AFX

Client:
LumCAT: EMAF06LAJD1BK
Luminaire: LED lamp
Report No:
Ballast type:

Test No:	Voltage(V): 120.000
LampCAT:	Current(A): 0.133
Lamp flux(lm): 1053.0	Power (W): 15.010
Number of Lamps: 1	PF: 0.941
Length(mm): -140	Width(mm): -140
Phm Type: C	Height(mm): 20

Photometric Results

Lumens(lm): 1052.98, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 70.15
Central intensity(cd): 350.167, Maximum intensity(cd): 350.179
Angle of maximum intensity: C=45.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=106.2
[C90/270]Total=105.2
Field angle(10%Imax): [C0/180]Total=163.4
[C90/270]Total=162.8
Maximum s/h(1/2): C0_180=1.20 C90_270=1.19
Maximum s/h(1/4): C0_180=1.32 C90_270=1.30
Up flux rate of lamp(%): 10.04%
Down flux rate of lamp(%): 89.96%
Up flux rate of LUM(%): 10.04%
Down flux rate of LUM(%): 89.96%
CIE Type : Semidirect lighting
Output flux ratio in π solid angle : 69.987%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	350.167	0.000	0	0.00%	0.00%
5.0	348.759	8.355	8.355	0.79%	0.79%
10.0	342.770	24.738	33.094	2.35%	3.14%
15.0	332.926	40.082	73.175	3.81%	6.95%
20.0	319.188	53.743	126.919	5.10%	12.05%
25.0	301.636	65.113	192.032	6.18%	18.24%
30.0	280.420	73.660	265.691	7.00%	25.23%
35.0	257.146	79.160	344.852	7.52%	32.75%
40.0	233.489	81.859	426.711	7.77%	40.52%
45.0	208.955	81.922	508.633	7.78%	48.30%
50.0	186.865	79.981	588.614	7.60%	55.90%
55.0	165.846	76.691	665.305	7.28%	63.18%
60.0	144.103	71.644	736.949	6.80%	69.99%
65.0	117.739	63.654	800.603	6.05%	76.03%
70.0	89.658	52.514	853.117	4.99%	81.02%
75.0	63.102	39.929	893.046	3.79%	84.81%
80.0	41.165	27.899	920.945	2.65%	87.46%
85.0	21.936	17.146	938.091	1.63%	89.09%
90.0	11.635	9.192	947.283	0.87%	89.96%
95.0	10.989	6.194	953.478	0.59%	90.55%
100.0	11.102	6.003	959.48	0.57%	91.12%
105.0	13.085	6.472	965.952	0.61%	91.74%
110.0	15.948	7.589	973.541	0.72%	92.46%
115.0	18.465	8.713	982.254	0.83%	93.28%
120.0	19.991	9.349	991.603	0.89%	94.17%
125.0	21.212	9.524	1001.127	0.90%	95.08%
130.0	21.861	9.365	1010.492	0.89%	95.97%
135.0	22.128	8.889	1019.381	0.84%	96.81%
140.0	22.205	8.209	1027.59	0.78%	97.59%
145.0	21.519	7.295	1034.884	0.69%	98.28%
150.0	20.260	6.152	1041.037	0.58%	98.87%
155.0	18.197	4.867	1045.903	0.46%	99.33%
160.0	15.066	3.489	1049.392	0.33%	99.66%
165.0	10.909	2.141	1051.533	0.20%	99.86%
170.0	6.598	1.039	1052.571	0.10%	99.96%
175.0	3.279	0.353	1052.925	0.03%	100.00%
180.0	1.029	0.052	1052.976	0.00%	100.00%

