正奇事

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

Test No:	Voltage(V): 120.020
LampCAT:	Current(A): 0.453
Lamp flux(lm): 7189.0	Power (W): 54.090
Number of Lamps: 1	PF: 0.995
Length(mm): 1190	Width(mm): 580
Phm Type: C	Height(mm): 8

Photometric Results

Lumens(lm): 7189.01, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 132.91
Central intensity(cd): 2797.147, Maximum intensity(cd): 2797.148
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 : 77.222%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2797.148	0.000	0	0.00%	0.00%
5.0	2778.548	66.656	66.656	0.93%	0.93%
10.0	2724.991	196.879	263.535	2.74%	3.67%
15.0	2637.340	318.090	581.625	4.42%	8.09%
20.0	2515.141	424.637	1006.261	5.91%	14.00%
25.0	2361.399	511.459	1517.72	7.11%	21.11%
30.0	2184.005	575.225	2092.945	8.00%	29.11%
35.0	1976.780	612.705	2705.65	8.52%	37.64%
40.0	1764.757	624.247	3329.897	8.68%	46.32%
45.0	1555.822	614.832	3944.729	8.55%	54.87%
50.0	1339.608	585.064	4529.793	8.14%	63.01%
55.0	1139.616	539.066	5068.859	7.50%	70.51%
60.0	948.360	482.630	5551.489	6.71%	77.22%
65.0	765.268	416.586	5968.075	5.79%	83.02%
70.0	600.231	345.753	6313.828	4.81%	87.83%
75.0	453.459	275.418	6589.246	3.83%	91.66%
80.0	320.390	207.060	6796.306	2.88%	94.54%
85.0	212.429	144.779	6941.086	2.01%	96.55%
90.0	99.280	85.348	7026.434	1.19%	97.74%
95.0	37.940	37.572	7064.005	0.52%	98.26%
100.0	27.012	17.649	7081.654	0.25%	98.51%
105.0	29.305	15.069	7096.723	0.21%	98.72%
110.0	26.948	14.703	7111.427	0.20%	98.92%
115.0	25.787	13.353	7124.779	0.19%	99.11%
120.0	24.440	12.210	7136.99	0.17%	99.28%
125.0	21.742	10.675	7147.665	0.15%	99.42%
130.0	19.383	8.942	7156.607	0.12%	99.55%
135.0	16.349	7.220	7163.827	0.10%	99.65%
140.0	11.780	5.208	7169.035	0.07%	99.72%
145.0	10.779	3.764	7172.799	0.05%	99.77%
150.0	12.725	3.461	7176.26	0.05%	99.82%
155.0	14.110	3.396	7179.656	0.05%	99.87%
160.0	15.345	3.089	7182.745	0.04%	99.91%
165.0	16.542	2.628	7185.373	0.04%	99.95%
170.0	17.441	2.016	7187.389	0.03%	99.98%
175.0	18.488	1.285	7188.674	0.02%	100.00%
180.0	9.431	0.334	7189.008	0.00%	100.00%

