正奇事

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

Test No:	Voltage(V): 120.000
LampCAT:	Current(A): 0.463
Lamp flux(lm): 6978.6	Power (W): 55.320
Number of Lamps: 1	PF: 0.995
Length(mm): 1190	Width(mm): 580
Phm Type: C	Height(mm): 8

Photometric Results

Lumens(lm): 6978.59, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 126.15
Central intensity(cd): 2715.561, Maximum intensity(cd): 2715.561
Angle of maximum intensity: C=30.0 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(%): 2.24%
Down flux rate of lamp(%): 97.76%
Up flux rate of LUM(%): 2.24%
Down flux rate of LUM(%): 97.76%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 77.235%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2715.561	0.000	0	0.00%	0.00%
5.0	2697.898	64.716	64.716	0.93%	0.93%
10.0	2645.762	191.160	255.876	2.74%	3.67%
15.0	2560.619	308.839	564.715	4.43%	8.09%
20.0	2442.013	412.287	977.002	5.91%	14.00%
25.0	2292.649	496.579	1473.58	7.12%	21.12%
30.0	2120.570	558.497	2032.077	8.00%	29.12%
35.0	1919.295	594.898	2626.975	8.52%	37.64%
40.0	1713.448	606.096	3233.071	8.69%	46.33%
45.0	1510.537	596.947	3830.018	8.55%	54.88%
50.0	1300.611	568.034	4398.052	8.14%	63.02%
55.0	1106.346	523.353	4921.404	7.50%	70.52%
60.0	920.664	468.538	5389.942	6.71%	77.24%
65.0	743.112	404.467	5794.409	5.80%	83.03%
70.0	582.828	335.737	6130.146	4.81%	87.84%
75.0	440.173	267.396	6397.542	3.83%	91.67%
80.0	310.995	200.992	6598.534	2.88%	94.55%
85.0	206.402	140.589	6739.123	2.01%	96.57%
90.0	96.434	82.919	6822.042	1.19%	97.76%
95.0	37.041	36.547	6858.588	0.52%	98.28%
100.0	25.963	17.120	6875.708	0.25%	98.53%
105.0	28.256	14.508	6890.216	0.21%	98.73%
110.0	25.899	14.155	6904.371	0.20%	98.94%
115.0	24.889	12.860	6917.231	0.18%	99.12%
120.0	23.542	11.774	6929.005	0.17%	99.29%
125.0	20.844	10.260	6939.265	0.15%	99.44%
130.0	18.485	8.551	6947.816	0.12%	99.56%
135.0	15.601	6.887	6954.703	0.10%	99.66%
140.0	11.407	5.001	6959.704	0.07%	99.73%
145.0	10.330	3.627	6963.331	0.05%	99.78%
150.0	11.827	3.263	6966.593	0.05%	99.83%
155.0	13.211	3.169	6969.762	0.05%	99.87%
160.0	14.446	2.901	6972.663	0.04%	99.92%
165.0	15.644	2.480	6975.142	0.04%	99.95%
170.0	16.542	1.909	6977.052	0.03%	99.98%
175.0	17.590	1.221	6978.273	0.02%	100.00%
180.0	8.982	0.318	6978.59	0.00%	100.00%