Zonal flux distribution table

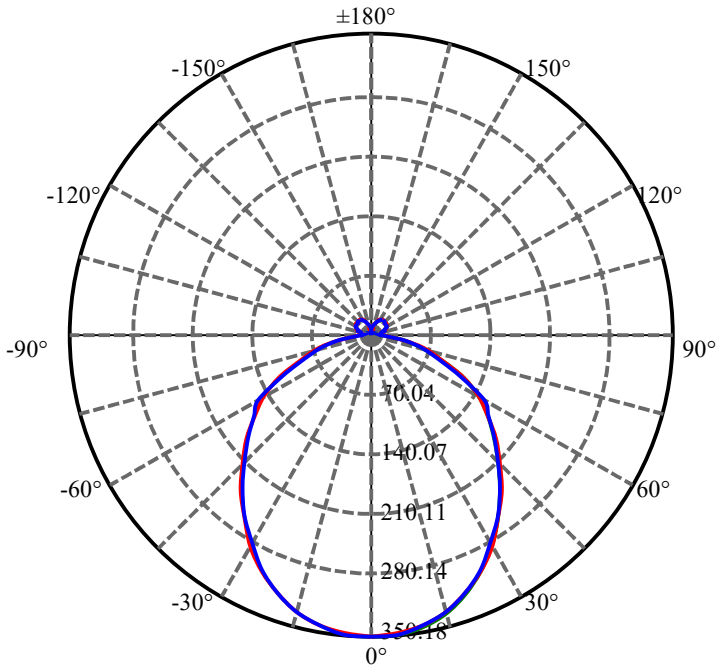
ZONAL LUMEN SUMMARY

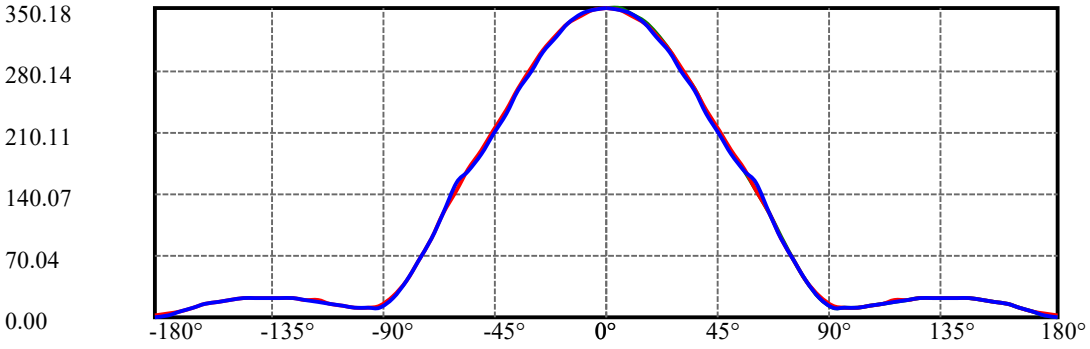
Zone	Lumens	%Lamp	%Fixt
0-30	265.69	25.23%	25.23%
0-40	426.71	40.52%	40.52%
0-60	736.95	69.99%	69.99%
0-90	947.28	89.96%	89.96%
0-120	991.60	94.17%	94.17%
0-180	1052.98	100.00%	100.00%
60-90	210.33	19.98%	19.98%
90-120	44.32	4.21%	4.21%
90-130	63.21	6.00%	6.00%
90-150	93.75	8.90%	8.90%
90-180	105.64	10.03%	10.03%
0-68.98	842.38	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	33.09
10-20	93.83
20-30	138.77
30-40	161.02
40-50	161.90
50-60	148.34
60-70	116.17
70-80	67.83
80-90	26.34
90-100	12.20
100-110	14.06
110-120	18.06
120-130	18.89
130-140	17.10
140-150	13.45
150-160	8.36
160-170	3.18
170-180	0.35

Light Distribution Curve [Unit:cd]





C45(Max):