Zonal flux distribution table

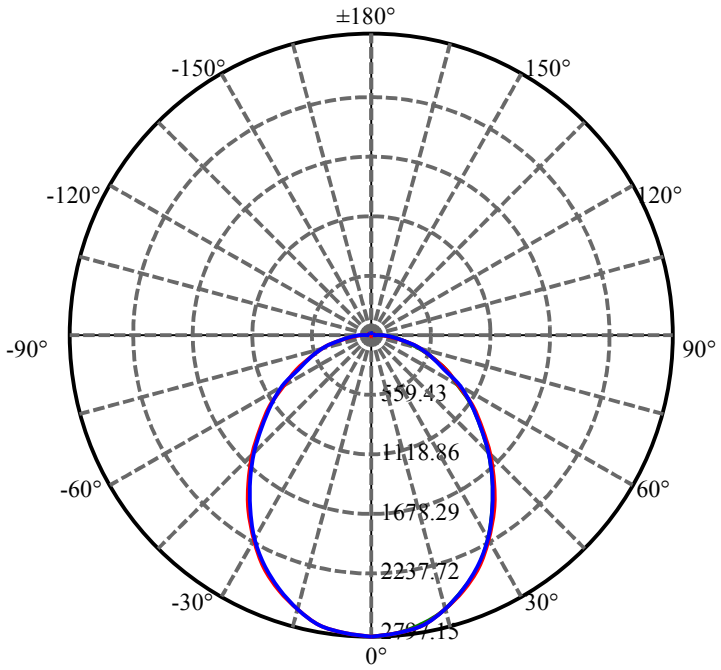
ZONAL LUMEN SUMMARY

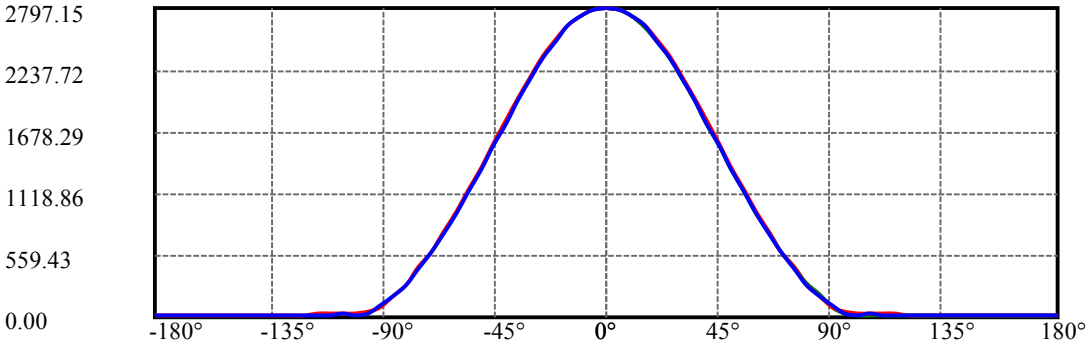
Zone	Lumens	%Lamp	%Fixt
0-30	2092.94	29.11%	29.11%
0-40	3329.90	46.32%	46.32%
0-60	5551.49	77.22%	77.22%
0-90	7026.43	97.74%	97.74%
0-120	7136.99	99.28%	99.28%
0-180	7189.01	100.00%	100.00%
60-90	1474.94	20.52%	20.52%
90-120	110.56	1.54%	1.54%
90-130	130.17	1.81%	1.81%
90-150	149.83	2.08%	2.08%
90-180	162.24	2.26%	2.26%
0-62.40	5751.21	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	263.53
10-20	742.73
20-30	1086.68
30-40	1236.95
40-50	1199.90
50-60	1021.70
60-70	762.34
70-80	482.48
80-90	230.13
90-100	55.22
100-110	29.77
110-120	25.56
120-130	19.62
130-140	12.43
140-150	7.22
150-160	6.49
160-170	4.64
170-180	1.29

Light Distribution Curve [Unit:cd]





C75(Max):

