

Report No	:	Voltage	: 230 V
Test No	: T2212712	Current	: 0.0457 A
LumCAT	: LIT by CARDI	Power	: 4.200 W
Luminaire	: 0019590001 LAFLA01 4.2W 2700K 470lm	PF	: 0.4
LampCAT	:	Ballast type	:
Lamp flux	: 470.0 lm	Width	: -35 mm
Number of Lamps	: 1	Length	: -35 mm
Phm Type	: C	Height	: 51 mm

Photometric Results

Lumens(lm)	: 470.00	Central intensity(cd)	: 34.988
Efficiency(%)	: 100.00%	Maximum intensity(cd)	: 59.789
Luminous Efficacy(lm/W)	: 111.90	Angle of maximum intensity	: C=0.0 γ =51.0
Beam Angle(50%Imax)	: [C0/180]Total=256.6 [C90/270]Total=256.6		
Field angle(10%Imax)	: [C0/180]Total=316.2 [C90/270]Total=316.2		
Maximum s/h(1/2)	: C0_180=2.25 C90_270=2.25		
Maximum s/h(1/4)	: C0_180=2.27 C90_270=2.27		
Up flux rate of lamp(%)	: 29.19%		
Down flux rate of lamp(%)	: 70.80%		
Up flux rate of LUM(%)	: 29.20%		
Down flux rate of LUM(%)	: 70.80%		
CIE Type	: Semidirect lighting		
Output flux ratio in π solid angle :	: 36.638%		

Zonal flux distribution table

Appendix Page: 2 Total:20

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	34.988	0.000	0	0.00%	0.00%
1.0	35.034	0.034	0.034	0.01%	0.01%
2.0	35.157	0.101	0.134	0.02%	0.03%
3.0	35.349	0.169	0.303	0.04%	0.06%
4.0	35.606	0.238	0.54	0.05%	0.11%
5.0	35.930	0.308	0.848	0.07%	0.18%
6.0	36.314	0.380	1.228	0.08%	0.26%
7.0	36.751	0.454	1.681	0.10%	0.36%
8.0	37.240	0.530	2.211	0.11%	0.47%
9.0	37.779	0.608	2.819	0.13%	0.60%
10.0	38.358	0.689	3.508	0.15%	0.75%
11.0	38.974	0.773	4.281	0.16%	0.91%
12.0	39.623	0.859	5.14	0.18%	1.09%
13.0	40.302	0.949	6.088	0.20%	1.30%
14.0	41.001	1.041	7.129	0.22%	1.52%
15.0	41.724	1.136	8.265	0.24%	1.76%
16.0	42.461	1.234	9.498	0.26%	2.02%
17.0	43.208	1.334	10.832	0.28%	2.30%
18.0	43.961	1.437	12.269	0.31%	2.61%
19.0	44.717	1.543	13.812	0.33%	2.94%
20.0	45.476	1.651	15.463	0.35%	3.29%
21.0	46.234	1.761	17.224	0.37%	3.66%
22.0	46.988	1.873	19.097	0.40%	4.06%
23.0	47.735	1.988	21.085	0.42%	4.49%
24.0	48.473	2.103	23.188	0.45%	4.93%
25.0	49.199	2.221	25.409	0.47%	5.41%
26.0	49.912	2.340	27.749	0.50%	5.90%
27.0	50.607	2.459	30.208	0.52%	6.43%
28.0	51.290	2.580	32.788	0.55%	6.98%
29.0	51.957	2.701	35.489	0.57%	7.55%
30.0	52.604	2.823	38.312	0.60%	8.15%
31.0	53.229	2.945	41.257	0.63%	8.78%
32.0	53.831	3.067	44.325	0.65%	9.43%
33.0	54.408	3.189	47.513	0.68%	10.11%
34.0	54.967	3.310	50.823	0.70%	10.81%
35.0	55.499	3.431	54.254	0.73%	11.54%
36.0	56.005	3.550	57.804	0.76%	12.30%
37.0	56.481	3.669	61.473	0.78%	13.08%

Equipment: GMS-1800
Temperature($^{\circ}\text{C}$): 25.0

Date: 2022/09/13
Humidity(%): 55.0%

Operator: LCS

Zonal flux distribution table

Appendix Page: 3 Total:20

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	56.925	3.785	65.258	0.81%	13.88%
39.0	57.338	3.900	69.158	0.83%	14.71%
40.0	57.715	4.013	73.171	0.85%	15.57%
41.0	58.063	4.123	77.294	0.88%	16.45%
42.0	58.383	4.231	81.524	0.90%	17.35%
43.0	58.674	4.336	85.861	0.92%	18.27%
44.0	58.931	4.439	90.299	0.94%	19.21%
45.0	59.152	4.538	94.837	0.97%	20.18%
46.0	59.339	4.634	99.471	0.99%	21.16%
47.0	59.495	4.726	104.198	1.01%	22.17%
48.0	59.618	4.815	109.013	1.02%	23.19%
49.0	59.708	4.900	113.913	1.04%	24.24%
50.0	59.766	4.981	118.894	1.06%	25.30%
51.0	59.789	5.058	123.953	1.08%	26.37%
52.0	59.779	5.131	129.083	1.09%	27.46%
53.0	59.736	5.199	134.282	1.11%	28.57%
54.0	59.663	5.263	139.545	1.12%	29.69%
55.0	59.558	5.322	144.867	1.13%	30.82%
56.0	59.421	5.376	150.243	1.14%	31.97%
57.0	59.253	5.426	155.669	1.15%	33.12%
58.0	59.054	5.471	161.14	1.16%	34.29%
59.0	58.826	5.511	166.651	1.17%	35.46%
60.0	58.570	5.546	172.197	1.18%	36.64%
61.0	58.285	5.577	177.774	1.19%	37.82%
62.0	57.971	5.602	183.376	1.19%	39.02%
63.0	57.631	5.622	188.998	1.20%	40.21%
64.0	57.268	5.638	194.636	1.20%	41.41%
65.0	56.877	5.649	200.285	1.20%	42.61%
66.0	56.461	5.655	205.94	1.20%	43.82%
67.0	56.024	5.656	211.596	1.20%	45.02%
68.0	55.568	5.653	217.249	1.20%	46.22%
69.0	55.089	5.645	222.894	1.20%	47.42%
70.0	54.591	5.633	228.527	1.20%	48.62%
71.0	54.075	5.616	234.143	1.19%	49.82%
72.0	53.539	5.596	239.739	1.19%	51.01%
73.0	52.985	5.570	245.309	1.19%	52.19%
74.0	52.415	5.541	250.85	1.18%	53.37%
75.0	51.829	5.508	256.358	1.17%	54.54%