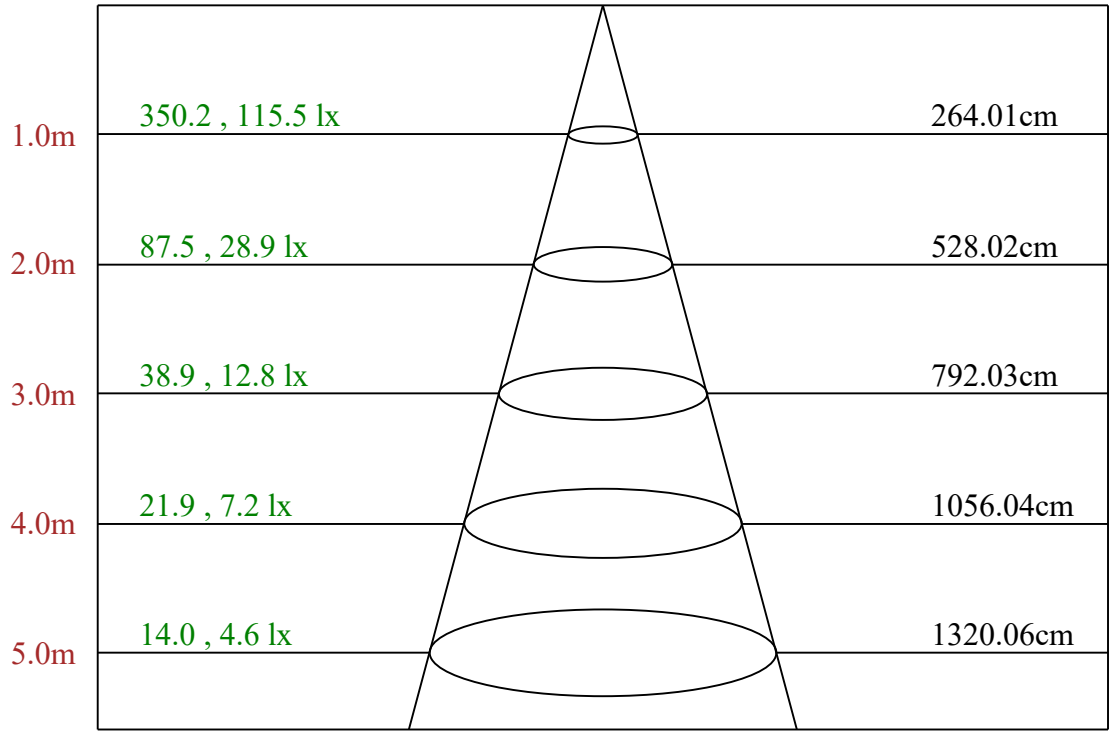
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:81.7 Right:81.7
:C90/270Left:81.4 Right:81.4

Beam Angle(50%Imax):C0/180Left:53.1 Right:53.1
:C90/270Left:52.6 Right:52.6

Lux distance Curve



Max , Ave

Beam angle of C45 plane 105.71

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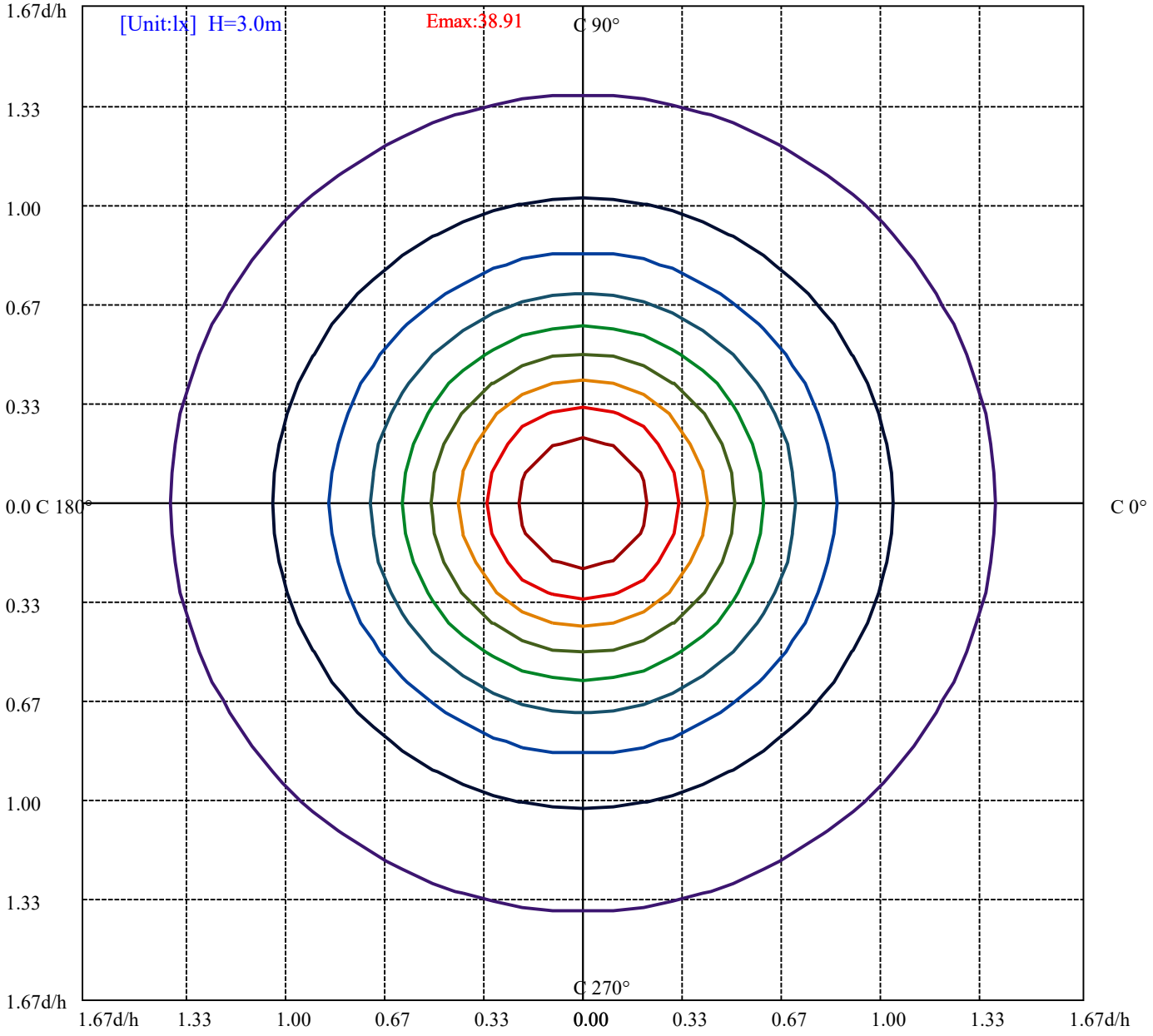
ISO illuminance diagram

