正奇事

Client:
LumCAT: ZS-FL2*4-K60-3065
Luminaire: LED 灯具
Report No:
Ballast type:

Test No:	Voltage(V): 120.030
LampCAT:	Current(A): 0.463
Lamp flux(lm): 7203.2	Power (W): 55.260
Number of Lamps: 1	PF: 0.995
Length(mm): 1190	Width(mm): 580
Phm Type: C	Height(mm): 8

Photometric Results

Lumens(lm): 7203.18, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 130.35
Central intensity(cd): 2802.537, Maximum intensity(cd): 2802.537
Angle of maximum intensity: C=75.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=97.8
[C90/270]Total=96.8
Field angle(10%Imax): [C0/180]Total=161.8
[C90/270]Total=162.0
Maximum s/h(1/2): C0_180=1.17 C90_270=1.16
Maximum s/h(1/4): C0_180=1.28 C90_270=1.26
Up flux rate of lamp(%): 2.26%
Down flux rate of lamp(%): 97.74%
Up flux rate of LUM(%): 2.26%
Down flux rate of LUM(%): 97.74%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 77.220%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2802.537	0.000	0	0.00%	0.00%
5.0	2783.974	66.785	66.785	0.93%	0.93%
10.0	2730.268	197.262	264.047	2.74%	3.67%
15.0	2642.542	318.711	582.758	4.42%	8.09%
20.0	2520.006	425.466	1008.225	5.91%	14.00%
25.0	2365.927	512.444	1520.669	7.11%	21.11%
30.0	2188.234	576.333	2097.002	8.00%	29.11%
35.0	1980.634	613.895	2710.897	8.52%	37.63%
40.0	1768.276	625.477	3336.374	8.68%	46.32%
45.0	1558.928	616.059	3952.433	8.55%	54.87%
50.0	1342.265	586.229	4538.662	8.14%	63.01%
55.0	1141.750	540.108	5078.769	7.50%	70.51%
60.0	950.193	483.547	5562.316	6.71%	77.22%
65.0	766.653	417.368	5979.684	5.79%	83.01%
70.0	601.541	346.435	6326.12	4.81%	87.82%
75.0	454.282	275.975	6602.095	3.83%	91.66%
80.0	321.026	207.451	6809.546	2.88%	94.54%
85.0	212.952	145.095	6954.64	2.01%	96.55%
90.0	99.654	85.594	7040.235	1.19%	97.74%
95.0	37.940	37.674	7077.909	0.52%	98.26%
100.0	27.012	17.649	7095.558	0.25%	98.51%
105.0	29.416	15.099	7110.657	0.21%	98.72%
110.0	26.948	14.733	7125.389	0.20%	98.92%
115.0	25.900	13.381	7138.77	0.19%	99.11%
120.0	24.440	12.238	7151.008	0.17%	99.28%
125.0	21.742	10.675	7161.683	0.15%	99.42%
130.0	19.383	8.942	7170.625	0.12%	99.55%
135.0	16.349	7.220	7177.845	0.10%	99.65%
140.0	11.818	5.215	7183.06	0.07%	99.72%
145.0	11.228	3.845	7186.905	0.05%	99.77%
150.0	12.725	3.527	7190.433	0.05%	99.82%
155.0	14.110	3.396	7193.828	0.05%	99.87%
160.0	15.345	3.089	7196.918	0.04%	99.91%
165.0	16.542	2.628	7199.546	0.04%	99.95%
170.0	17.441	2.016	7201.561	0.03%	99.98%
175.0	18.488	1.285	7202.847	0.02%	100.00%
180.0	9.431	0.334	7203.18	0.00%	100.00%