Equipment: GMS-1800
Temperature($^{\circ}\text{C}$): 25.0

Date: 2022/09/13
Humidity(%): 55.0%

Operator: LCS

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	51.231	5.471	261.829	1.16%	55.71%
77.0	50.624	5.430	267.26	1.16%	56.86%
78.0	50.007	5.387	272.646	1.15%	58.01%
79.0	49.375	5.340	277.986	1.14%	59.15%
80.0	48.734	5.289	283.275	1.13%	60.27%
81.0	48.084	5.236	288.511	1.11%	61.39%
82.0	47.422	5.179	293.69	1.10%	62.49%
83.0	46.752	5.119	298.81	1.09%	63.58%
84.0	46.080	5.057	303.867	1.08%	64.65%
85.0	45.402	4.993	308.86	1.06%	65.72%
86.0	44.719	4.926	313.786	1.05%	66.76%
87.0	44.031	4.857	318.643	1.03%	67.80%
88.0	43.338	4.786	323.429	1.02%	68.82%
89.0	42.645	4.713	328.142	1.00%	69.82%
90.0	41.947	4.638	332.78	0.99%	70.80%
91.0	41.247	4.561	337.341	0.97%	71.78%
92.0	40.545	4.483	341.825	0.95%	72.73%
93.0	39.845	4.404	346.228	0.94%	73.67%
94.0	39.149	4.323	350.551	0.92%	74.59%
95.0	38.452	4.242	354.793	0.90%	75.49%
96.0	37.758	4.159	358.953	0.88%	76.37%
97.0	37.064	4.076	363.029	0.87%	77.24%
98.0	36.373	3.992	367.021	0.85%	78.09%
99.0	35.689	3.908	370.929	0.83%	78.92%
100.0	35.004	3.823	374.752	0.81%	79.74%
101.0	34.323	3.738	378.489	0.80%	80.53%
102.0	33.648	3.652	382.141	0.78%	81.31%
103.0	32.980	3.567	385.708	0.76%	82.07%
104.0	32.315	3.481	389.189	0.74%	82.81%
105.0	31.653	3.396	392.585	0.72%	83.53%
106.0	30.993	3.310	395.895	0.70%	84.23%
107.0	30.335	3.224	399.119	0.69%	84.92%
108.0	29.685	3.139	402.258	0.67%	85.59%
109.0	29.041	3.054	405.311	0.65%	86.24%
110.0	28.404	2.969	408.28	0.63%	86.87%
111.0	27.773	2.885	411.165	0.61%	87.48%
112.0	27.140	2.801	413.967	0.60%	88.08%
113.0	26.512	2.718	416.685	0.58%	88.66%

Zonal flux distribution table

Appendix Page: 5 Total:20

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
114.0	25.888	2.635	419.319	0.56%	89.22%
115.0	25.269	2.552	421.872	0.54%	89.76%
116.0	24.656	2.471	424.343	0.53%	90.29%
117.0	24.051	2.390	426.733	0.51%	90.80%
118.0	23.448	2.310	429.043	0.49%	91.29%
119.0	22.845	2.231	431.273	0.47%	91.76%
120.0	22.249	2.152	433.425	0.46%	92.22%
121.0	21.655	2.074	435.5	0.44%	92.66%
122.0	21.067	1.997	437.497	0.42%	93.09%
123.0	20.486	1.922	439.418	0.41%	93.49%
124.0	19.913	1.847	441.266	0.39%	93.89%
125.0	19.348	1.774	443.04	0.38%	94.26%
126.0	18.781	1.702	444.742	0.36%	94.63%
127.0	18.214	1.631	446.372	0.35%	94.97%
128.0	17.652	1.560	447.932	0.33%	95.31%
129.0	17.093	1.491	449.423	0.32%	95.62%
130.0	16.539	1.423	450.846	0.30%	95.93%
131.0	15.990	1.356	452.202	0.29%	96.21%
132.0	15.450	1.291	453.494	0.27%	96.49%
133.0	14.916	1.228	454.721	0.26%	96.75%
134.0	14.382	1.165	455.886	0.25%	97.00%
135.0	13.850	1.104	456.991	0.23%	97.23%
136.0	13.320	1.044	458.035	0.22%	97.46%
137.0	12.798	0.986	459.02	0.21%	97.66%
138.0	12.282	0.929	459.949	0.20%	97.86%
139.0	11.773	0.874	460.823	0.19%	98.05%
140.0	11.273	0.821	461.644	0.17%	98.22%
141.0	10.784	0.769	462.413	0.16%	98.39%
142.0	10.295	0.719	463.133	0.15%	98.54%
143.0	9.808	0.671	463.804	0.14%	98.68%
144.0	9.328	0.624	464.428	0.13%	98.82%
145.0	8.851	0.579	465.007	0.12%	98.94%
146.0	8.384	0.535	465.542	0.11%	99.05%
147.0	7.926	0.494	466.036	0.11%	99.16%
148.0	7.474	0.454	466.489	0.10%	99.25%
149.0	7.035	0.416	466.905	0.09%	99.34%
150.0	6.604	0.380	467.285	0.08%	99.42%
151.0	6.184	0.345	467.63	0.07%	99.50%