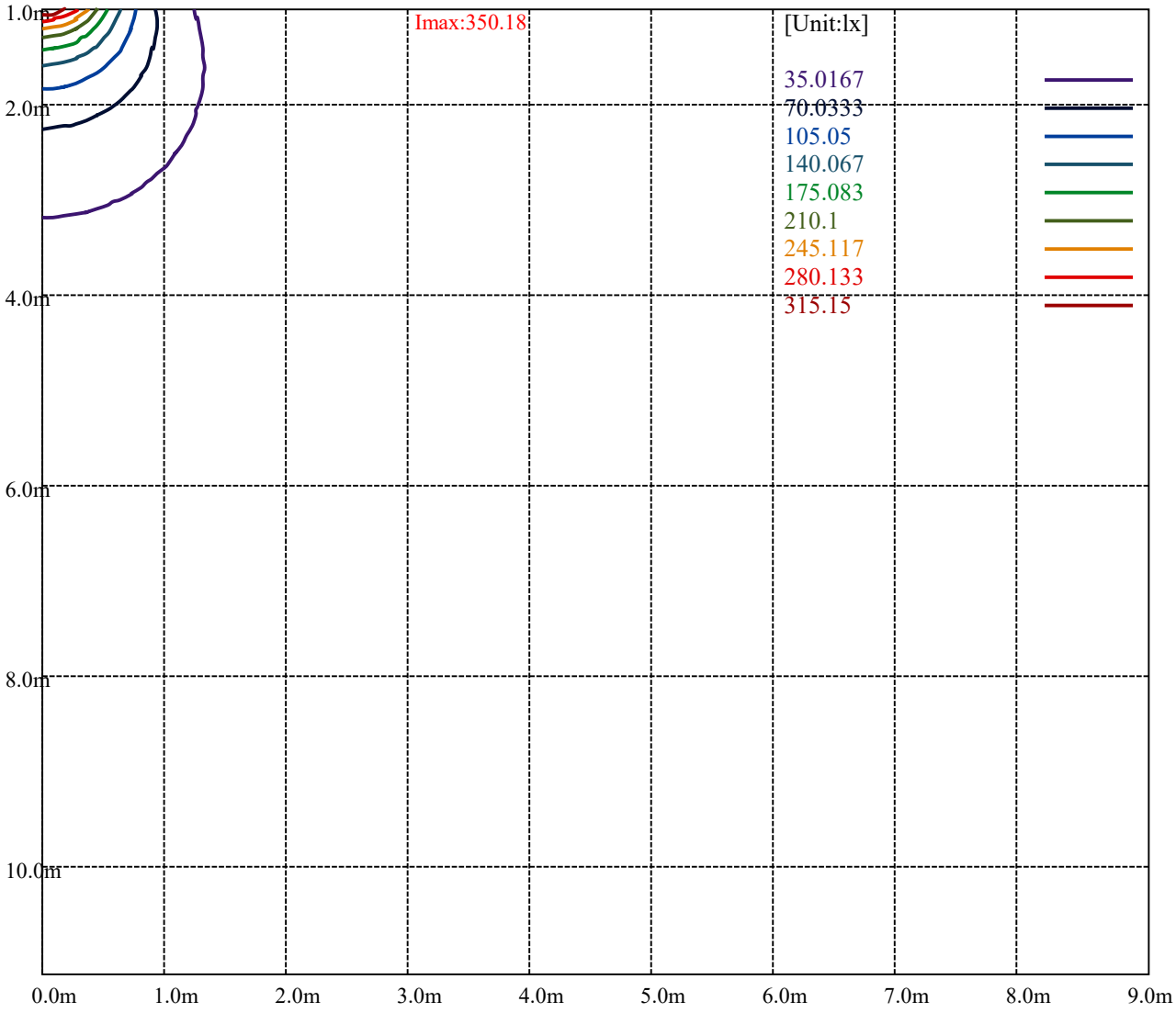


Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.2

Date: 2024/10/31
Humidity(%): 62.1%

Operator: JUN WANG
Distance(m): 30.26

Space ISO Lux diagram



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Temperature(°C): 25.2

Date: 2024/10/31
Humidity(%): 62.1%

Operator: JUN WANG
Distance(m): 30.26

