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正奇事

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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

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Photometric Results

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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  $\gamma$ =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  $\pi$  solid angle : 77.222%

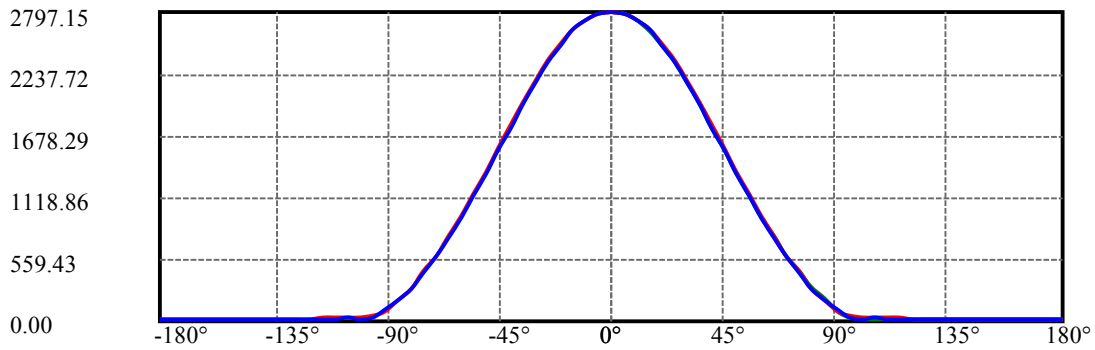
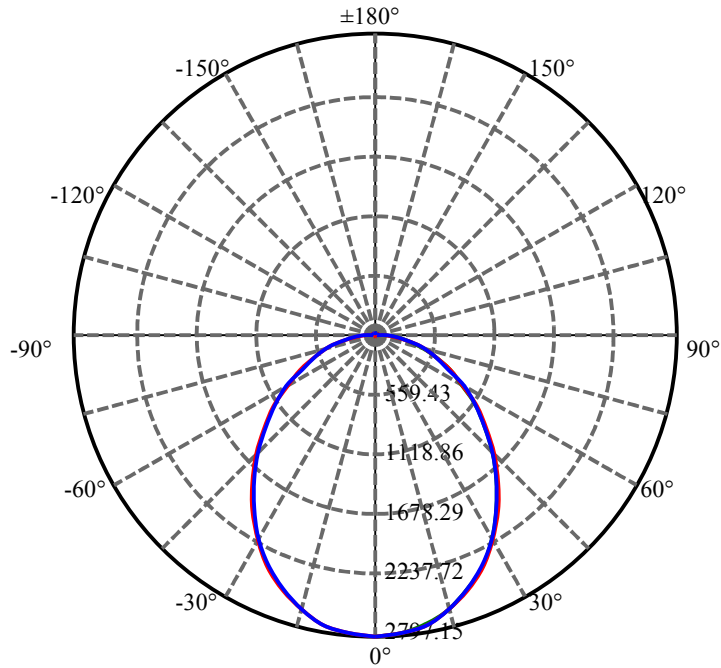
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2797.148	0.000	0	0.00%	0.00%
5.0	2778.548	66.656	66.656	0.93%	0.93%
10.0	2724.991	196.879	263.535	2.74%	3.67%
15.0	2637.340	318.090	581.625	4.42%	8.09%
20.0	2515.141	424.637	1006.261	5.91%	14.00%
25.0	2361.399	511.459	1517.72	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 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