Zonal flux distribution table

Appendix Page: 6 Total:20

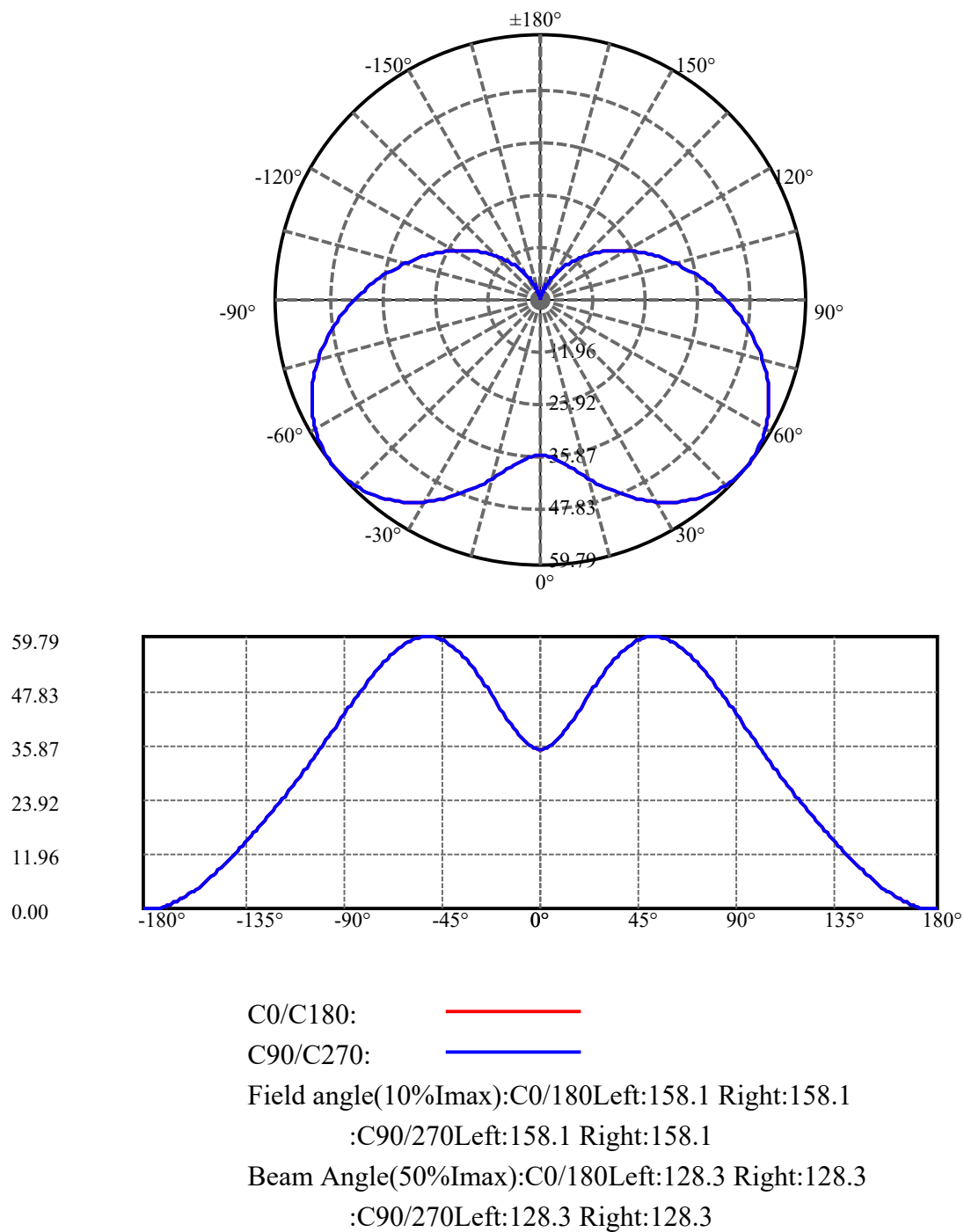
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
152.0	5.773	0.313	467.943	0.07%	99.56%
153.0	5.372	0.282	468.225	0.06%	99.62%
154.0	4.980	0.253	468.478	0.05%	99.68%
155.0	4.602	0.226	468.704	0.05%	99.73%
156.0	4.237	0.201	468.905	0.04%	99.77%
157.0	3.884	0.178	469.083	0.04%	99.81%
158.0	3.546	0.156	469.239	0.03%	99.84%
159.0	3.223	0.136	469.375	0.03%	99.87%
160.0	2.917	0.118	469.493	0.03%	99.89%
161.0	2.628	0.101	469.594	0.02%	99.91%
162.0	2.357	0.087	469.681	0.02%	99.93%
163.0	2.100	0.073	469.754	0.02%	99.95%
164.0	1.847	0.061	469.816	0.01%	99.96%
165.0	1.600	0.051	469.866	0.01%	99.97%
166.0	1.357	0.041	469.907	0.01%	99.98%
167.0	1.113	0.032	469.939	0.01%	99.99%
168.0	0.852	0.023	469.962	0.00%	99.99%
169.0	0.564	0.015	469.977	0.00%	100.00%
170.0	0.349	0.009	469.986	0.00%	100.00%
171.0	0.216	0.005	469.992	0.00%	100.00%
172.0	0.104	0.003	469.994	0.00%	100.00%
173.0	0.024	0.001	469.995	0.00%	100.00%
174.0	0.002	0.000	469.995	0.00%	100.00%
175.0	0.000	0.000	469.995	0.00%	100.00%
176.0	0.000	0.000	469.995	0.00%	100.00%
177.0	0.000	0.000	469.995	0.00%	100.00%
178.0	0.000	0.000	469.995	0.00%	100.00%
179.0	0.000	0.000	469.995	0.00%	100.00%
180.0	0.000	0.000	469.995	0.00%	100.00%