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Luminance Limitting Curve(no luminous side)

Luminance Table

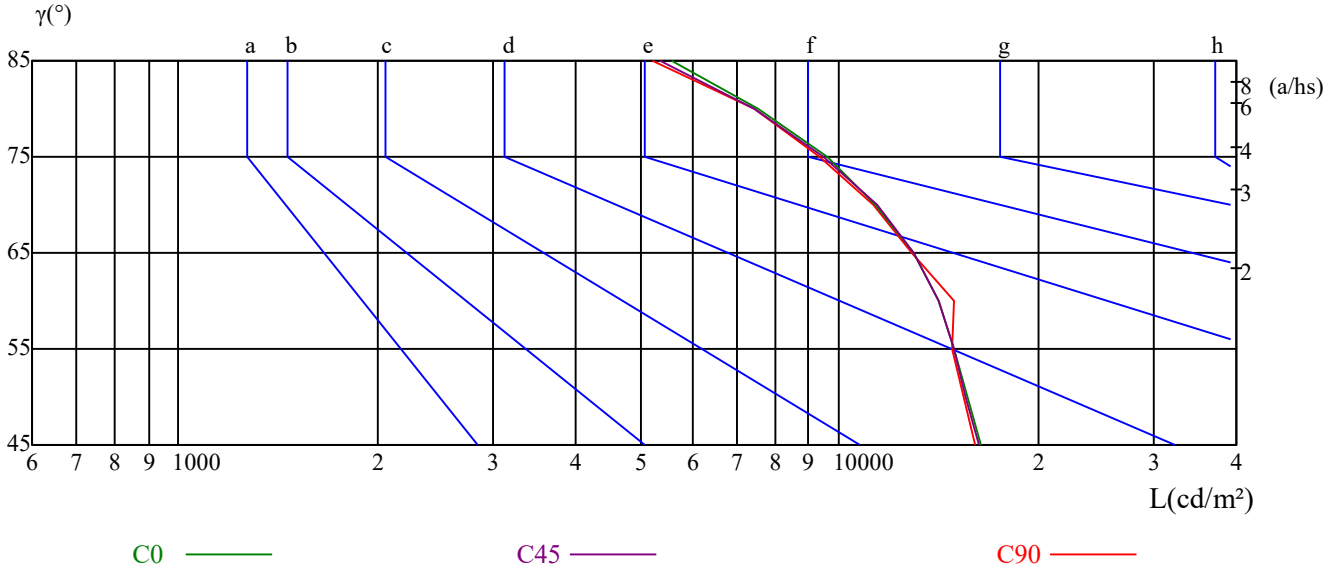
γ	45	50	55	60	65	70	75	80	85
C0	16415	15666	14970	14177	12973	11372	9580	7562	5571
C45	16291	15535	14934	14184	13025	11450	9494	7456	5346
C90	16103	15418	14834	14988	12924	11261	9319	7427	5215