Zonal flux distribution table

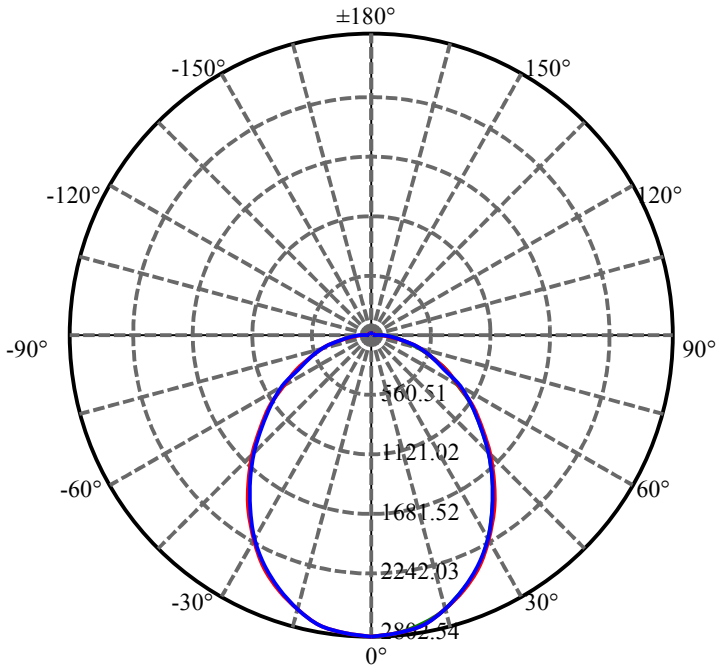
ZONAL LUMEN SUMMARY

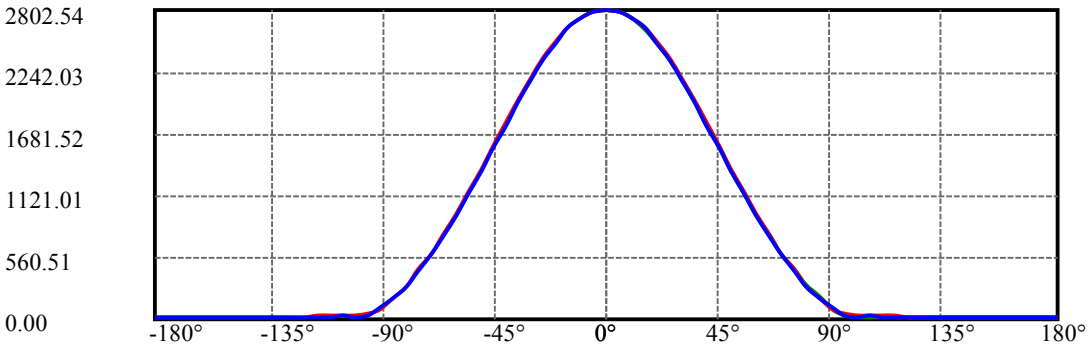
Zone	Lumens	%Lamp	%Fixt
0-30	2097.00	29.11%	29.11%
0-40	3336.37	46.32%	46.32%
0-60	5562.32	77.22%	77.22%
0-90	7040.23	97.74%	97.74%
0-120	7151.01	99.28%	99.28%
0-180	7203.18	100.00%	100.00%
60-90	1477.92	20.52%	20.52%
90-120	110.77	1.54%	1.54%
90-130	130.39	1.81%	1.81%
90-150	150.20	2.09%	2.09%
90-180	162.61	2.26%	2.26%
0-62.40	5762.54	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	264.05
10-20	744.18
20-30	1088.78
30-40	1239.37
40-50	1202.29
50-60	1023.65
60-70	763.80
70-80	483.43
80-90	230.69
90-100	55.32
100-110	29.83
110-120	25.62
120-130	19.62
130-140	12.44
140-150	7.37
150-160	6.49
160-170	4.64
170-180	1.29

Light Distribution Curve [Unit:cd]





C75(Max):

