



LIT by CARDI

Client:

LumCAT: LIT by CARDI

Luminaire: 0028920095 994772402 30W 3000K 3600lm

Report No:

Voltage(V):

Test No:

Current(A):

LampCAT:

Power (W): 30.0000

Lamp flux(lm)

PF:

Number of Lamps: 1

Ballast type:

Length(mm): 1523

Width(mm): 70

Phm Type: C

Height(mm): 77

Photometric Results

Lumens(lm): 3600.00

Lumens(lm)/Power(W): 120.00

Central intensity(cd): 956.375

Maximum intensity(cd): 961.271

Angle of maximum intensity: C=180.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=133.7

[C90/270]Total=110.9

Field angle(10%Imax): [C0/180]Total=235.8

[C90/270]Total=159.7

Maximum s/h(1/2): C0_180=1.32 C90_270=1.20

Maximum s/h(1/4): C0_180=1.47 C90_270=1.36

Up flux rate of LUM(%): 10.24%

Down flux rate of LUM(%): 89.76%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 62.692%

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Zonal flux distribution table

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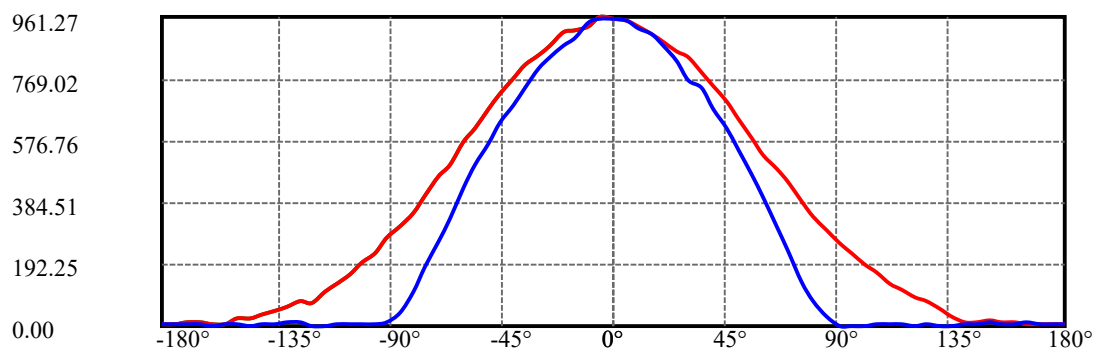
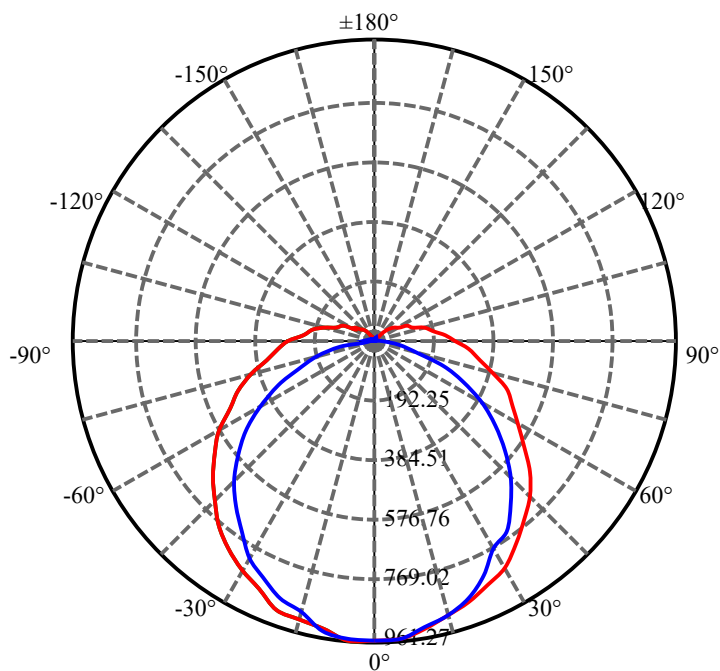
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	956.997	0.000	0	.000%	.000%
5.0	952.163	22.809	22.809	.634%	.634%
10.0	939.976	67.644	90.452	1.879%	2.513%
15.0	919.114	110.208	200.661	3.061%	5.574%
20.0	895.865	149.483	350.143	4.152%	9.726%
25.0	864.064	184.464	534.608	5.124%	14.850%
30.0	821.509	213.172	747.78	5.921%	20.772%
35.0	779.943	235.672	983.452	6.546%	27.318%
40.0	731.979	252.089	1235.54	7.002%	34.321%
45.0	678.428	260.979	1496.519	7.249%	41.570%
50.0	620.029	262.202	1758.721	7.283%	48.853%
55.0	555.739	255.485	2014.206	7.097%	55.950%
60.0	494.916	242.698	2256.904	6.742%	62.692%
65.0	430.704	224.874	2481.778	6.247%	68.938%
70.0	366.927	201.834	2683.612	5.607%	74.545%
75.0	307.190	176.089	2859.701	4.891%	79.436%
80.0	249.430	148.839	3008.54	4.134%	83.571%
85.0	202.433	122.702	3131.243	3.408%	86.979%
90.0	163.110	100.024	3231.266	2.778%	89.757%
95.0	132.011	80.754	3312.02	2.243%	92.001%
100.0	109.855	65.678	3377.698	1.824%	93.825%
105.0	89.776	53.381	3431.079	1.483%	95.308%
110.0	73.196	42.571	3473.65	1.183%	96.490%
115.0	60.916	33.936	3507.586	.943%	97.433%
120.0	46.815	26.173	3533.759	.727%	98.160%
125.0	38.559	19.721	3553.48	.548%	98.708%
130.0	30.504	15.007	3568.487	.417%	99.125%
135.0	21.630	10.528	3579.015	.292%	99.417%
140.0	15.734	6.914	3585.928	.192%	99.609%
145.0	12.589	4.722	3590.651	.131%	99.740%
150.0	9.418	3.238	3593.889	.090%	99.830%
155.0	7.425	2.130	3596.019	.059%	99.890%
160.0	6.307	1.439	3597.459	.040%	99.930%
165.0	7.239	1.116	3598.574	.031%	99.961%
170.0	5.873	0.777	3599.352	.022%	99.982%
175.0	7.437	0.476	3599.827	.013%	99.995%
180.0	6.700	0.169	3599.996	.005%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	747.78	20.77%
0-40	1235.54	34.32%
0-60	2256.90	62.69%
0-90	3231.27	89.76%
0-120	3533.76	98.16%
0-180	3600.00	100.00%
60-90	1217.06	33.81%
90-120	402.52	11.18%
90-130	437.24	12.15%
90-150	462.65	12.85%
90-180	468.58	13.02%
0-75.68	2880.00	80.00%