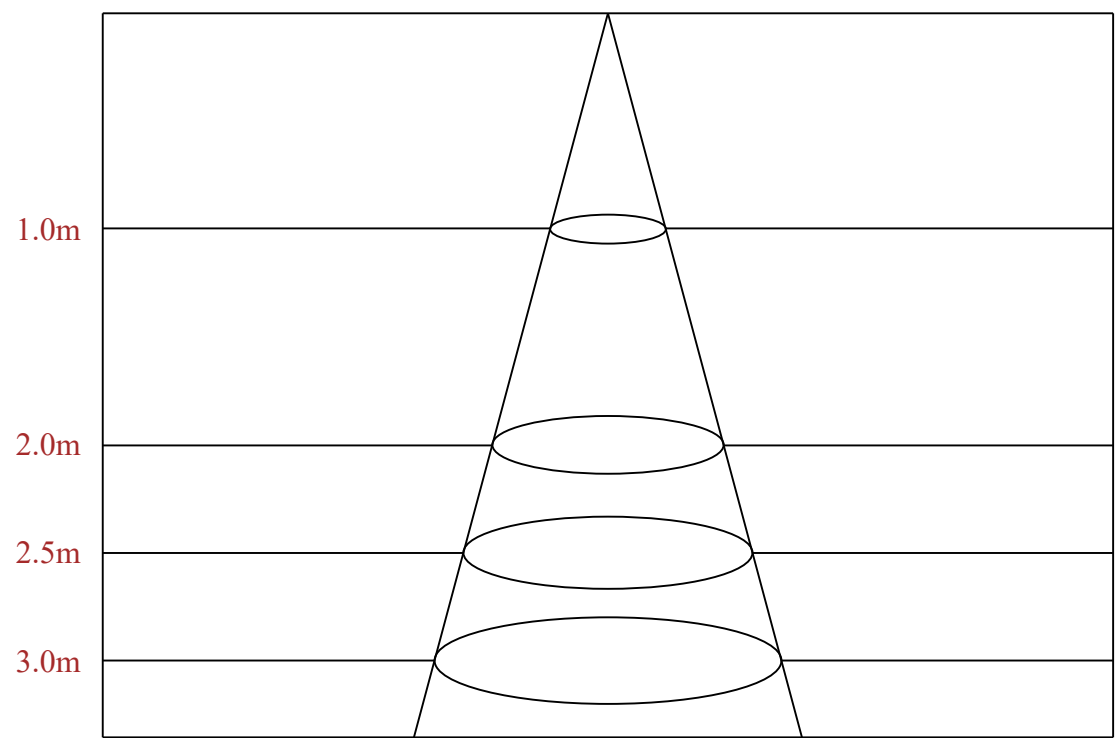
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	38.31	8.15%	8.15%
0-40	73.17	15.57%	15.57%
0-60	172.20	36.64%	36.64%
0-90	332.78	70.80%	70.80%
0-120	433.43	92.22%	92.22%
0-180	470.00	100.00%	100.00%
60-90	160.58	34.17%	34.17%
90-120	100.65	21.41%	21.41%
90-130	118.07	25.12%	25.12%
90-150	134.50	28.62%	28.62%
90-180	137.22	29.19%	29.20%
0-100.33	376.00	80.00%	80.00%