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
18034	17965	18106	16083	15645	15938	17153	16056	16460

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	1.06	1.06	1.06	0.99	0.99	0.99	0.93	0.93	0.93	0.90
1	1.01	0.97	0.93	0.98	0.94	0.91	0.92	0.89	0.86	0.86	0.84	0.82	0.81	0.79	0.77	0.75
2	0.88	0.81	0.76	0.86	0.79	0.74	0.80	0.75	0.71	0.76	0.71	0.68	0.71	0.68	0.65	0.62
3	0.77	0.69	0.63	0.75	0.68	0.62	0.71	0.64	0.59	0.67	0.61	0.57	0.63	0.59	0.55	0.52
4	0.69	0.60	0.53	0.67	0.59	0.52	0.63	0.56	0.51	0.59	0.54	0.49	0.56	0.51	0.47	0.45
5	0.61	0.52	0.46	0.60	0.51	0.45	0.56	0.49	0.44	0.53	0.47	0.42	0.51	0.45	0.41	0.39
6	0.55	0.46	0.40	0.54	0.45	0.39	0.51	0.44	0.38	0.48	0.42	0.37	0.46	0.40	0.36	0.34
7	0.50	0.41	0.35	0.49	0.41	0.35	0.46	0.39	0.34	0.44	0.38	0.33	0.42	0.36	0.32	0.30
8	0.46	0.37	0.32	0.45	0.37	0.31	0.42	0.35	0.30	0.40	0.34	0.30	0.39	0.33	0.29	0.27
9	0.42	0.34	0.28	0.41	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.27	0.36	0.30	0.26	0.24
10	0.39	0.31	0.26	0.38	0.30	0.25	0.36	0.29	0.25	0.35	0.29	0.24	0.33	0.28	0.24	0.22

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	350.17	351.07	347.46	341.14	330.31	316.77	296.92	273.45	249.09
15.0	350.17	351.99	348.35	340.16	329.25	313.79	295.60	272.86	248.30
30.0	350.17	350.17	345.62	337.43	325.61	311.06	291.05	268.31	243.75
45.0	350.17	349.25	344.70	335.58	323.72	307.31	286.33	264.45	239.83
60.0	350.17	347.43	341.96	332.84	320.07	302.75	281.77	258.07	234.36
75.0	350.17	348.33	341.92	331.83	318.08	299.75	278.67	255.75	230.08
90.0	350.17	347.42	341.00	330.00	314.42	296.08	274.08	251.17	226.42
105.0	350.17	346.49	340.06	329.03	313.40	294.10	271.13	248.15	224.25
120.0	350.17	346.49	339.14	327.19	312.48	292.27	271.13	246.31	223.33
135.0	350.17	350.17	341.81	330.66	315.80	295.37	273.07	250.78	224.78
150.0	350.17	346.48	339.11	328.05	298.56	294.88	271.84	249.72	225.77
165.0	350.17	346.48	340.03	328.97	314.23	295.80	275.53	252.49	226.69
180.0	350.17	344.75	335.73	323.99	307.75	287.89	267.14	242.77	221.11
195.0	350.17	347.44	339.25	325.61	311.06	291.96	270.13	247.39	223.74
210.0	350.17	346.53	338.34	327.43	312.88	292.87	271.95	249.21	225.56
225.0	350.17	348.34	339.22	330.10	315.51	296.36	274.48	251.68	227.97
240.0	350.17	347.43	341.05	331.02	316.43	299.10	277.22	254.42	230.71
255.0	350.17	349.25	343.75	334.58	320.83	303.42	281.42	257.58	233.75
270.0	350.17	350.17	344.67	335.50	321.75	305.25	282.33	260.33	235.58
285.0	350.17	350.17	346.49	337.30	324.43	306.97	286.75	261.94	256.42
300.0	350.17	351.09	346.49	337.30	335.46	308.81	287.67	261.94	238.04
315.0	350.17	352.95	349.24	340.88	328.80	313.01	290.72	266.57	240.57
330.0	350.17	350.17	345.56	337.27	325.29	307.78	286.58	263.55	236.82
345.0	350.17	350.17	345.56	336.34	324.36	305.94	286.58	262.62	236.82
360.0	350.17	351.07	347.46	341.14	330.31	316.77	296.92	273.45	249.09

