.93	318.94	276.42	233.80	192.09	153.36	112.65	79.71	51.66
360.0	375.72	333.78	292.03	249.91	205.38	156.90	109.86	66.31	29.75

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	5.38	1.16	0.81	0.63	0.45	0.45	0.54	0.63	0.81
15.0	26.82	14.67	7.83	4.59	3.15	2.61	2.25	2.07	2.07
30.0	64.11	46.48	33.54	23.38	16.27	11.06	8.27	6.47	5.12
45.0	99.20	79.61	62.99	50.05	37.47	28.75	20.85	15.19	11.41
60.0	128.12	107.20	89.33	72.45	58.54	45.79	35.64	26.22	18.94
75.0	146.23	125.31	106.10	88.24	72.35	57.45	44.79	35.19	25.31
90.0	151.84	131.03	110.58	92.44	76.28	62.43	49.04	38.50	27.69
105.0	146.73	125.02	106.88	88.20	72.92	58.35	46.11	35.39	25.91
120.0	129.39	109.22	90.66	73.97	59.88	47.65	37.03	26.95	19.45
135.0	101.83	82.73	66.15	52.62	40.34	30.83	22.14	15.87	12.28
150.0	67.17	50.31	36.95	26.63	19.46	12.38	9.42	6.91	5.20
165.0	29.77	17.92	9.77	5.43	3.62	2.80	2.62	2.44	2.35
180.0	2.24	1.97	1.70	1.61	1.34	1.25	1.16	1.08	0.99
195.0	24.93	14.67	9.27	6.66	5.22	4.59	4.14	3.69	3.24
210.0	67.70	50.53	37.40	27.51	25.62	15.19	11.78	9.35	7.64
225.0	126.15	88.68	72.06	57.15	44.75	34.23	26.06	19.77	15.01
240.0	139.88	118.60	99.75	82.42	66.80	53.42	41.30	31.60	23.97
255.0	159.69	137.52	116.78	98.56	80.88	66.70	52.87	40.57	30.79
270.0	165.86	142.37	123.26	103.79	86.46	70.74	56.63	44.39	33.76
285.0	161.03	139.14	118.23	99.55	83.37	67.11	53.89	41.46	31.28
300.0	145.18	123.23	103.42	85.40	69.60	55.50	43.01	33.19	24.90
315.0	116.88	95.28	77.09	61.58	48.94	37.65	28.50	21.51	16.31
330.0	76.05	58.38	44.03	32.73	24.03	17.85	13.90	10.67	8.61
345.0	32.21	19.91	12.76	8.78	6.61	5.61	4.80	4.34	3.71
360.0	5.38	1.16	0.81	0.63	0.45	0.45	0.54	0.63	0.81

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.81	1.16	1.70	2.33	2.87	3.05	3.23	3.23	3.14
15.0	1.98	2.07	2.25	2.52	2.88	3.06	3.24	3.06	3.06
30.0	3.87	3.60	3.87	4.05	4.05	3.69	3.33	3.15	2.97
45.0	8.27	6.20	5.48	5.12	5.12	4.49	3.95	3.23	3.05
60.0	13.92	9.97	7.72	6.37	5.75	5.30	4.58	3.50	2.96
75.0	18.31	13.20	9.69	7.54	6.46	5.74	5.12	3.86	2.96
90.0	20.28	14.83	10.99	8.31	6.70	5.98	5.18	4.02	2.86
105.0	19.03	13.67	10.10	7.77	6.52	5.90	5.09	3.93	2.86
120.0	14.63	10.44	8.12	6.78	6.16	5.44	4.82	3.66	2.94
135.0	8.87	6.72	5.74	5.56	5.47	4.75	4.21	3.14	2.96
150.0	4.48	4.04	4.30	4.39	4.30	3.77	3.50	3.05	2.96
165.0	2.26	2.26	2.71	2.80	2.99	2.99	3.35	3.08	2.99
180.0	0.81	0.99	1.16	1.34	1.61	1.97	2.15	2.60	2.87
195.0	2.88	2.61	2.61	2.61	2.70	2.61	2.61	2.70	2.97
210.0	6.38	5.39	4.86	4.50	4.05	3.69	3.42	3.15	2.88
225.0	11.50	9.16	7.46	6.38	5.57	4.67	4.13	3.68	2.97
240.0	17.96	13.47	10.32	8.35	6.82	5.66	4.67	3.95	3.05
255.0	22.89	17.23	12.75	9.78	7.72	6.28	5.03	4.22	3.05
270.0	25.19	18.49	13.58	10.27	8.04	6.34	5.27	4.20	3.13
285.0	23.14	17.25	12.78	9.74	7.69	6.26	5.09	3.84	2.86
300.0	18.56	14.01	10.71	8.48	6.96	5.71	4.19	3.39	2.94
315.0	12.55	9.77	7.98	6.72	5.56	4.21	3.68	3.32	2.87
330.0	6.99	6.01	5.20	4.57	3.77	3.32	3.23	2.96	2.78
345.0	3.26	2.99	2.80	2.62	2.62	2.44	2.62	2.62	2.80
360.0	0.81	1.16	1.70	2.33	2.87	3.05	3.23	3.23	3.14

Intensity data(cd)

C/γ(°)	180.0
0.0	2.96
15.0	3.06
30.0	2.97
45.0	3.05
60.0	2.96
75.0	2.96
90.0	2.95
105.0	2.95
120.0	2.94
135.0	2.96
150.0	2.96
165.0	2.99
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	2.96