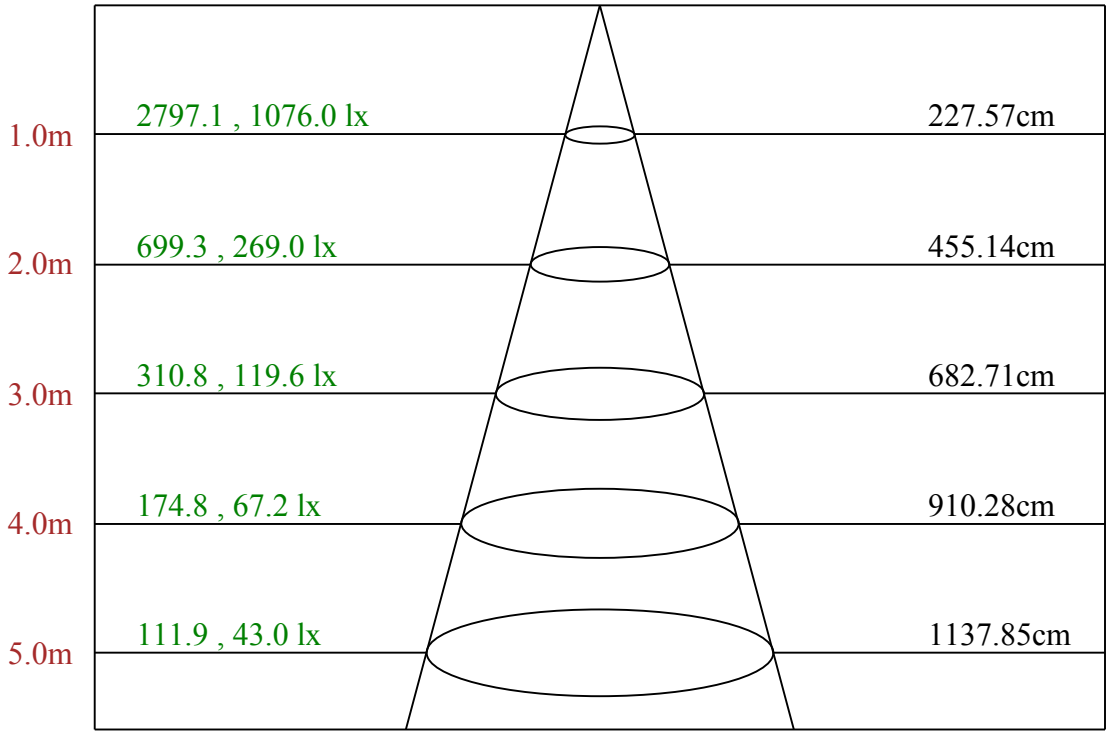
C0/C180:

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 97.38

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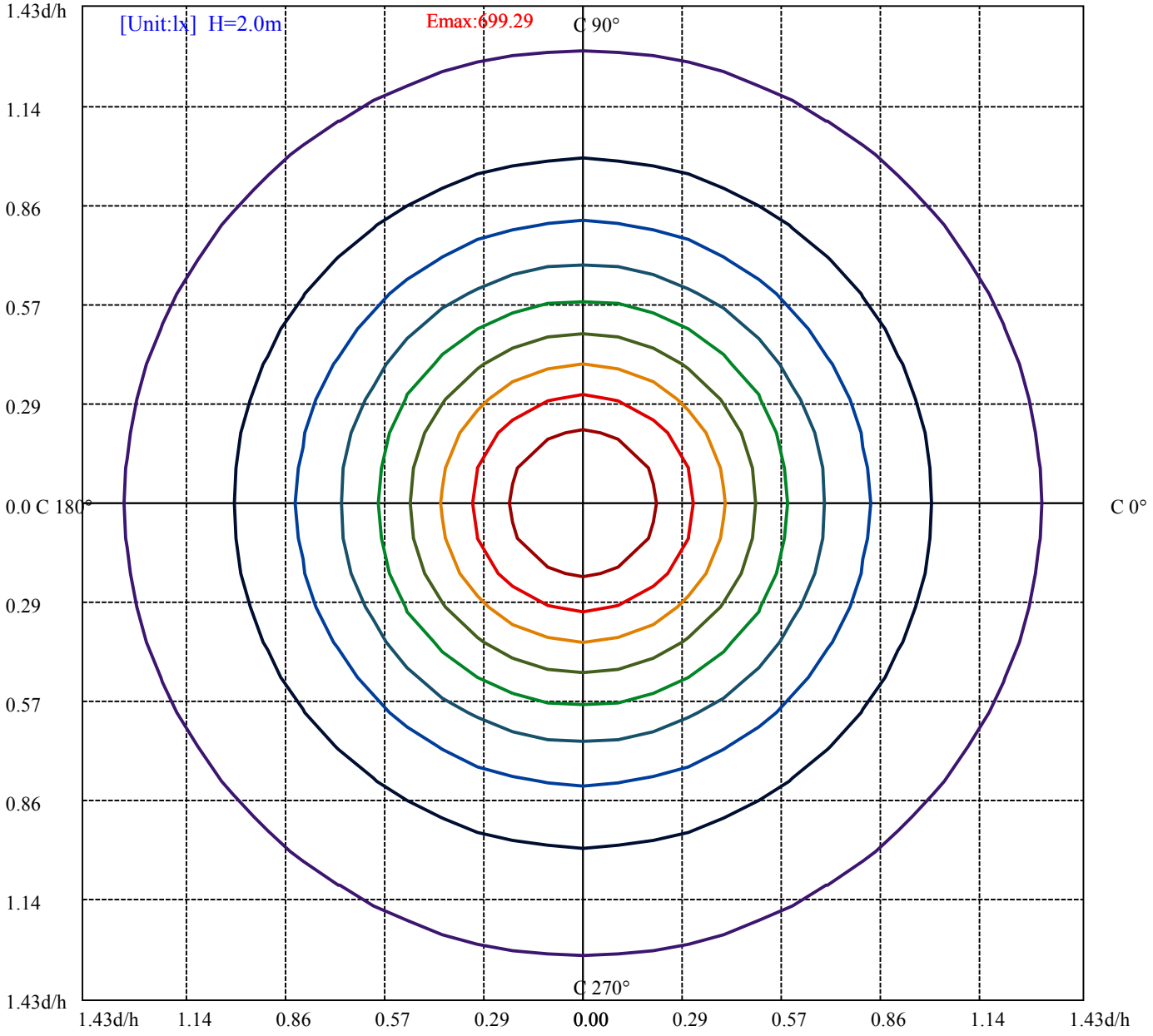
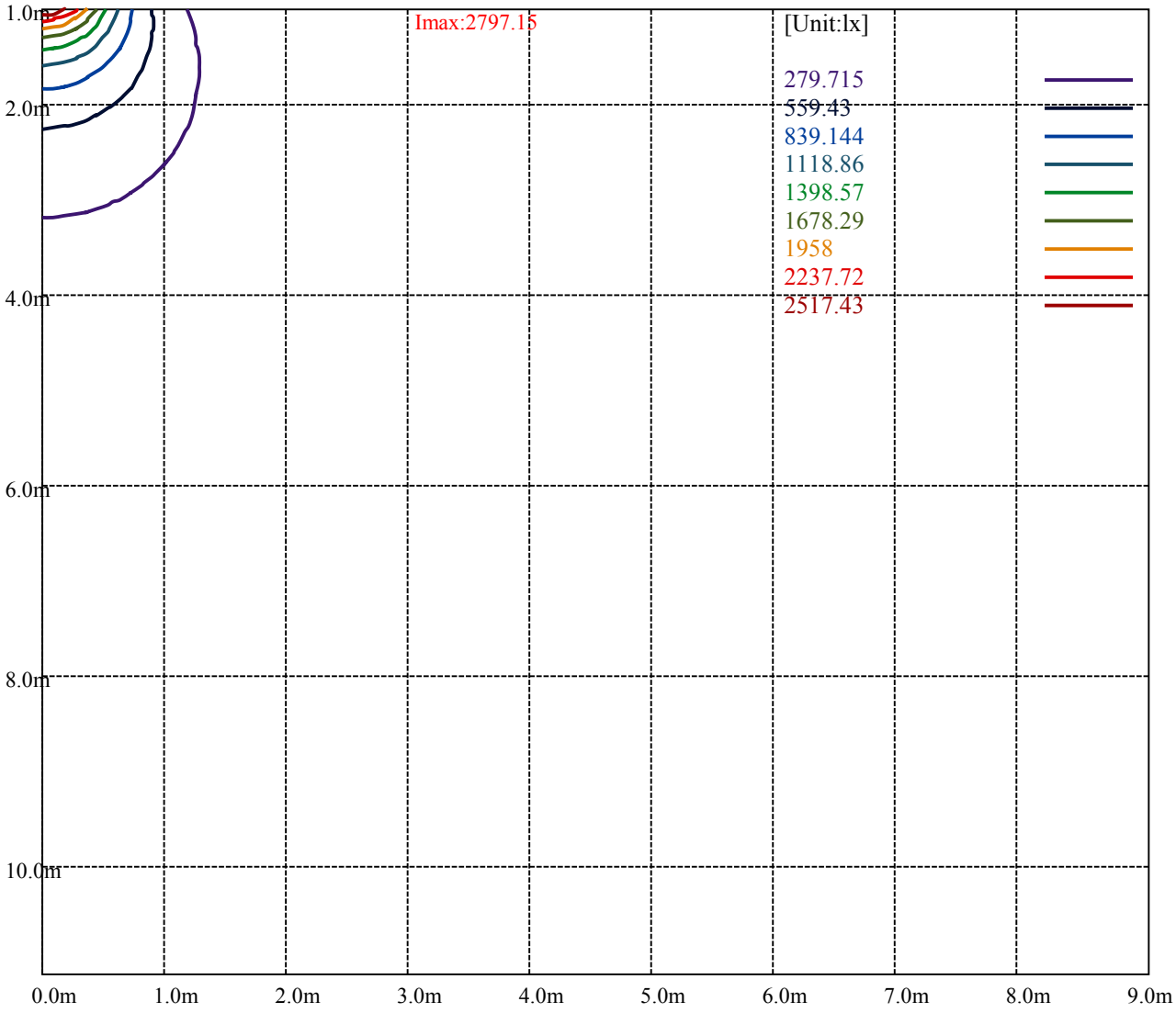
ISO illuminance diagram