Zonal flux distribution table

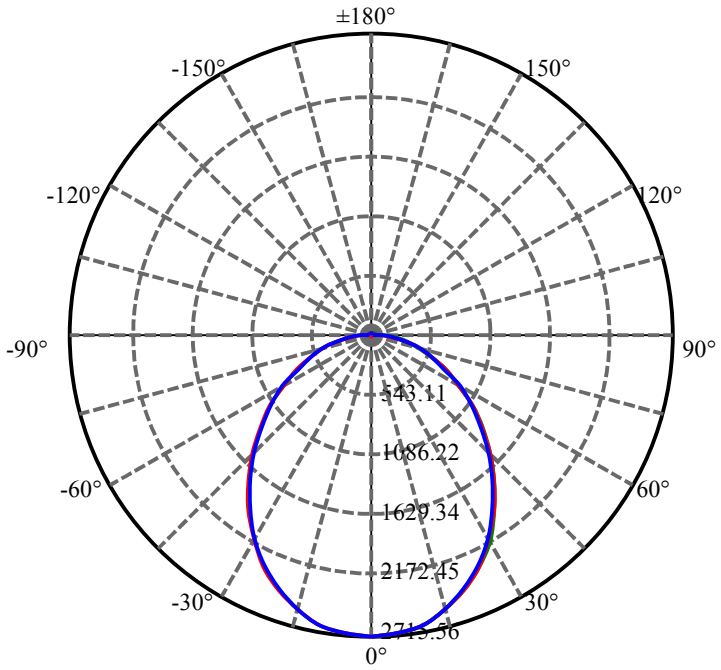
ZONAL LUMEN SUMMARY

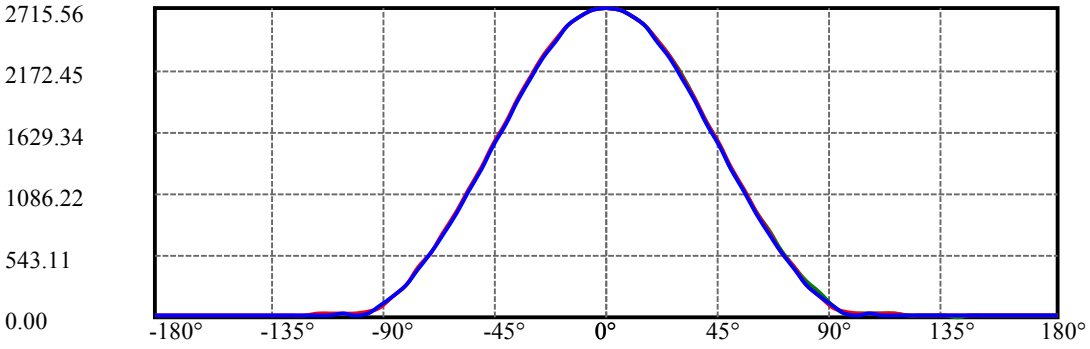
Zone	Lumens	%Lamp	%Fixt
0-30	2032.08	29.12%	29.12%
0-40	3233.07	46.33%	46.33%
0-60	5389.94	77.24%	77.24%
0-90	6822.04	97.76%	97.76%
0-120	6929.00	99.29%	99.29%
0-180	6978.59	100.00%	100.00%
60-90	1432.10	20.52%	20.52%
90-120	106.96	1.53%	1.53%
90-130	125.77	1.80%	1.80%
90-150	144.55	2.07%	2.07%
90-180	156.23	2.24%	2.24%
0-62.38	5582.87	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	255.88
10-20	721.13
20-30	1055.08
30-40	1200.99
40-50	1164.98
50-60	991.89
60-70	740.20
70-80	468.39
80-90	223.51
90-100	53.67
100-110	28.66
110-120	24.63
120-130	18.81
130-140	11.89
140-150	6.89
150-160	6.07
160-170	4.39
170-180	1.22

Light Distribution Curve [Unit:cd]





C30(Max):