C75(Max): ———

C0/C180: ———

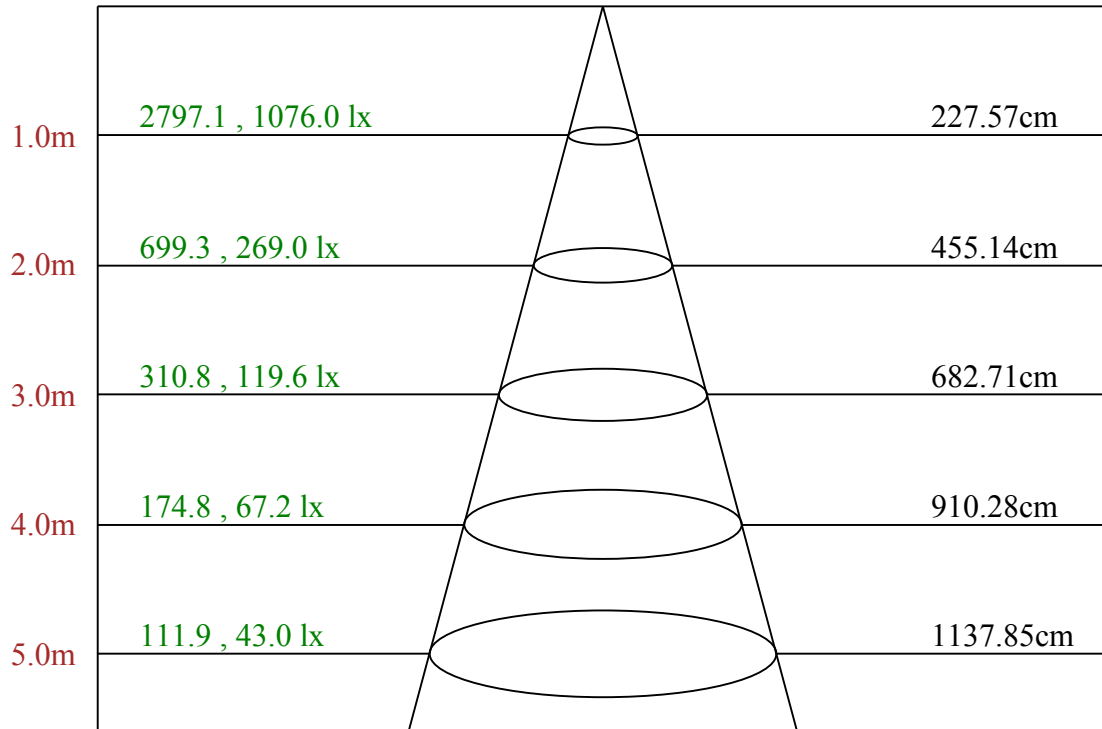
C90/C270: ———

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

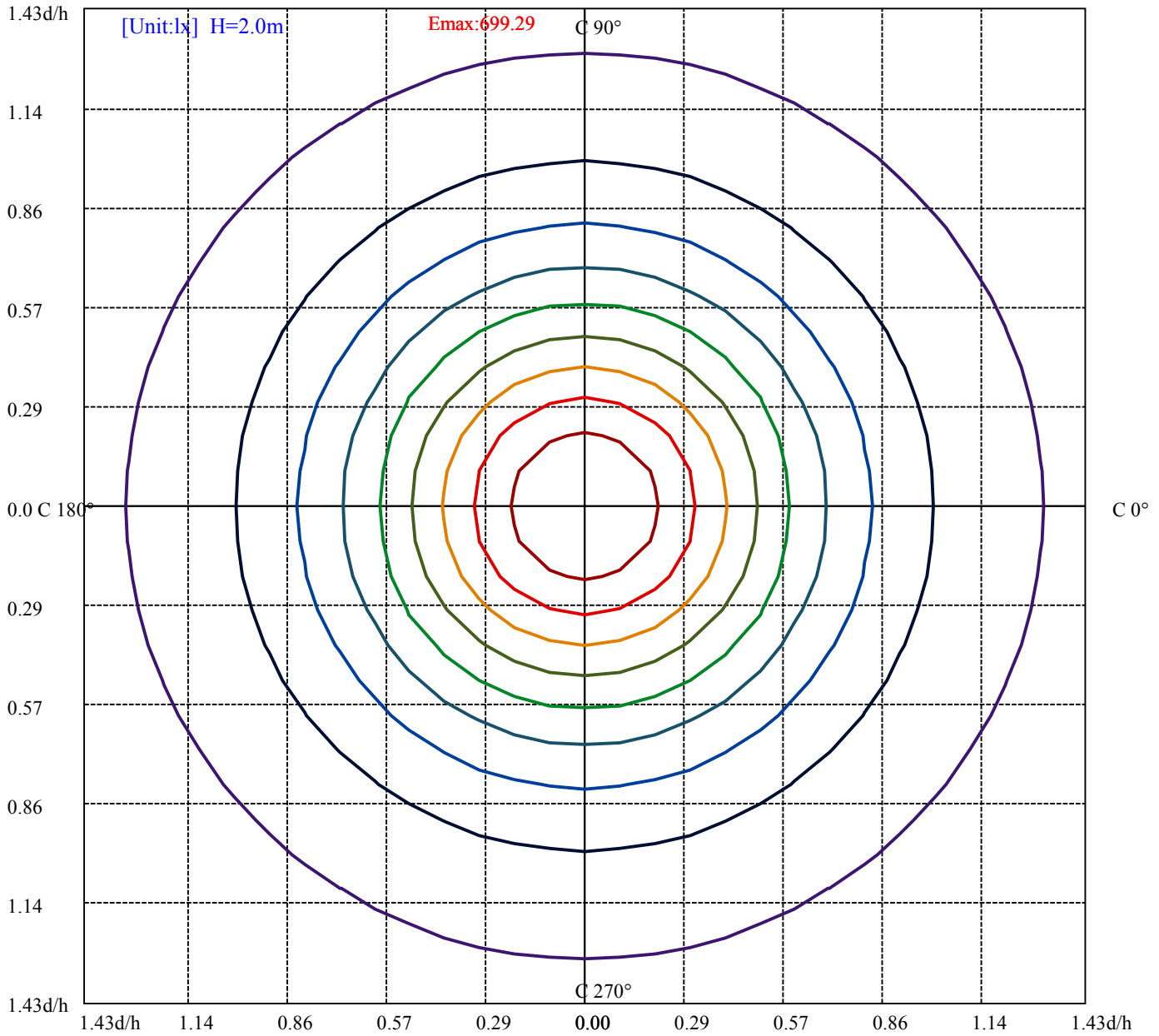
:C90/270Left:81.0 Right:81.0

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

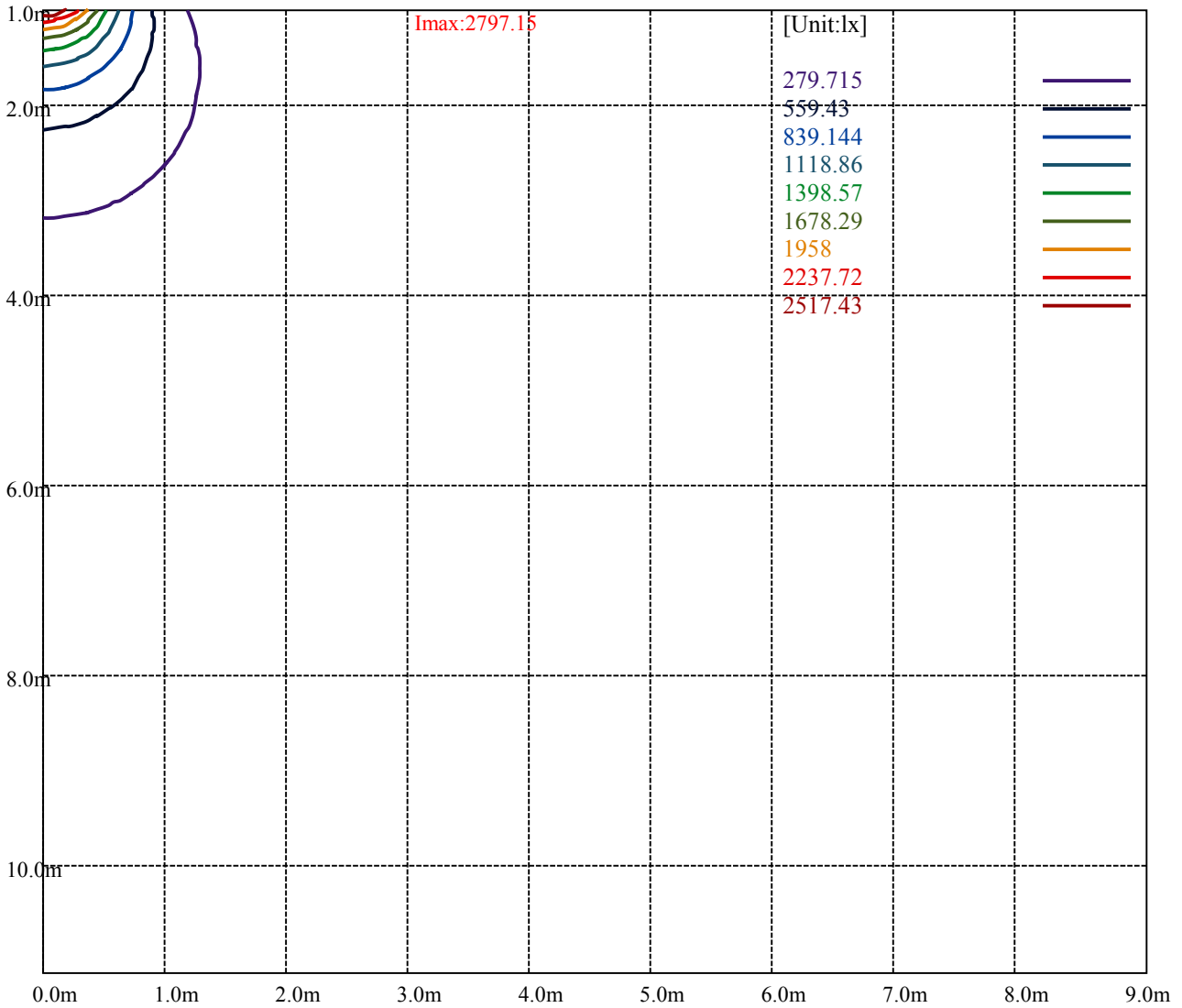