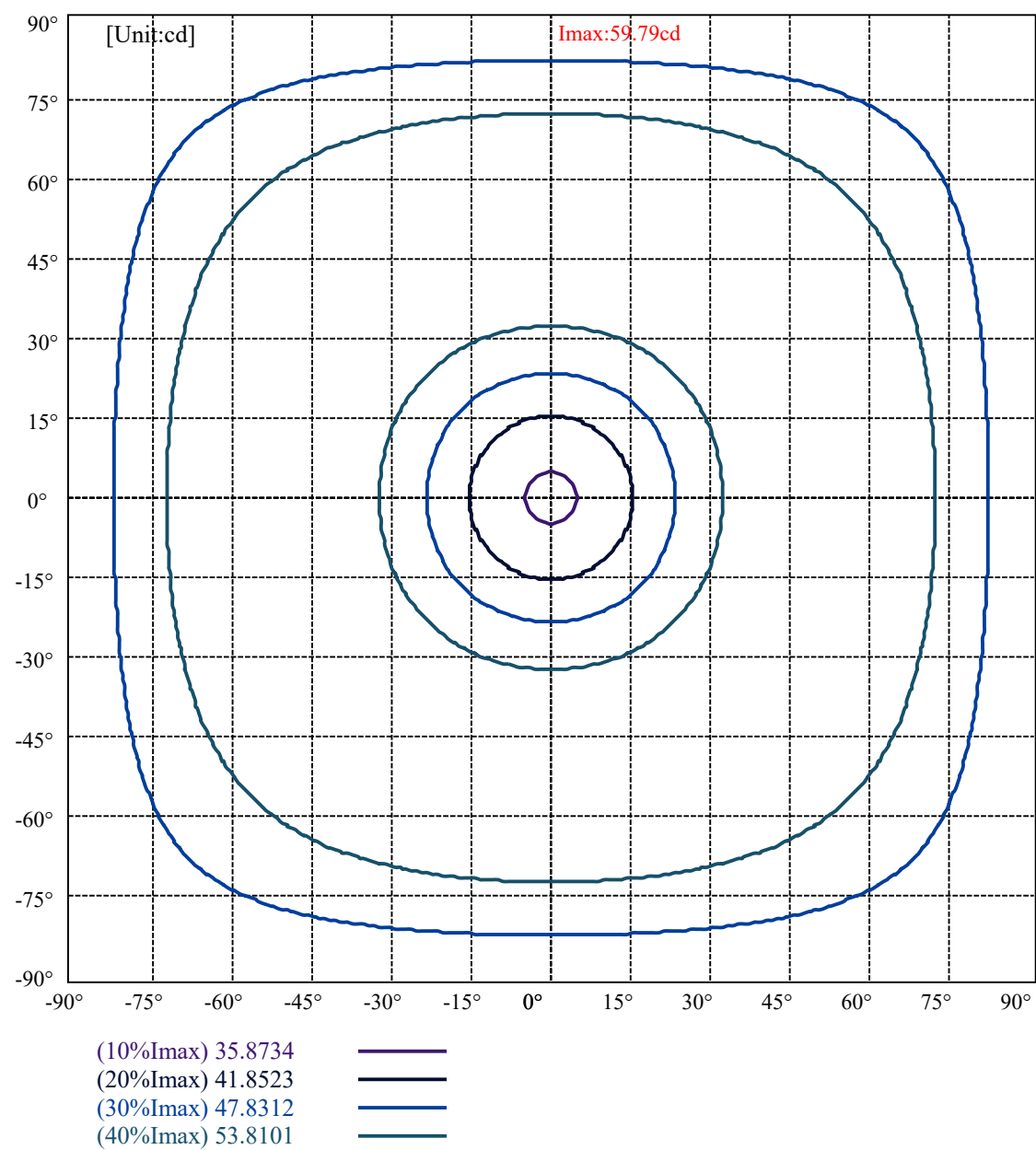
ZONAL LUMEN SUMMARY

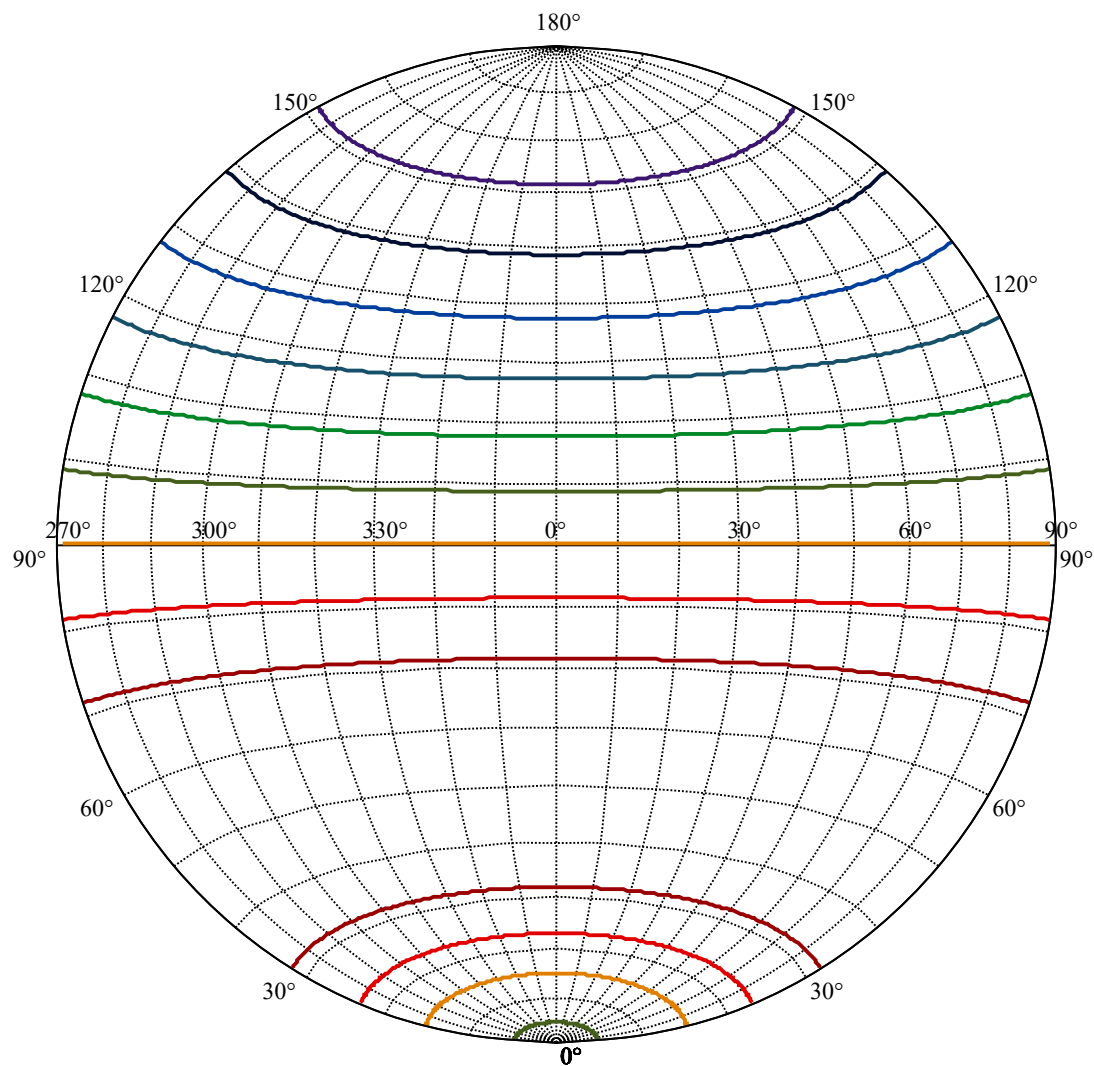
0-10	3.51
10-20	11.96
20-30	22.85
30-40	34.86
40-50	45.72
50-60	53.30
60-70	56.33
70-80	54.75
80-90	49.50
90-100	41.97
100-110	33.53
110-120	25.15
120-130	17.42
130-140	10.80
140-150	5.64
150-160	2.21
160-170	0.49
170-180	0.01