(10%Emax) 69.92875
(20%Emax) 139.8573
(30%Emax) 209.786
(40%Emax) 279.715
(50%Emax) 349.6425
(60%Emax) 419.5725
(70%Emax) 489.5
(80%Emax) 559.43
(90%Emax) 629.3575

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

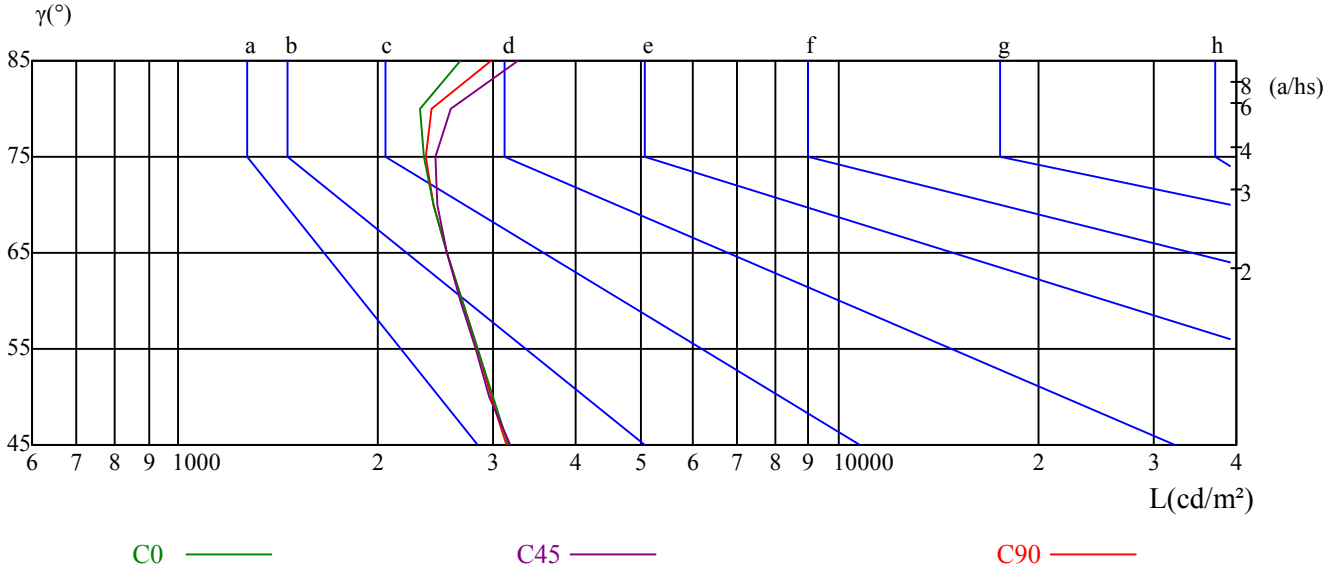
γ	45	50	55	60	65	70	75	80	85
C0	3170	3000	2845	2686	2550	2432	2361	2324	2667
C45	3171	2950	2819	2681	2555	2474	2447	2582	3274
C90	3141	2978	2832	2684	2542	2440	2375	2423	2968