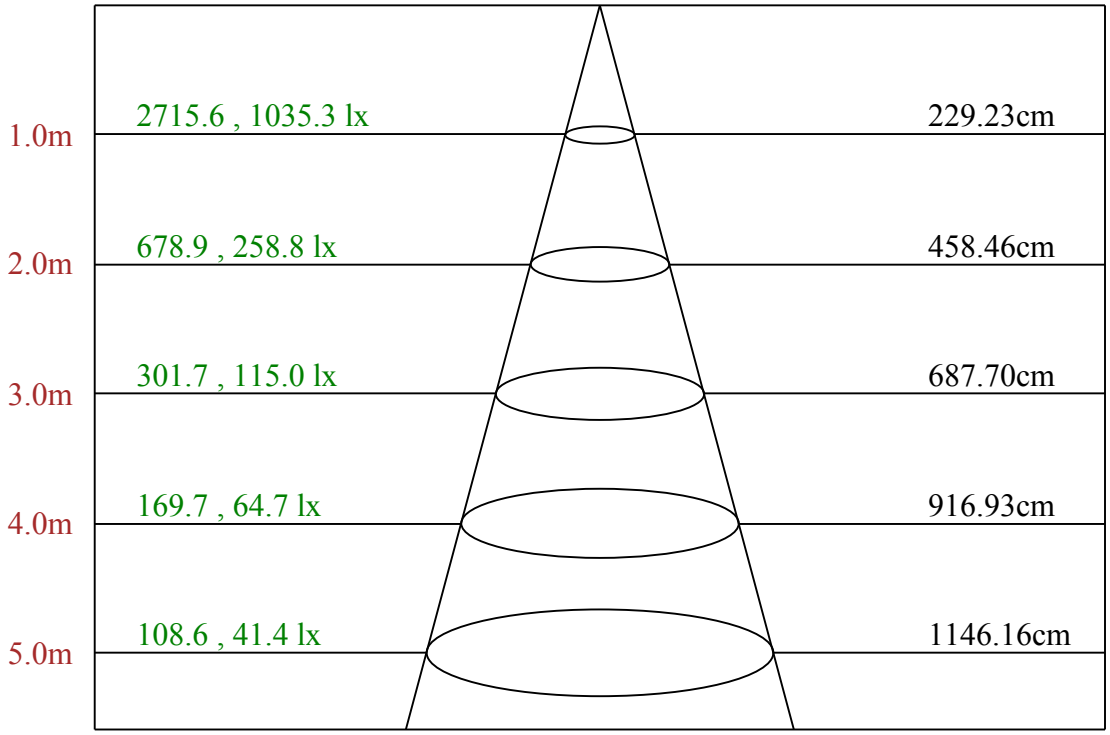
C0/C180:

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 C30 plane 97.79

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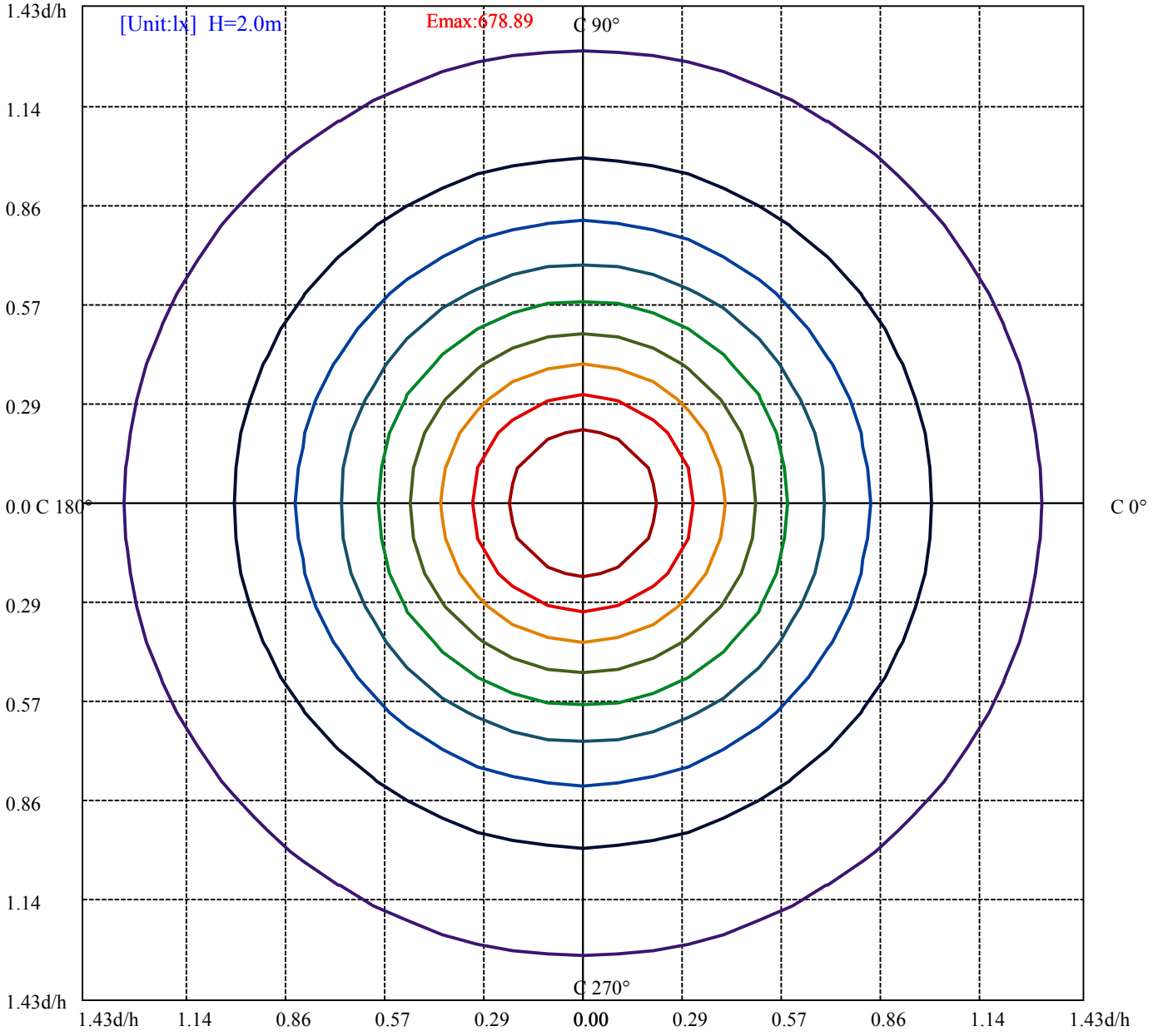
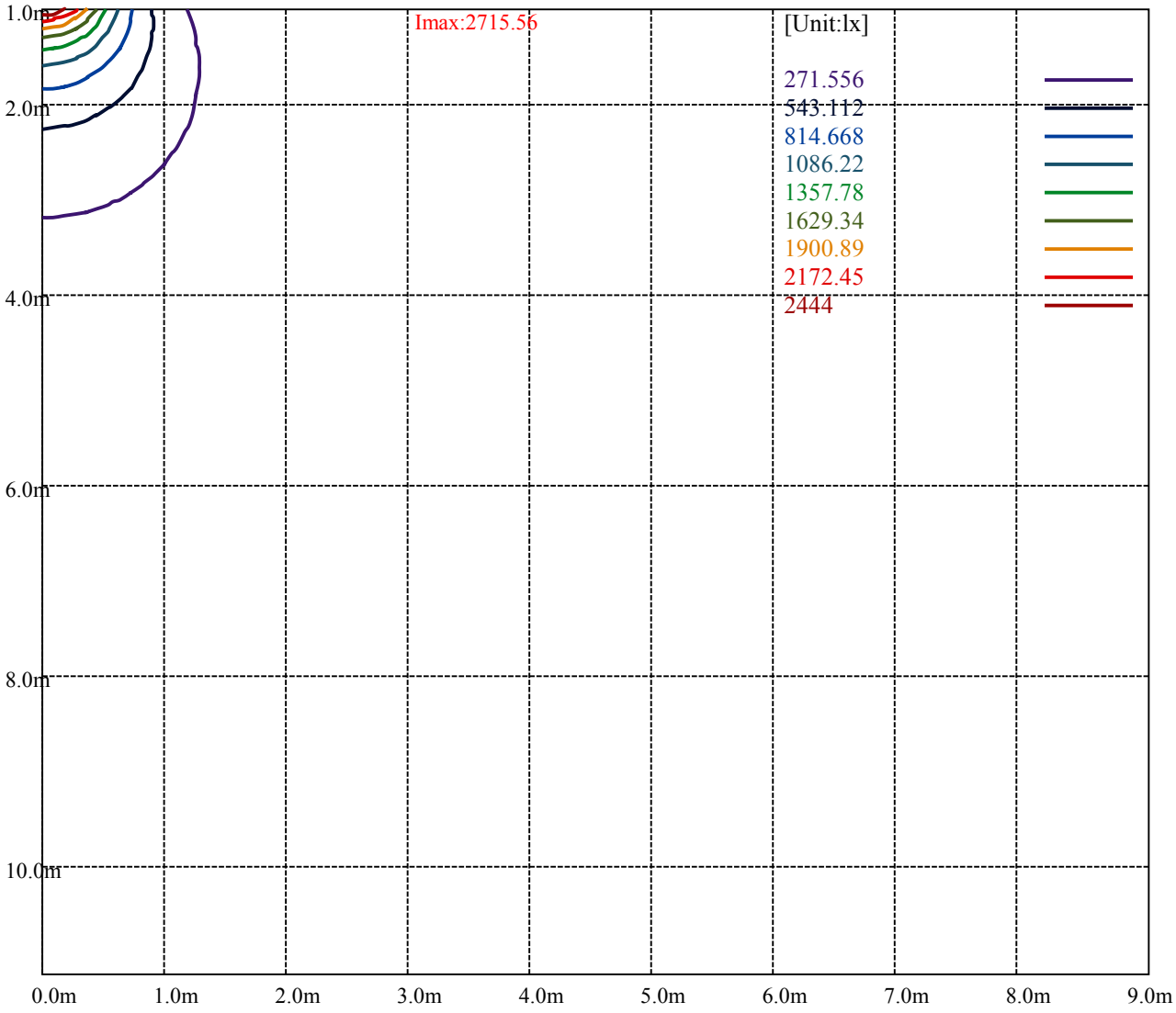
ISO illuminance diagram