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	223.82	199.45	176.89	154.33	129.96	102.88	76.71	50.54	30.68
15.0	223.74	199.19	175.54	152.80	129.15	100.05	73.67	49.11	28.20
30.0	219.20	196.46	174.63	151.89	126.42	97.32	69.12	46.39	25.47
45.0	216.12	192.41	171.44	148.64	123.11	95.75	66.57	42.86	23.71
60.0	210.65	188.76	168.70	146.81	121.28	91.19	62.92	40.12	21.89
75.0	208.08	186.08	166.83	143.92	117.33	88.92	61.42	38.50	20.17
90.0	203.50	182.42	163.17	141.17	113.67	85.25	58.67	37.58	18.33
105.0	202.20	181.06	160.84	137.86	111.21	84.55	57.90	36.76	18.38
120.0	200.36	179.22	159.92	136.02	111.21	82.72	56.98	35.84	19.30
135.0	203.41	182.05	162.54	139.32	112.39	84.52	59.44	37.15	19.51
150.0	203.65	183.38	163.10	141.91	115.19	86.62	59.90	37.78	19.35
165.0	205.49	186.14	165.87	143.75	117.95	88.46	62.66	38.70	21.19
180.0	198.55	177.79	156.13	132.67	104.69	76.71	51.44	31.59	15.34
195.0	200.10	179.18	159.17	134.61	108.23	80.04	54.57	33.65	16.37
210.0	202.82	181.00	159.17	136.43	110.05	81.86	58.21	35.47	18.19
225.0	204.26	183.29	161.40	138.61	113.07	85.72	60.18	38.30	20.97
240.0	207.00	185.11	163.23	140.43	114.90	88.45	62.92	41.04	21.89
255.0	209.00	187.92	166.83	143.92	119.17	90.75	64.17	58.67	22.92
270.0	210.83	188.83	166.83	162.25	120.08	92.58	66.00	43.08	24.75
285.0	212.31	189.33	168.19	147.97	122.24	94.66	67.09	44.12	24.81
300.0	212.31	189.33	168.19	147.05	122.24	94.66	67.09	43.20	24.81
315.0	214.56	190.41	169.05	147.68	122.60	95.67	67.80	43.65	24.15
330.0	211.94	188.91	166.79	145.60	120.72	92.15	65.43	42.39	23.96
345.0	211.02	187.06	165.87	142.83	118.87	90.31	63.58	41.47	22.12
360.0	223.82	199.45	176.89	154.33	129.96	102.88	76.71	50.54	30.68