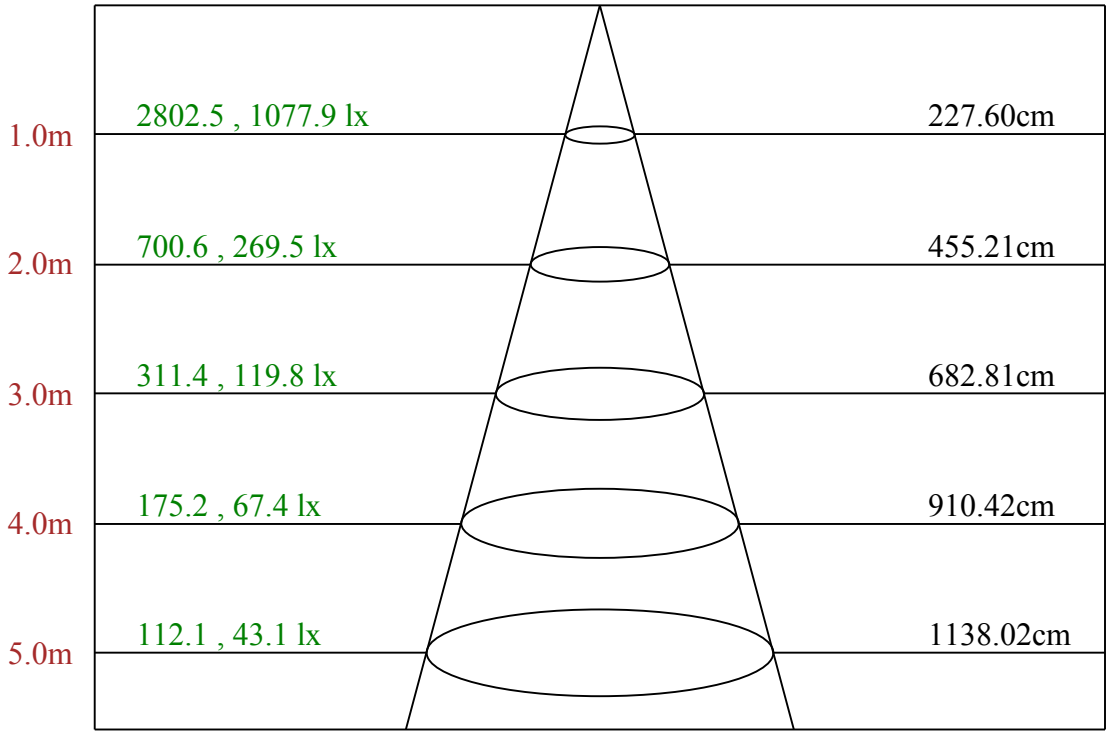
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:80.9 Right:80.9
:C90/270Left:81.0 Right:81.0