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2626	2578	2634	2482	2435	2579	3087	3197	3816

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	0.69	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	2797.15	2780.27	2734.06	2654.98	2534.14	2388.42	2208.04	2007.23	1807.31
15.0	2797.15	2782.82	2732.68	2652.10	2538.38	2387.07	2211.57	2014.59	1807.76
30.0	2797.15	2781.85	2736.85	2659.45	2539.75	2393.96	2213.96	2012.36	1799.97
45.0	2797.15	2785.46	2733.29	2650.54	2536.32	2392.42	2213.43	2010.17	1801.51
60.0	2797.15	2786.35	2738.69	2655.04	2536.32	2392.42	2212.53	2013.77	1795.21
75.0	2797.15	2786.37	2737.86	2654.33	2534.86	2389.34	2209.69	2012.08	1791.11
90.0	2797.15	2787.26	2742.34	2665.96	2539.27	2394.60	2210.40	2011.83	1790.79
105.0	2797.15	2788.15	2744.98	2663.14	2546.21	2395.11	2218.83	2011.97	1794.31
120.0	2797.15	2791.73	2747.52	2671.73	2561.65	2412.77	2234.11	2038.31	1816.34
135.0	2797.15	2791.74	2750.29	2674.59	2564.65	2421.37	2248.35	2049.20	1832.92
150.0	2797.15	2790.85	2750.39	2675.77	2566.97	2425.81	2250.49	2056.28	1843.19
165.0	2797.15	2789.97	2752.29	2677.83	2567.49	2425.75	2254.40	2058.84	1851.61
180.0	2797.15	2776.71	2718.07	2623.88	2513.70	2350.21	2174.28	1961.91	1754.88
195.0	2797.15	2776.55	2719.25	2624.34	2499.88	2344.98	2160.54	1951.91	1738.82
210.0	2797.15	2773.75	2717.95	2622.55	2500.15	2342.66	2162.66	1952.06	1739.67
225.0	2797.15	2772.86	2710.80	2619.07	2486.85	2333.06	2149.58	1947.21	1724.16
240.0	2797.15	2770.17	2710.80	2616.37	2489.55	2324.96	2144.18	1935.52	1727.76
255.0	2797.15	2772.00	2705.53	2606.72	2476.47	2314.79	2126.16	1925.85	1719.25
270.0	2797.15	2766.60	2703.70	2608.45	2475.47	2298.46	2117.85	1910.29	1704.53
285.0	2797.15	2765.67	2700.01	2601.08	2463.47	2300.68	2107.30	1899.54	1694.48
300.0	2797.15	2768.27	2702.41	2602.25	2472.32	2306.29	2122.22	1907.47	1707.16
315.0	2797.15	2768.31	2705.23	2604.30	2470.93	2309.63	2126.70	1918.53	1703.16
330.0	2797.15	2766.58	2702.74	2604.74	2472.57	2312.52	2215.42	1915.12	1705.62
345.0	2797.15	2764.85	2702.06	2606.96	2475.99	2316.30	2123.43	1920.68	1702.69
360.0	2797.15	2780.27	2734.06	2654.98	2534.14	2388.42	2208.04	2007.23	1807.31