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	14.44	10.83	10.83	12.63	15.34	18.05	19.85	21.66	21.66
15.0	13.64	10.91	10.91	12.73	15.46	18.19	20.92	21.83	22.74
30.0	12.73	10.91	10.91	12.73	16.37	19.10	20.92	21.83	22.74
45.0	11.85	10.94	10.94	12.77	16.41	19.15	20.97	21.89	22.80
60.0	10.94	10.94	10.94	13.68	16.41	19.15	20.97	21.89	22.80
75.0	11.00	11.00	11.00	13.75	16.50	19.25	21.08	22.00	22.92
90.0	11.00	11.00	11.00	13.75	16.50	18.33	20.17	22.00	22.00
105.0	11.03	11.03	11.03	12.87	16.54	18.38	20.22	21.14	22.06
120.0	11.03	11.03	11.03	12.87	15.62	18.38	20.22	21.14	22.06
135.0	11.15	11.15	11.15	13.00	15.79	17.65	19.51	21.36	22.29
150.0	11.06	11.06	11.06	12.90	15.67	17.51	19.35	21.19	22.12
165.0	11.06	11.06	11.06	11.98	14.74	17.51	19.35	20.27	21.19
180.0	10.83	10.83	11.73	14.44	16.24	18.95	20.76	21.66	21.66
195.0	10.91	10.91	11.82	13.64	16.37	19.10	20.01	20.92	21.83
210.0	10.91	10.91	11.82	13.64	16.37	18.19	20.01	20.92	21.83
225.0	10.94	10.94	10.94	12.77	15.50	18.24	18.24	20.97	21.89
240.0	11.85	10.94	10.94	12.77	15.50	18.24	19.15	20.97	20.97
255.0	11.92	11.00	11.00	12.83	15.58	18.33	19.25	20.17	21.08
270.0	11.92	11.00	11.00	12.83	15.58	18.33	19.25	20.17	21.08
285.0	11.95	11.03	11.03	12.87	15.62	18.38	19.30	20.22	21.14
300.0	11.95	11.03	11.03	12.87	15.62	18.38	19.30	21.14	21.14
315.0	12.07	11.15	11.15	13.00	15.79	18.58	20.43	21.36	21.36
330.0	11.98	11.06	11.06	12.90	16.59	18.43	20.27	21.19	21.19
345.0	11.06	11.06	11.06	13.82	16.59	19.35	20.27	21.19	22.12
360.0	14.44	10.83	10.83	12.63	15.34	18.05	19.85	21.66	21.66

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	22.56	22.56	21.66	21.66	19.85	17.15	13.54	9.02	4.51
15.0	22.74	22.74	22.74	20.92	20.01	17.28	12.73	9.10	4.55
30.0	22.74	22.74	22.74	20.92	19.10	16.37	12.73	8.19	4.55
45.0	22.80	22.80	21.89	20.97	19.15	16.41	11.85	7.30	3.65
60.0	22.80	22.80	21.89	20.97	19.15	15.50	10.94	7.30	3.65
75.0	22.92	22.92	22.00	21.08	18.33	15.58	11.00	6.42	2.75
90.0	22.92	22.00	22.00	20.17	18.33	14.67	11.00	5.50	2.75
105.0	22.06	22.06	21.14	19.30	17.46	13.79	10.11	5.51	2.76
120.0	22.06	22.06	21.14	20.22	16.54	13.79	9.19	5.51	2.76
135.0	22.29	22.29	22.29	20.43	16.72	13.00	9.29	4.64	1.86
150.0	22.12	22.12	22.12	20.27	17.51	13.82	10.14	4.61	2.76
165.0	22.12	22.12	22.12	20.27	17.51	13.82	10.14	5.53	2.76
180.0	21.66	21.66	20.76	18.05	16.24	12.63	9.02	4.51	2.71
195.0	21.83	21.83	20.92	19.10	17.28	16.37	10.00	5.46	2.73
210.0	21.83	21.83	20.92	20.01	18.19	14.55	10.00	6.37	2.73
225.0	21.89	21.89	20.97	20.06	18.24	15.50	10.94	6.38	2.74
240.0	21.89	21.89	20.97	20.06	18.24	15.50	10.94	6.38	3.65
255.0	22.00	22.00	21.08	20.17	18.33	15.58	11.00	7.33	3.67
270.0	21.08	22.00	21.08	20.17	18.33	15.58	11.00	7.33	3.67
285.0	21.14	22.06	21.14	20.22	18.38	14.71	11.95	7.35	3.68
300.0	21.14	22.06	21.14	20.22	18.38	15.62	11.03	7.35	3.68
315.0	22.29	22.29	21.36	20.43	18.58	14.86	11.15	7.43	3.72
330.0	22.12	22.12	21.19	20.27	18.43	14.74	11.06	7.37	3.69
345.0	22.12	22.12	21.19	20.27	18.43	14.74	11.06	6.45	2.76
360.0	22.56	22.56	21.66	21.66	19.85	17.15	13.54	9.02	4.51

Intensity data(cd)

C/γ(°)	180.0
0.0	2.71
15.0	2.73
30.0	2.73
45.0	1.82
60.0	1.82
75.0	1.83
90.0	1.83
105.0	1.84
120.0	1.84
135.0	1.86
150.0	1.84
165.0	1.84
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	2.71