(10%Emax) 67.889
(20%Emax) 135.778
(30%Emax) 203.667
(40%Emax) 271.555
(50%Emax) 339.445
(60%Emax) 407.335
(70%Emax) 475.2225
(80%Emax) 543.1125
(90%Emax) 611

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

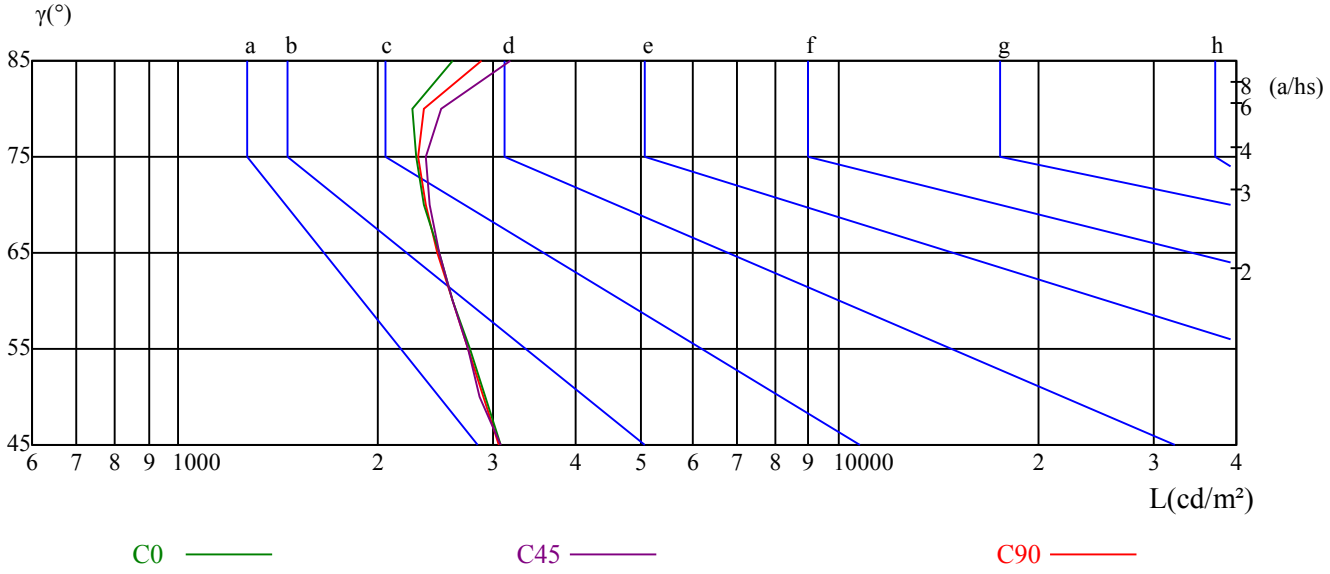
γ	45	50	55	60	65	70	75	80	85
C0	3076	2912	2761	2607	2476	2360	2291	2255	2596
C45	3079	2864	2736	2603	2481	2402	2374	2505	3184
C90	3050	2891	2749	2606	2469	2370	2306	2351	2885