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1592.28	1373.69	1171.11	964.07	784.59	610.43	458.49	308.33	195.48
15.0	1596.45	1381.56	1169.36	975.06	795.09	620.49	462.01	325.92	214.89
30.0	1591.17	1373.37	1171.78	970.18	791.99	626.39	476.09	343.79	232.20
45.0	1577.56	1360.80	1163.83	970.46	787.88	628.68	476.68	348.07	241.94
60.0	1574.86	1360.80	1159.33	965.96	791.48	625.09	475.78	345.37	234.74
75.0	1576.43	1361.75	1159.64	971.01	793.15	622.49	468.89	335.05	221.87
90.0	1576.93	1362.18	1166.30	976.71	790.71	622.69	468.14	330.66	212.05
105.0	1585.65	1372.49	1177.32	979.45	804.07	634.08	482.08	344.47	232.05
120.0	1597.98	1387.75	1180.22	983.51	810.27	644.25	494.46	363.63	254.45
135.0	1613.05	1392.27	1190.41	998.47	824.55	656.93	507.34	373.97	261.33
150.0	1631.89	1406.22	1206.61	1004.31	825.39	658.15	506.20	371.33	254.45
165.0	1639.89	1423.69	1222.74	1018.20	826.23	656.67	502.37	361.53	238.63
180.0	1544.30	1331.93	1125.79	933.86	747.27	581.11	428.28	292.33	175.93
195.0	1527.51	1325.15	1123.69	923.13	739.58	578.41	434.26	299.95	191.61
210.0	1527.27	1312.18	1113.28	927.88	756.89	592.19	441.89	316.79	212.40
225.0	1507.40	1296.04	1112.56	923.69	740.21	582.81	439.81	317.49	214.96
240.0	1511.90	1311.33	1107.17	913.79	734.81	572.92	428.12	305.80	207.76
255.0	1512.65	1311.44	1103.95	902.74	720.40	557.81	414.99	289.24	185.94
270.0	1509.54	1301.08	1097.11	897.64	713.44	550.80	401.65	272.26	172.52
285.0	1497.51	1291.54	1090.08	889.51	716.83	555.83	470.39	282.41	181.68
300.0	1486.10	1285.79	1089.99	983.51	716.43	558.53	414.16	294.15	197.60
315.0	1582.41	1276.02	1089.48	901.14	720.91	560.51	419.03	300.08	200.05
330.0	1488.04	1273.15	1079.84	893.72	724.69	558.35	409.10	292.21	191.51
345.0	1490.97	1278.36	1079.21	892.61	709.60	549.92	402.80	274.51	172.24
360.0	1592.28	1373.69	1171.11	964.07	784.59	610.43	458.49	308.33	195.48

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	113.71	47.45	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	115.12	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	153.39	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	156.45	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	30.21	27.54	26.66	23.99	23.10	20.44
195.0	65.36	42.98	34.92	30.44	26.86	25.97	24.18	21.49	18.80
210.0	72.90	40.50	32.40	34.20	32.40	30.60	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	72.85	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	114.11	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	71.28	27.07	35.19	32.48	28.87	27.97	26.17	20.75	18.95
315.0	72.99	35.14	35.14	35.14	32.44	30.64	27.94	26.13	14.42
330.0	71.03	40.46	35.07	35.07	32.37	30.57	24.28	20.68	17.98
345.0	61.90	43.06	34.99	30.50	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	9.89	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	9.89	13.49	14.39	16.18	17.08	17.98	18.88
165.0	18.84	17.94	9.87	13.46	14.35	16.15	17.04	17.94	18.84
180.0	17.77	15.99	9.77	11.55	13.33	14.22	15.99	16.88	18.66
195.0	17.91	8.06	9.85	11.64	13.43	14.33	14.33	17.01	17.91
210.0	16.20	8.10	9.90	11.70	13.50	14.40	16.20	17.10	18.00
225.0	8.09	8.09	9.89	11.69	13.49	14.39	16.19	17.09	17.99
240.0	17.99	8.09	9.89	11.69	13.49	14.39	16.19	17.09	17.99
255.0	20.66	13.47	9.88	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	9.93	11.73	13.53	14.44	16.24	18.05	18.95
315.0	7.21	8.11	9.91	11.71	13.52	14.42	16.22	17.12	18.02
330.0	16.18	8.09	9.89	11.69	13.49	14.39	16.18	17.08	17.98
345.0	17.94	8.07	9.87	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