Max , Ave Beam angle of C0 plane 256.48



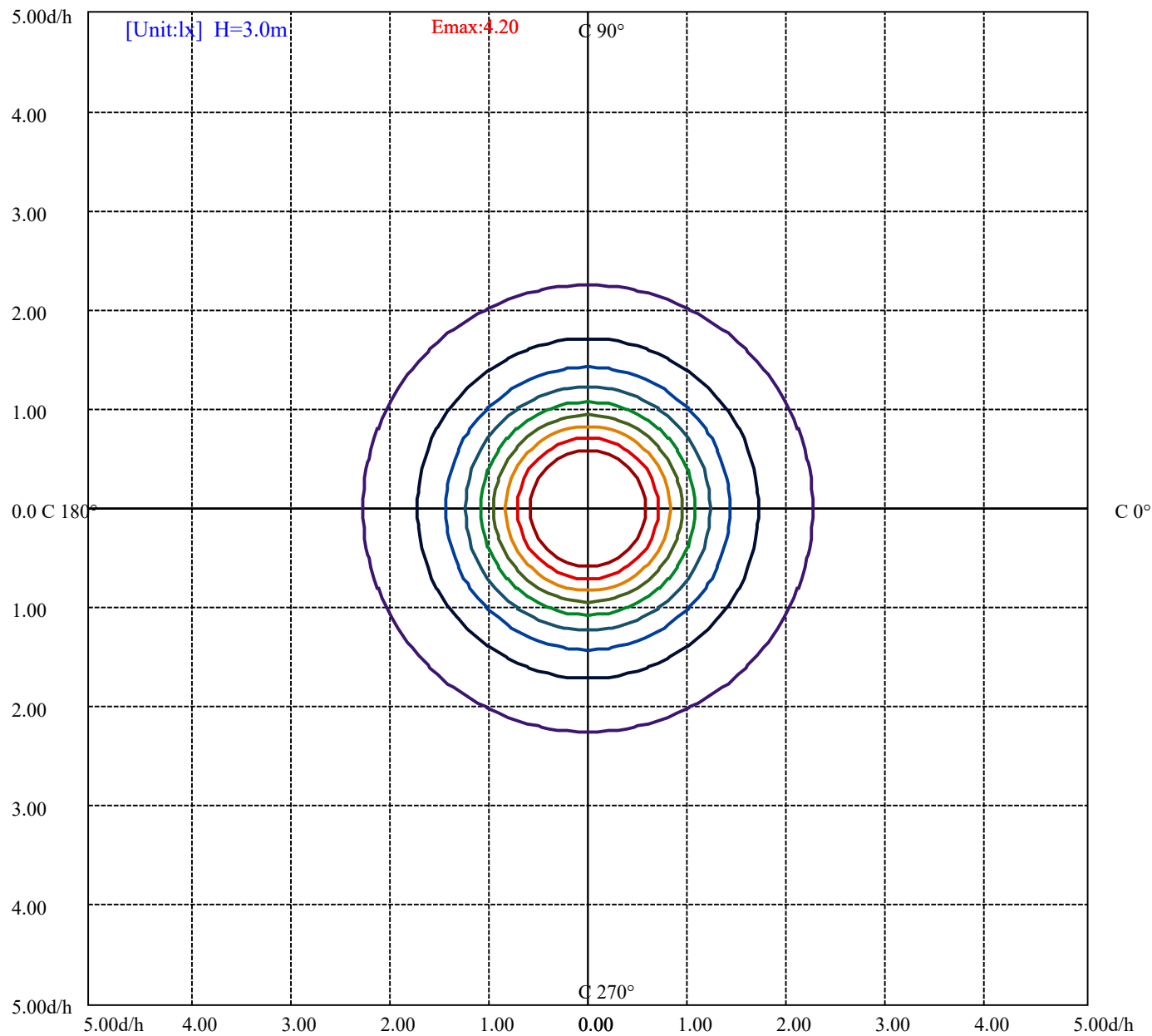


House

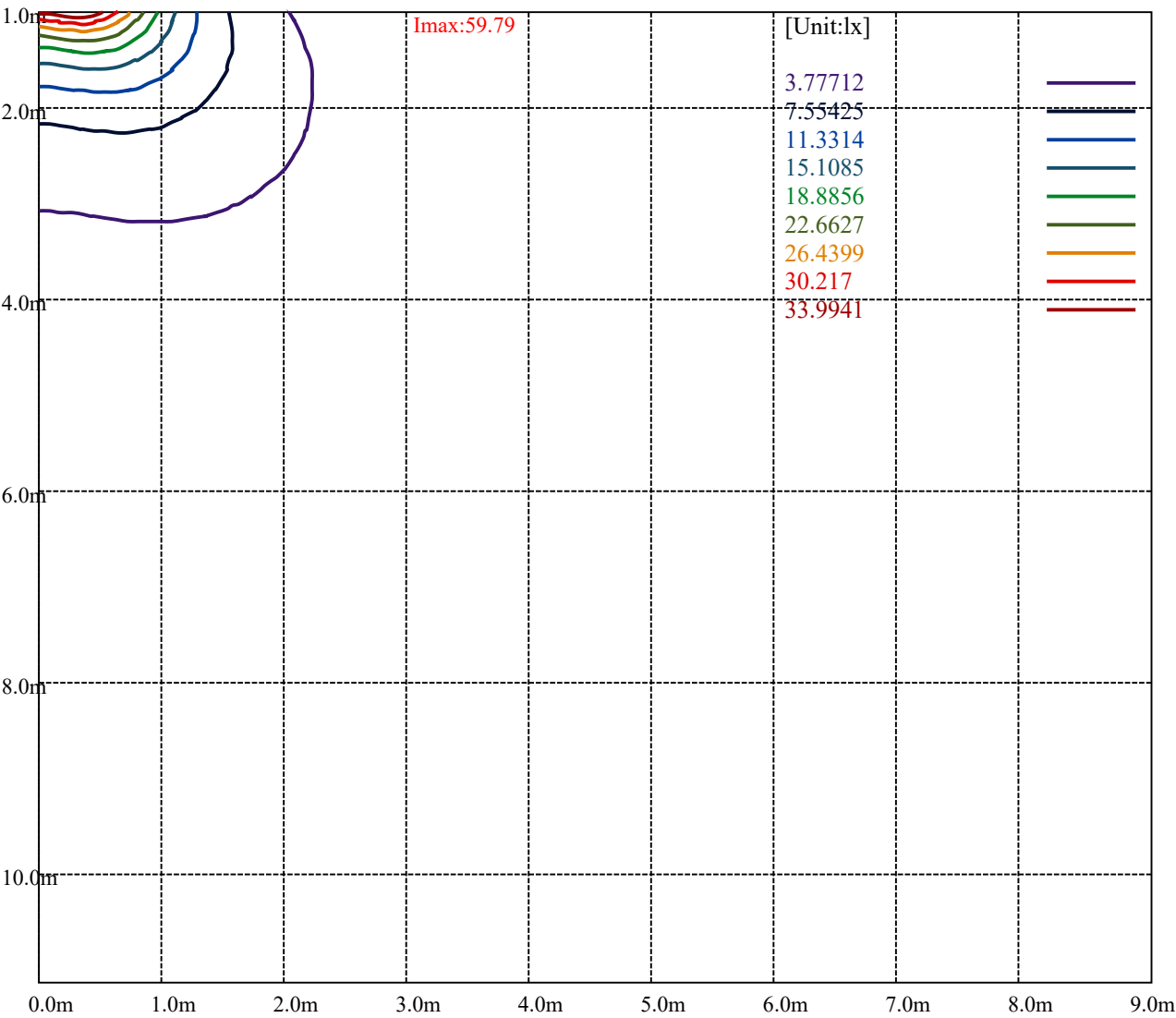
[Unit:cd]