Beam Angle(50%Imax):C0/180Left:48.9 Right:48.9
:C90/270Left:48.4 Right:48.4

Lux distance Curve



Max , Ave

Beam angle of C75 plane 97.39

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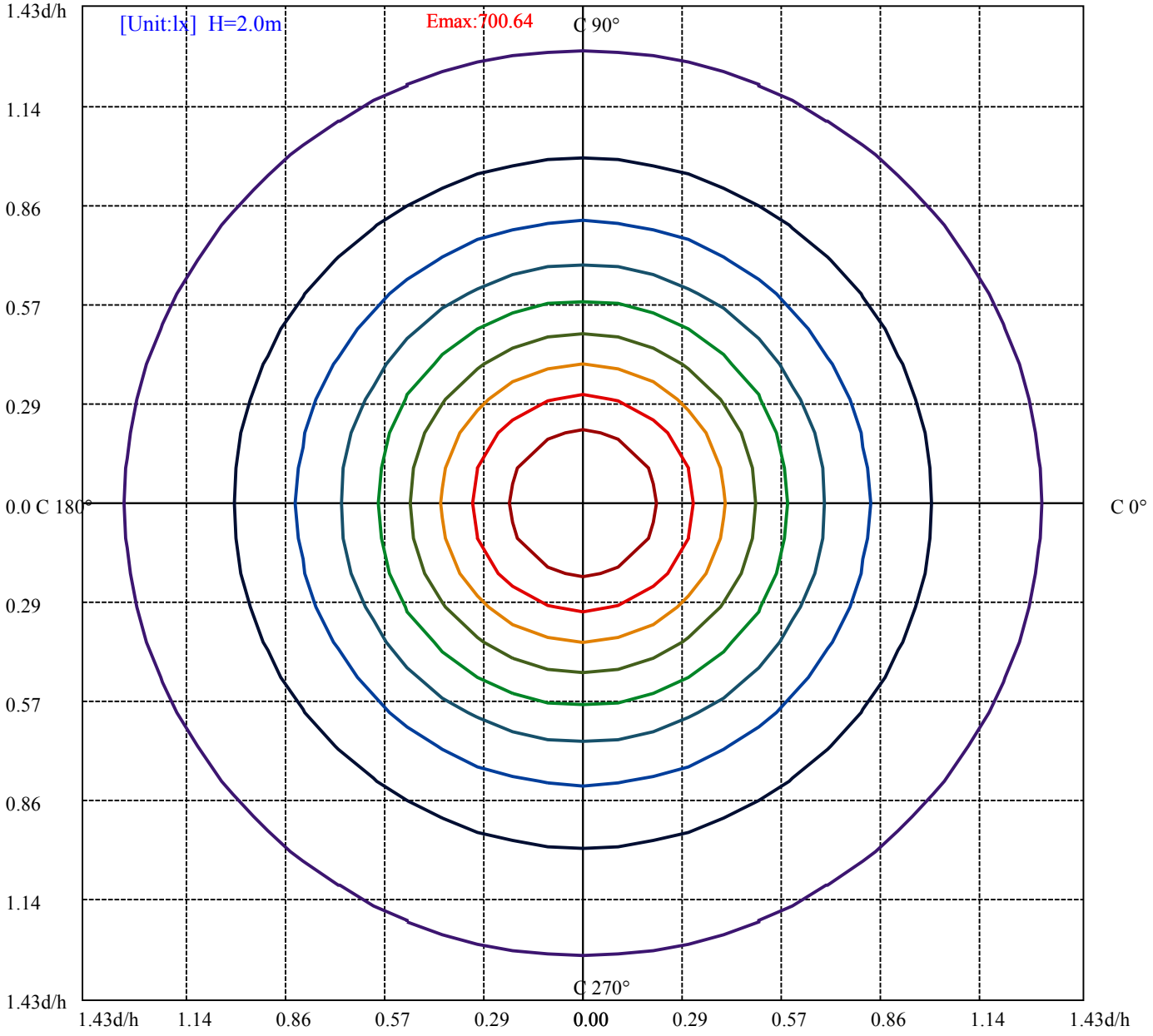
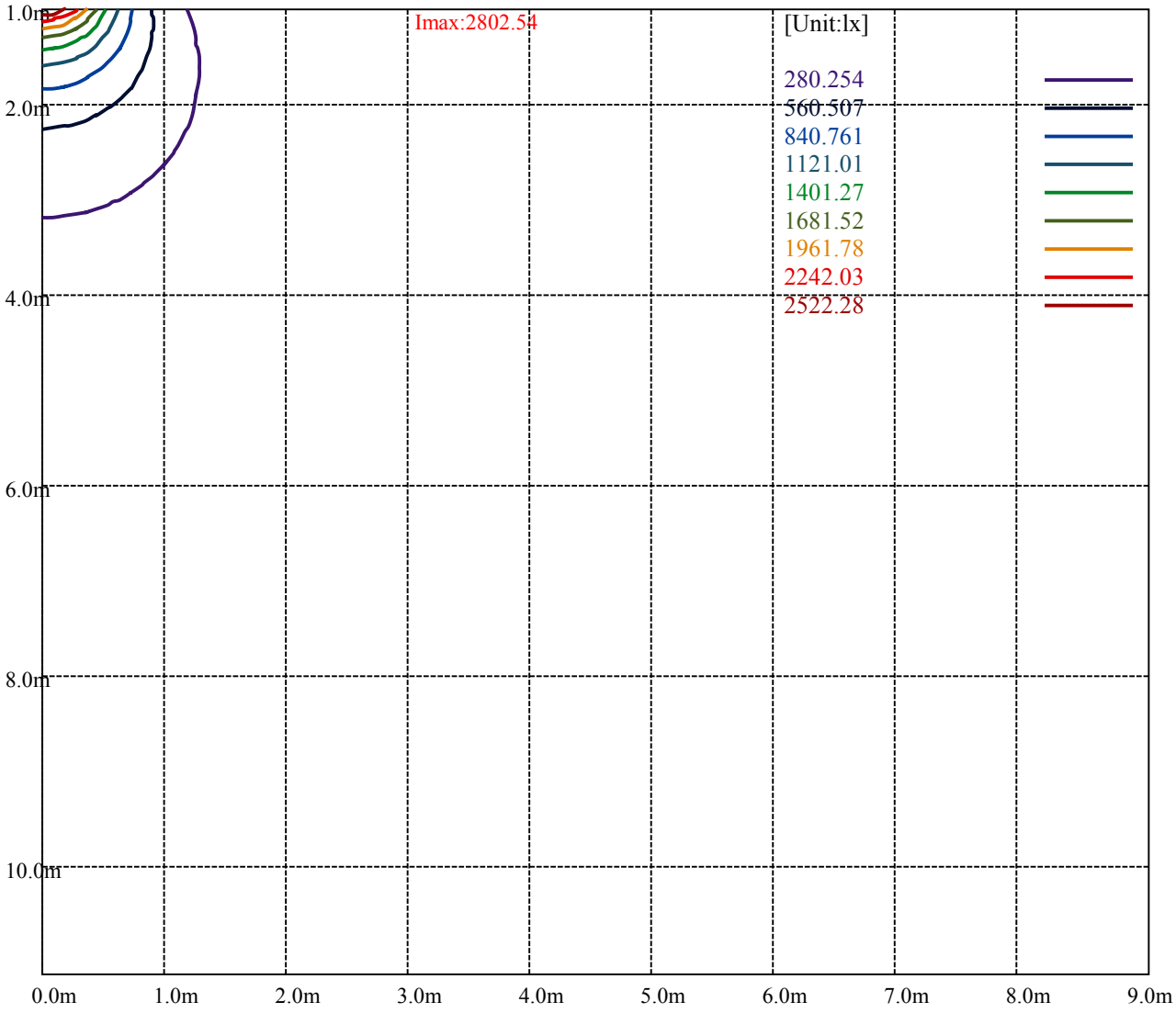
ISO illuminance diagram