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2549	2505	2558	2409	2364	2502	3005	3107	3711

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	0.86	0.84	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	0.51	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	2715.56	2698.68	2654.27	2577.87	2459.73	2318.49	2143.49	1948.06	1754.41
15.0	2715.56	2701.24	2652.89	2574.99	2464.87	2317.14	2147.02	1956.31	1755.76
30.0	2715.56	2701.16	2657.06	2582.35	2466.24	2324.02	2150.31	1954.09	1747.07
45.0	2715.56	2704.77	2653.50	2573.44	2462.80	2322.48	2149.78	1951.89	1749.51
60.0	2715.56	2705.67	2658.89	2577.94	2462.80	2322.48	2148.88	1955.49	1743.21
75.0	2715.56	2705.68	2658.07	2577.22	2461.34	2319.41	2146.04	1953.80	1739.11
90.0	2715.56	2706.57	2662.54	2587.96	2464.85	2324.67	2146.75	1953.55	1738.79
105.0	2715.56	2707.47	2665.19	2586.03	2472.70	2325.18	2155.18	1953.69	1742.31
120.0	2715.56	2710.15	2666.84	2593.77	2487.31	2342.06	2168.84	1978.48	1763.76
135.0	2715.56	2710.15	2669.61	2595.73	2490.32	2350.66	2182.18	1989.37	1779.44
150.0	2715.56	2710.17	2671.50	2597.77	2492.56	2355.88	2185.04	1996.21	1789.39
165.0	2715.56	2708.38	2672.50	2600.73	2493.08	2355.82	2188.96	1998.77	1797.81
180.0	2715.56	2695.13	2639.17	2546.78	2439.30	2281.18	2109.73	1904.53	1702.89
195.0	2715.56	2695.86	2639.46	2548.13	2427.26	2276.84	2097.78	1895.43	1688.61
210.0	2715.56	2693.96	2639.05	2547.24	2427.53	2274.52	2099.90	1895.58	1689.46
225.0	2715.56	2693.07	2631.91	2543.76	2415.13	2264.92	2087.72	1890.73	1673.95
240.0	2715.56	2690.37	2631.91	2541.06	2417.83	2257.72	2082.32	1879.93	1677.55
255.0	2715.56	2691.31	2627.53	2530.51	2404.75	2247.55	2064.29	1869.36	1669.04
270.0	2715.56	2686.81	2625.70	2532.25	2402.85	2232.12	2055.99	1854.70	1655.22
285.0	2715.56	2685.88	2622.01	2525.77	2391.74	2234.33	2046.34	1844.85	1645.17
300.0	2715.56	2687.59	2623.54	2526.10	2399.80	2239.21	2059.68	1852.17	1657.30
315.0	2715.56	2687.63	2626.36	2528.16	2398.42	2242.55	2064.15	1862.33	1653.30
330.0	2715.56	2686.79	2624.74	2528.53	2400.84	2245.28	2151.77	1859.53	1656.31
345.0	2715.56	2685.06	2624.06	2530.76	2404.26	2249.06	2061.57	1864.20	1653.38
360.0	2715.56	2698.68	2654.27	2577.87	2459.73	2318.49	2143.49	1948.06	1754.41