Road

Imax:59.79	
(10%Imax) 5.9789	
(20%Imax) 11.9578	
(30%Imax) 17.9367	
(40%Imax) 23.9156	
(50%Imax) 29.8945	
(60%Imax) 35.8734	
(70%Imax) 41.8523	
(80%Imax) 47.8312	
(90%Imax) 53.8101	



(10%Emax)	0.4201111	—
(20%Emax)	0.8402222	—
(30%Emax)	1.260333	—
(40%Emax)	1.680444	—
(50%Emax)	2.100556	—
(60%Emax)	2.520667	—
(70%Emax)	2.940778	—
(80%Emax)	3.360889	—
(90%Emax)	3.781	—



Luminance Limiting Curve(no luminous side)

Appendix Page: 14 Total:20

Luminance Table

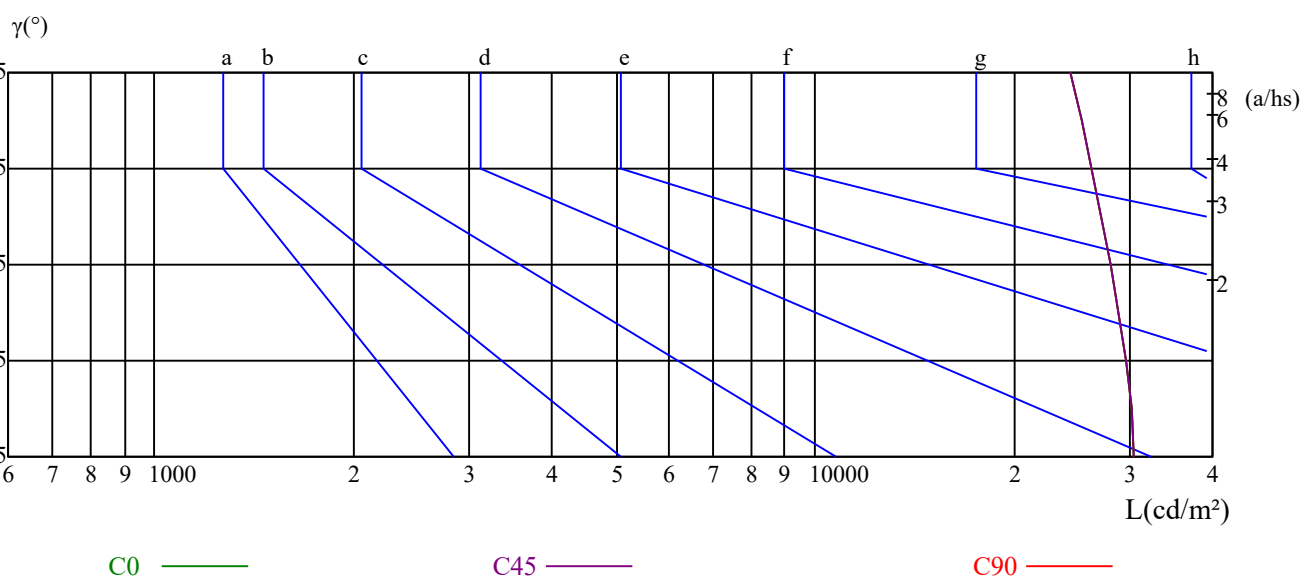
γ	45	50	55	60	65	70	75	80	85
C0	30451	30096	29572	28896	28096	27208	26267	25317	24383
C45	30451	30096	29572	28896	28096	27208	26267	25317	24383
C90	30451	30096	29572	28896	28096	27208	26267	25317	24383

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
139882	139882	139882	208138	208138	208138	541443	541443	541443

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



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	22.00	23.29	22.72	24.06	24.99	22.00	23.29	22.72	24.06	24.99
	3H	24.40	25.59	25.13	26.38	27.32	24.40	25.59	25.13	26.38	27.32
	4H	25.51	26.65	26.26	27.44	28.40	25.51	26.65	26.26	27.44	28.40
	6H	26.61	27.68	27.37	28.48	29.46	26.61	27.68	27.37	28.48	29.46
	8H	27.10	28.15	27.87	28.95	29.93	27.10	28.15	27.87	28.95	29.93
	12H	27.57	28.58	28.34	29.39	30.38	27.57	28.58	28.34	29.39	30.38
4H	2H	22.90	24.04	23.65	24.83	25.79	22.90	24.04	23.65	24.83	25.79
	3H	25.44	26.45	26.21	27.26	28.25	25.44	26.45	26.21	27.26	28.25
	4H	26.76	27.68	27.54	28.50	29.51	26.76	27.68	27.54	28.50	29.51
	6H	27.98	28.82	28.78	29.66	30.66	27.98	28.82	28.78	29.66	30.66
	8H	28.58	29.38	29.39	30.22	31.24	28.58	29.38	29.39	30.22	31.24
	12H	29.17	29.92	29.98	30.75	31.79	29.17	29.92	29.98	30.75	31.79
8H	4H	27.26	28.06	28.07	28.90	29.91	27.26	28.06	28.07	28.90	29.91
	6H	28.70	29.39	29.52	30.23	31.28	28.70	29.39	29.52	30.23	31.28
	8H	29.50	30.11	30.34	30.98	32.03	29.50	30.11	30.34	30.98	32.03
	12H	30.23	30.77	31.07	31.65	32.69	30.23	30.77	31.07	31.65	32.69
12H	4H	27.37	28.11	28.18	28.94	29.99	27.37	28.11	28.18	28.94	29.99
	6H	28.93	29.54	29.76	30.41	31.46	28.93	29.54	29.76	30.41	31.46
	8H	29.75	30.29	30.59	31.18	32.22	29.75	30.29	30.59	31.18	32.22
Variation with the observer position at spacings:											
S = 1.0H		0.2/-1.0					0.2/-1.0				
S = 1.5H		0.4/-0.8					0.4/-0.8				
S = 2.0H		0.3/-0.6					0.3/-0.6				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		14.1					14.1				