(10%Emax) 70.0635
(20%Emax) 140.1268
(30%Emax) 210.1902
(40%Emax) 280.2525
(50%Emax) 350.3175
(60%Emax) 420.38
(70%Emax) 490.445
(80%Emax) 560.5075
(90%Emax) 630.57

Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1
Date: 2023/5/11
Humidity(%): 61.8%
Operator: JUN WANG
Distance(m): 29.97

Space ISO Lux diagram



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Luminance Limitting Curve(no luminous side)

Luminance Table

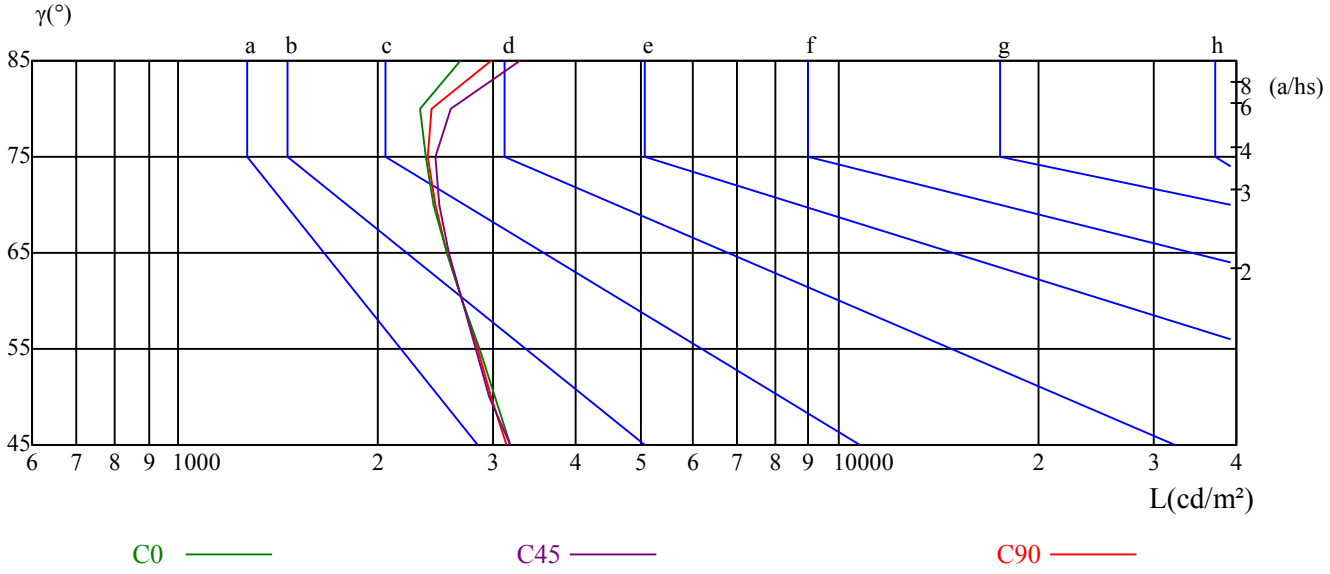
γ	45	50	55	60	65	70	75	80	85
C0	3175	3006	2849	2692	2555	2435	2365	2328	2680
C45	3177	2956	2824	2686	2558	2479	2451	2587	3286
C90	3147	2984	2836	2690	2546	2446	2380	2423	2975