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1545.66	1333.35	1136.15	935.39	762.17	592.50	445.04	299.36	190.10
15.0	1550.73	1341.22	1135.29	946.37	771.78	602.56	448.56	316.95	208.61
30.0	1544.55	1333.03	1137.71	941.49	769.57	608.46	462.64	333.93	225.02
45.0	1531.83	1321.35	1129.76	941.77	765.47	609.85	463.24	338.21	235.67
60.0	1529.13	1321.35	1125.26	938.17	769.06	607.16	462.34	335.51	227.57
75.0	1530.70	1322.30	1125.57	942.32	770.74	604.56	455.44	325.18	215.59
90.0	1531.21	1322.74	1132.23	948.02	768.30	604.76	454.69	320.80	205.78
105.0	1539.03	1332.14	1143.25	950.76	780.76	615.25	467.73	334.61	224.87
120.0	1550.85	1346.95	1145.77	954.51	786.70	625.21	479.96	352.75	247.20
135.0	1565.91	1351.47	1155.06	969.46	800.07	637.90	491.94	362.19	254.08
150.0	1584.38	1365.87	1171.65	975.62	801.18	639.33	490.96	360.58	247.28
165.0	1592.38	1382.45	1186.88	988.62	802.02	637.85	487.13	350.77	232.35
180.0	1498.58	1293.38	1092.62	906.96	724.86	564.08	415.73	283.37	171.44
195.0	1483.58	1286.60	1091.42	896.23	718.06	562.27	420.81	290.98	186.23
210.0	1482.44	1273.62	1081.00	900.99	734.47	575.16	429.34	307.83	206.12
225.0	1463.47	1258.39	1080.29	897.69	718.69	566.68	426.36	308.53	208.68
240.0	1467.97	1272.78	1074.89	886.90	713.30	555.88	415.56	297.73	201.49
255.0	1468.72	1272.89	1071.67	875.84	699.78	541.67	402.44	280.27	180.56
270.0	1465.61	1263.43	1064.84	871.64	692.82	534.67	389.99	264.19	168.04
285.0	1454.48	1253.89	1058.70	863.51	696.21	539.69	456.94	274.34	176.30
300.0	1442.59	1248.62	1058.26	954.51	695.58	542.21	402.37	285.09	192.16
315.0	1536.17	1238.85	1057.75	874.85	700.06	544.19	406.34	291.02	194.61
330.0	1445.00	1236.39	1048.46	867.72	704.07	542.21	397.44	283.25	186.13
345.0	1447.94	1241.60	1047.83	866.61	688.98	533.78	391.14	266.44	167.76
360.0	1545.66	1333.35	1136.15	935.39	762.17	592.50	445.04	299.36	190.10

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	102.16	44.42	33.76	27.54	25.76	24.87	23.10	22.21	20.43
15.0	111.02	46.56	34.02	27.76	25.07	23.28	22.38	20.59	19.70
30.0	115.21	42.30	30.60	27.90	27.00	26.10	23.40	19.80	17.10
45.0	116.93	36.88	25.19	26.98	26.98	25.19	23.39	22.49	19.79
60.0	112.44	37.78	17.99	25.19	23.39	22.49	22.49	17.09	16.19
75.0	97.91	46.71	10.78	22.46	19.76	19.76	19.76	19.76	17.97
90.0	97.95	44.93	7.19	23.36	22.46	20.67	20.67	20.67	19.77
105.0	119.63	49.47	10.79	22.49	19.79	17.99	19.79	19.79	17.99
120.0	148.86	45.11	18.04	26.16	25.26	23.46	22.55	17.14	16.24
135.0	157.67	37.84	25.23	27.03	27.03	26.13	25.23	22.52	19.82
150.0	151.96	44.06	30.57	27.87	26.98	26.08	23.38	17.98	17.08
165.0	136.36	44.86	34.09	27.81	25.12	23.32	22.43	20.63	19.74
180.0	55.96	41.75	33.76	29.31	26.65	25.76	23.10	22.21	19.54
195.0	63.57	42.08	34.02	29.55	25.96	25.07	23.28	20.59	17.91
210.0	71.11	39.60	30.60	32.40	30.60	29.70	27.00	18.00	17.10
225.0	75.56	34.18	30.58	32.38	30.58	27.88	26.98	25.19	17.09
240.0	71.06	23.39	32.38	30.58	26.98	26.09	25.19	17.99	17.99
255.0	63.78	15.27	13.47	27.85	22.46	23.36	23.36	22.46	20.66
270.0	111.43	12.58	10.78	27.86	25.16	25.16	25.16	23.36	22.46
285.0	63.86	17.09	22.49	26.98	22.49	23.39	23.39	22.49	20.69
300.0	69.47	26.16	34.28	30.67	27.97	27.07	25.26	19.85	18.04
315.0	71.18	34.24	34.24	34.24	30.63	29.73	27.03	25.23	13.51
330.0	69.24	39.56	34.17	34.17	30.57	29.67	23.38	19.78	17.08
345.0	60.11	42.16	34.09	29.60	26.91	25.12	23.32	22.43	19.74
360.0	102.16	44.42	33.76	27.54	25.76	24.87	23.10	22.21	20.43