:C90/270Left:48.4 Right:48.4



Max , Ave      Beam angle of C75 plane 97.38



- (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



Luminance Table

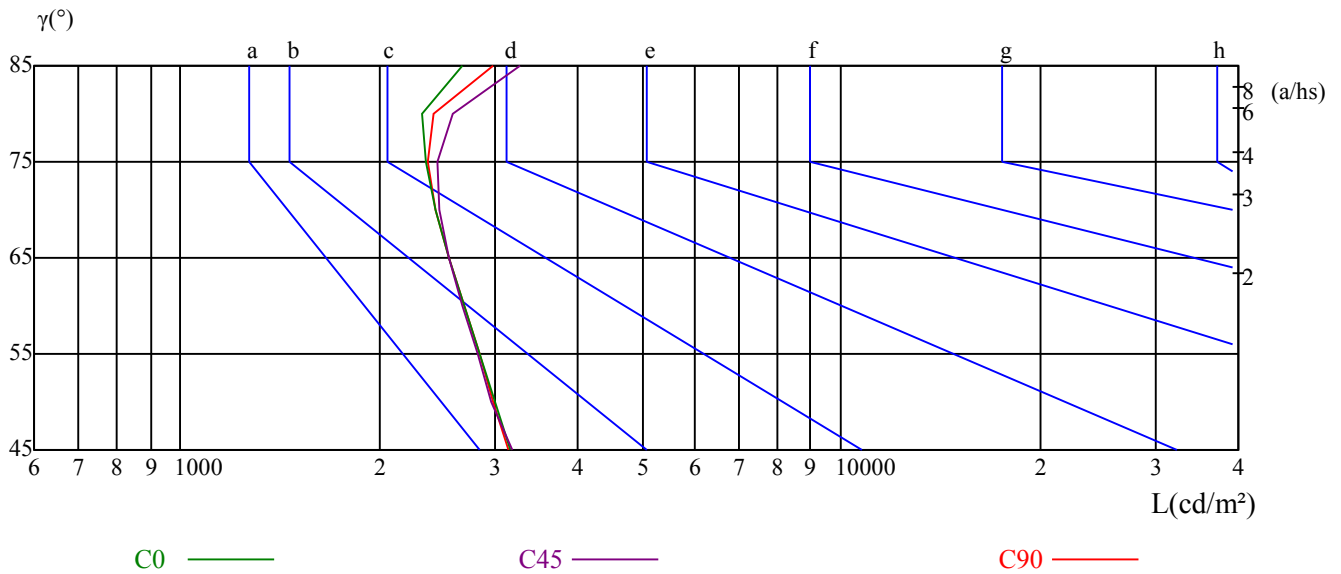
$\gamma$	45	50	55	60	65	70	75	80	85
C0	3170	3000	2845	2686	2550	2432	2361	2324	2667
C45	3171	2950	2819	2681	2555	2474	2447	2582	3274
C90	3141	2978	2832	2684	2542	2440	2375	2423	2968

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 Limiting Curve



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	COEFFICIENTS 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