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2630	2583	2638	2487	2440	2584	3102	3204	3831

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	1.19	1.19	1.19	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	0.98
1	1.03	0.99	0.95	1.01	0.97	0.93	0.96	0.93	0.90	0.92	0.89	0.86	0.88	0.85	0.83	0.81
2	0.90	0.83	0.78	0.88	0.82	0.76	0.84	0.79	0.74	0.80	0.76	0.72	0.77	0.74	0.70	0.68
3	0.79	0.71	0.65	0.78	0.70	0.64	0.74	0.68	0.63	0.71	0.66	0.61	0.68	0.64	0.60	0.58
4	0.71	0.62	0.55	0.69	0.61	0.55	0.66	0.59	0.54	0.64	0.58	0.53	0.61	0.56	0.52	0.50
5	0.63	0.55	0.48	0.62	0.54	0.48	0.60	0.52	0.47	0.58	0.51	0.46	0.55	0.50	0.45	0.43
6	0.57	0.48	0.42	0.56	0.48	0.42	0.54	0.47	0.41	0.52	0.46	0.41	0.50	0.45	0.40	0.38
7	0.52	0.43	0.37	0.51	0.43	0.37	0.49	0.42	0.37	0.48	0.41	0.36	0.46	0.40	0.36	0.34
8	0.48	0.39	0.33	0.47	0.39	0.33	0.45	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.32	0.30
9	0.44	0.36	0.30	0.43	0.35	0.30	0.42	0.35	0.30	0.41	0.34	0.30	0.39	0.34	0.29	0.27
10	0.41	0.33	0.28	0.40	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.27	0.37	0.31	0.27	0.25

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	2802.54	2786.54	2739.45	2660.37	2538.63	2392.91	2212.53	2010.82	1810.90
15.0	2802.54	2788.21	2738.07	2657.49	2542.88	2391.56	2215.17	2019.08	1811.35
30.0	2802.54	2787.24	2742.24	2664.84	2545.14	2398.45	2218.45	2015.95	1803.56
45.0	2802.54	2790.84	2738.68	2655.03	2541.71	2396.91	2217.93	2013.76	1805.10
60.0	2802.54	2791.74	2744.08	2660.43	2541.71	2396.91	2217.03	2017.36	1798.80
75.0	2802.54	2791.76	2743.25	2659.72	2540.25	2393.83	2214.18	2015.67	1794.70
90.0	2802.54	2792.65	2747.73	2670.45	2543.76	2399.09	2214.89	2015.42	1794.38
105.0	2802.54	2793.54	2750.37	2668.53	2550.70	2399.60	2223.32	2015.56	1797.90
120.0	2802.54	2797.12	2752.91	2677.12	2567.04	2417.26	2238.60	2041.90	1819.93
135.0	2802.54	2797.13	2755.68	2679.08	2570.04	2425.86	2251.94	2053.69	1836.52
150.0	2802.54	2796.24	2755.78	2681.16	2571.46	2430.30	2254.98	2059.87	1846.78
165.0	2802.54	2795.36	2757.68	2683.22	2572.88	2431.14	2258.89	2063.33	1855.20
180.0	2802.54	2782.10	2723.45	2629.27	2518.20	2354.70	2177.87	1966.40	1757.58
195.0	2802.54	2781.94	2723.74	2629.73	2505.27	2349.47	2165.03	1956.40	1742.41
210.0	2802.54	2779.14	2723.34	2627.94	2504.64	2347.15	2166.25	1955.66	1743.26
225.0	2802.54	2778.25	2715.29	2624.46	2491.34	2337.55	2154.07	1950.80	1727.75
240.0	2802.54	2775.55	2715.29	2621.76	2494.94	2329.45	2148.67	1939.11	1731.35
255.0	2802.54	2777.39	2710.92	2611.21	2480.96	2319.28	2130.65	1929.44	1722.84
270.0	2802.54	2771.99	2709.09	2613.84	2479.96	2302.95	2121.45	1913.88	1708.12
285.0	2802.54	2771.06	2705.40	2606.47	2467.96	2305.17	2111.80	1904.03	1697.17
300.0	2802.54	2773.66	2707.80	2607.64	2476.81	2310.78	2125.81	1911.97	1710.76
315.0	2802.54	2773.70	2710.62	2609.69	2475.42	2314.12	2130.29	1922.13	1706.75
330.0	2802.54	2771.97	2708.13	2609.23	2477.96	2317.02	2219.91	1918.71	1709.21
345.0	2802.54	2770.24	2707.44	2612.35	2480.48	2320.79	2127.92	1924.28	1706.28
360.0	2802.54	2786.54	2739.45	2660.37	2538.63	2392.91	2212.53	2010.82	1810.90