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	19.54	17.77	10.66	12.44	13.32	15.10	15.99	16.88	17.77
15.0	17.91	17.01	10.74	12.53	13.43	15.22	16.12	16.12	17.91
30.0	16.20	8.10	10.80	12.60	13.50	15.30	16.20	16.20	17.10
45.0	7.20	8.10	10.79	12.59	13.49	15.29	16.19	17.09	17.09
60.0	15.29	9.89	10.79	12.59	13.49	15.29	16.19	17.09	17.99
75.0	17.07	17.07	10.78	12.58	13.47	15.27	16.17	16.17	17.97
90.0	17.97	17.07	10.78	12.58	15.28	16.17	16.17	16.17	17.97
105.0	17.09	17.09	10.79	12.59	15.29	16.19	16.19	16.19	17.99
120.0	15.34	8.12	10.83	12.63	13.53	15.34	16.24	17.14	17.14
135.0	7.21	8.11	10.81	12.61	13.51	15.32	16.22	17.12	18.02
150.0	16.19	8.09	9.89	12.59	13.49	15.29	16.19	17.08	17.98
165.0	17.94	17.05	9.87	12.56	13.46	15.25	16.15	17.05	17.94
180.0	16.88	15.10	9.77	10.66	12.44	13.32	15.10	15.99	17.77
195.0	17.01	8.06	9.85	10.74	12.53	13.43	13.43	16.12	17.01
210.0	15.30	8.10	9.90	10.80	12.60	13.50	15.30	16.20	17.10
225.0	8.10	8.10	9.89	10.79	12.59	13.49	15.29	16.19	17.09
240.0	17.09	8.10	9.89	10.79	12.59	13.49	15.29	16.19	17.09
255.0	19.76	12.58	9.88	10.78	12.58	13.47	15.27	16.17	17.07
270.0	20.67	15.28	10.78	12.58	13.48	13.48	15.28	17.07	17.97
285.0	19.79	12.59	10.79	12.59	12.59	13.49	15.29	17.09	17.99
300.0	15.34	8.12	9.92	10.83	12.63	13.53	15.34	17.14	18.04
315.0	7.21	8.11	9.91	10.81	12.61	13.51	15.32	16.22	17.12
330.0	15.29	8.09	9.89	10.79	12.59	13.49	15.29	16.19	17.08
345.0	17.05	8.07	9.87	10.77	12.56	13.46	15.25	16.15	17.94
360.0	19.54	17.77	10.66	12.44	13.32	15.10	15.99	16.88	17.77

Intensity data(cd)

C/γ(°)	180.0
0.0	17.77
15.0	17.91
30.0	18.00
45.0	17.99
60.0	17.99
75.0	17.97
90.0	17.97
105.0	17.99
120.0	18.04
135.0	18.02
150.0	17.98
165.0	17.94
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	17.77