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25

C/ $\gamma(^{\circ})$	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
45.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
90.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
135.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
180.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
225.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
270.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
315.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
360.0	34.99	35.03	35.16	35.35	35.61	35.93	36.31	36.75	37.24
C/ $\gamma(^{\circ})$	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
45.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
90.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
135.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
180.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
225.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
270.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
315.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
360.0	37.78	38.36	38.97	39.62	40.30	41.00	41.72	42.46	43.21
C/ $\gamma(^{\circ})$	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
45.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
90.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
135.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
180.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
225.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
270.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
315.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
360.0	43.96	44.72	45.48	46.23	46.99	47.74	48.47	49.20	49.91
C/ $\gamma(^{\circ})$	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
45.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
90.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
135.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
180.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
225.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
270.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
315.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
360.0	50.61	51.29	51.96	52.60	53.23	53.83	54.41	54.97	55.50
C/ $\gamma(^{\circ})$	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
45.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
90.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
135.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
180.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
225.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
270.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
315.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93
360.0	56.01	56.48	56.93	57.34	57.72	58.06	58.38	58.67	58.93

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
45.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
90.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
135.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
180.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
225.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
270.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
315.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74
360.0	59.15	59.34	59.50	59.62	59.71	59.77	59.79	59.78	59.74

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
45.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
90.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
135.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
180.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
225.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
270.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
315.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97
360.0	59.66	59.56	59.42	59.25	59.05	58.83	58.57	58.29	57.97

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
45.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
90.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
135.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
180.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
225.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
270.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
315.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08
360.0	57.63	57.27	56.88	56.46	56.02	55.57	55.09	54.59	54.08

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
45.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
90.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
135.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
180.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
225.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
270.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
315.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73
360.0	53.54	52.99	52.42	51.83	51.23	50.62	50.01	49.38	48.73

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
45.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
90.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
135.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
180.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
225.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
270.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
315.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65
360.0	48.08	47.42	46.75	46.08	45.40	44.72	44.03	43.34	42.65

Intensity data(cd)									Appendix Page: 18 Total:20
C/γ(°)	90.0	91.0	92.0	93.0	94.0	95.0	96.0	97.0	98.0
0.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
45.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
90.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
135.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
180.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
225.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
270.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
315.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
360.0	41.95	41.25	40.55	39.85	39.15	38.45	37.76	37.06	36.37
C/γ(°)	99.0	100.0	101.0	102.0	103.0	104.0	105.0	106.0	107.0
0.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
45.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
90.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
135.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
180.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
225.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
270.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
315.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
360.0	35.69	35.00	34.32	33.65	32.98	32.32	31.65	30.99	30.34
C/γ(°)	108.0	109.0	110.0	111.0	112.0	113.0	114.0	115.0	116.0
0.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
45.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
90.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
135.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
180.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
225.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
270.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
315.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
360.0	29.69	29.04	28.40	27.77	27.14	26.51	25.89	25.27	24.66
C/γ(°)	117.0	118.0	119.0	120.0	121.0	122.0	123.0	124.0	125.0
0.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
45.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
90.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
135.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
180.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
225.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
270.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
315.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
360.0	24.05	23.45	22.85	22.25	21.66	21.07	20.49	19.91	19.35
C/γ(°)	126.0	127.0	128.0	129.0	130.0	131.0	132.0	133.0	134.0
0.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
45.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
90.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
135.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
180.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
225.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
270.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
315.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38
360.0	18.78	18.21	17.65	17.09	16.54	15.99	15.45	14.92	14.38

Intensity data(cd)									Appendix Page: 19 Total:20
C/ γ (°)	135.0	136.0	137.0	138.0	139.0	140.0	141.0	142.0	143.0
0.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
45.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
90.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
135.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
180.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
225.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
270.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
315.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
360.0	13.85	13.32	12.80	12.28	11.77	11.27	10.78	10.30	9.81
C/ γ (°)	144.0	145.0	146.0	147.0	148.0	149.0	150.0	151.0	152.0
0.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
45.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
90.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
135.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
180.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
225.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
270.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
315.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
360.0	9.33	8.85	8.38	7.93	7.47	7.04	6.60	6.18	5.77
C/ γ (°)	153.0	154.0	155.0	156.0	157.0	158.0	159.0	160.0	161.0
0.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
45.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
90.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
135.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
180.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
225.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
270.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
315.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
360.0	5.37	4.98	4.60	4.24	3.88	3.55	3.22	2.92	2.63
C/ γ (°)	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0	170.0
0.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
45.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
90.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
135.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
180.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
225.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
270.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
315.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
360.0	2.36	2.10	1.85	1.60	1.36	1.11	0.85	0.56	0.35
C/ γ (°)	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.22	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00

Intensity data(cd)

Appendix Page: 20 Total:20

C/γ(°)	180.0
0.0	0.00
45.0	0.00
90.0	0.00
135.0	0.00
180.0	0.00
225.0	0.00
270.0	0.00
315.0	0.00
360.0	0.00