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1594.98	1376.39	1172.91	965.87	786.38	611.33	459.39	308.33	196.37
15.0	1600.04	1384.26	1172.05	976.86	795.99	622.29	462.91	326.81	215.79
30.0	1593.86	1376.07	1174.47	971.98	793.78	628.19	476.99	344.69	232.19
45.0	1581.15	1363.49	1165.63	972.25	789.68	629.58	477.58	348.97	242.84
60.0	1578.45	1363.49	1161.13	968.66	793.27	626.88	476.68	346.27	235.64
75.0	1580.02	1364.44	1161.44	972.80	794.95	624.28	469.78	335.95	222.77
90.0	1580.53	1364.88	1168.10	978.51	792.51	624.48	469.04	330.66	212.05
105.0	1588.34	1375.19	1180.02	981.25	805.86	634.98	482.98	345.37	232.05
120.0	1600.68	1390.44	1182.91	985.31	812.07	646.05	495.36	364.53	254.45
135.0	1615.74	1394.96	1192.20	1000.26	825.44	657.83	508.24	373.97	262.23
150.0	1634.59	1408.91	1208.41	1006.11	827.18	659.05	507.10	372.23	255.35
165.0	1643.48	1426.39	1224.54	1020.00	828.02	657.57	503.27	362.43	239.53
180.0	1546.99	1334.63	1127.59	936.55	748.17	582.01	429.18	293.23	176.82
195.0	1531.10	1326.95	1126.39	924.93	741.37	580.21	434.26	300.85	191.61
210.0	1529.97	1314.87	1115.97	929.68	757.78	593.09	442.79	317.69	212.40
225.0	1510.10	1298.74	1115.26	925.48	741.11	584.61	440.71	318.39	215.86
240.0	1514.59	1314.03	1108.96	915.59	735.71	573.82	429.01	306.70	207.76
255.0	1516.24	1314.14	1105.74	903.64	721.29	559.61	414.99	289.24	185.94
270.0	1512.24	1303.78	1098.91	899.44	714.34	551.70	402.54	272.26	173.42
285.0	1501.10	1294.24	1092.77	891.31	717.72	556.73	471.29	283.31	181.68
300.0	1488.79	1288.48	1091.78	985.31	717.33	559.42	415.06	294.15	198.51
315.0	1586.00	1278.71	1092.18	902.94	721.81	562.31	419.93	300.98	200.95
330.0	1490.73	1275.84	1081.63	895.52	726.48	560.15	410.00	292.21	191.51
345.0	1494.57	1281.06	1081.00	894.41	711.40	550.82	403.69	275.41	173.14
360.0	1594.98	1376.39	1172.91	965.87	786.38	611.33	459.39	308.33	196.37

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	104.85	45.32	34.65	28.43	26.66	25.77	23.99	23.10	21.33
15.0	114.61	47.46	34.92	28.65	25.97	24.18	23.28	21.49	20.59
30.0	118.80	43.20	32.40	28.80	27.90	27.00	24.30	20.70	18.00
45.0	120.52	37.77	26.08	27.88	27.88	26.08	24.28	23.38	20.69
60.0	116.02	38.67	18.89	26.08	24.28	23.38	23.38	17.99	17.09
75.0	101.50	47.61	11.68	23.35	20.66	20.66	20.66	20.66	18.86
90.0	101.53	45.83	7.19	24.26	23.36	21.56	21.56	21.56	20.67
105.0	123.22	50.37	11.69	23.38	20.69	18.89	20.69	20.69	18.89
120.0	154.29	46.02	18.95	27.07	26.17	24.36	23.46	18.05	17.14
135.0	163.11	38.75	26.13	27.94	27.94	27.03	26.13	23.43	20.73
150.0	157.34	44.96	32.37	28.77	27.87	26.97	24.28	18.88	17.98
165.0	140.84	45.75	34.99	28.71	26.02	24.22	23.32	21.53	20.63
180.0	57.76	42.65	34.65	31.10	27.55	26.66	23.99	23.10	20.44
195.0	65.36	42.98	34.92	31.34	26.86	25.97	24.18	21.49	18.80
210.0	73.80	40.50	32.40	34.20	32.40	31.50	27.90	18.90	18.00
225.0	78.25	35.08	32.38	34.18	32.38	28.78	27.88	26.08	17.99
240.0	73.75	24.28	34.18	32.38	27.88	26.98	26.08	18.89	18.89
255.0	65.57	16.17	14.37	28.74	23.35	24.25	24.25	23.35	21.56
270.0	115.01	13.48	11.68	28.75	26.06	26.06	26.06	24.26	23.36
285.0	65.66	17.99	23.38	27.88	23.38	24.28	24.28	23.38	21.59
300.0	72.18	27.07	35.19	32.48	28.87	27.97	26.17	20.75	18.95
315.0	73.89	35.14	35.14	35.14	32.44	31.54	27.94	26.13	14.42
330.0	71.93	40.46	35.07	35.07	32.37	31.47	24.28	20.68	17.98
345.0	61.90	43.06	34.99	31.40	27.81	26.02	24.22	23.32	20.63
360.0	104.85	45.32	34.65	28.43	26.66	25.77	23.99	23.10	21.33

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	20.44	18.66	11.55	13.33	14.22	15.99	16.88	17.77	18.66
15.0	18.80	17.91	11.64	13.43	14.33	16.12	17.01	17.01	18.80
30.0	17.10	8.10	11.70	13.50	14.40	16.20	17.10	17.10	18.00
45.0	7.20	8.09	11.69	13.49	14.39	16.19	17.09	17.99	17.99
60.0	16.19	10.79	11.69	13.49	14.39	16.19	17.09	17.99	18.89
75.0	17.96	17.96	11.68	13.47	14.37	16.17	17.07	17.07	18.86
90.0	18.87	17.97	11.68	13.48	16.17	17.07	17.07	17.07	18.87
105.0	17.99	17.99	11.69	13.49	16.19	17.09	17.09	17.09	18.89
120.0	16.24	8.12	11.73	13.53	14.44	16.24	17.14	18.05	18.05
135.0	7.21	8.11	11.71	13.52	14.42	16.22	17.12	18.02	18.92
150.0	17.08	8.09	10.79	13.49	14.39	16.18	17.08	17.98	18.88
165.0	18.84	17.94	10.77	13.46	14.35	16.15	17.04	17.94	18.84
180.0	17.77	15.99	10.66	11.55	13.33	14.22	15.99	16.88	18.66
195.0	17.91	8.06	10.74	11.64	13.43	14.33	14.33	17.01	17.91
210.0	16.20	8.10	10.80	11.70	13.50	14.40	16.20	17.10	18.00
225.0	8.09	8.09	10.79	11.69	13.49	14.39	16.19	17.09	17.99
240.0	17.99	8.09	10.79	11.69	13.49	14.39	16.19	17.09	17.99
255.0	20.66	13.47	10.78	11.68	13.47	14.37	16.17	17.07	17.96
270.0	21.56	16.17	11.68	13.48	14.38	14.38	16.17	17.97	18.87
285.0	20.69	13.49	11.69	13.49	13.49	14.39	16.19	17.99	18.89
300.0	16.24	8.12	10.83	11.73	13.53	14.44	16.24	18.05	18.95
315.0	7.21	8.11	10.81	11.71	13.52	14.42	16.22	17.12	18.02
330.0	16.18	8.09	10.79	11.69	13.49	14.39	16.18	17.08	17.98
345.0	17.94	8.07	10.77	11.66	13.46	14.35	16.15	17.04	18.84
360.0	20.44	18.66	11.55	13.33	14.22	15.99	16.88	17.77	18.66

Intensity data(cd)

C/γ(°)	180.0
0.0	18.66
15.0	18.80
30.0	18.90
45.0	18.89
60.0	18.89
75.0	18.86
90.0	18.87
105.0	18.89
120.0	18.95
135.0	18.92
150.0	18.88
165.0	18.84
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	18.66