ZONAL LUMEN SUMMARY

0-10	90.45
10-20	259.69
20-30	397.64
30-40	487.76
40-50	523.18
50-60	498.18
60-70	426.71
70-80	324.93
80-90	222.73
90-100	146.43
100-110	95.95
110-120	60.11
120-130	34.73
130-140	17.44
140-150	7.96
150-160	3.57
160-170	1.89
170-180	0.48



C180(Max): —————

C0/C180: —————

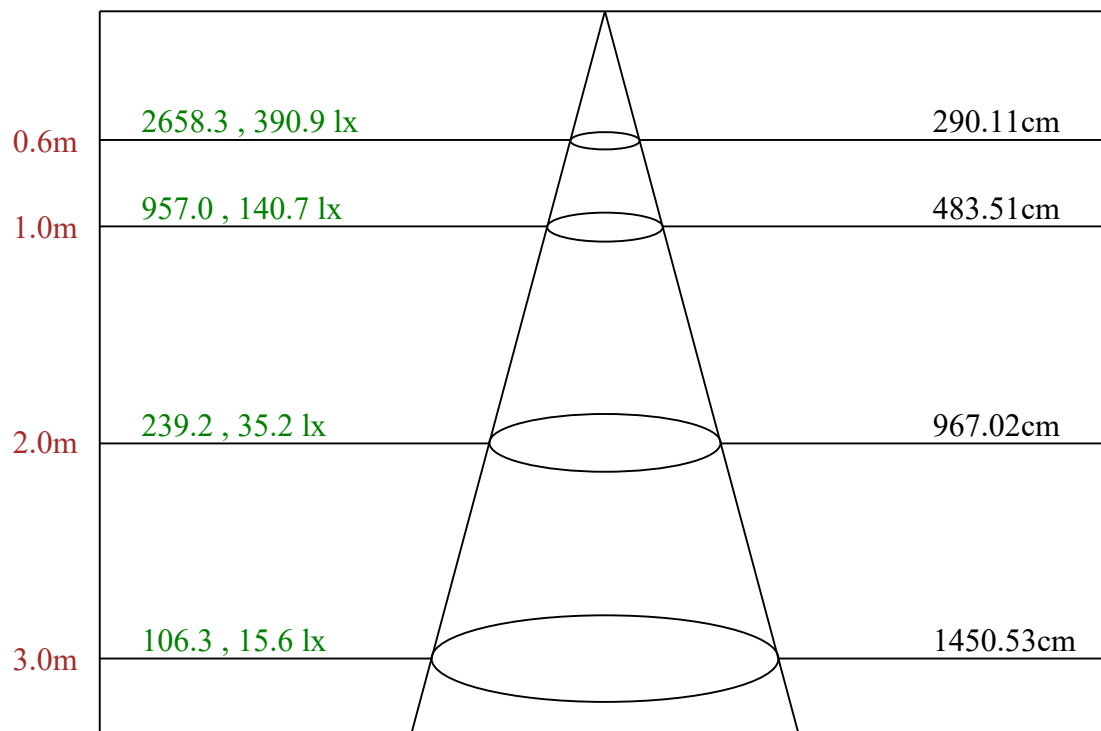
C90/C270: —————

Field angle(10%Imax):C0/180Left:111.8 Right:124.0

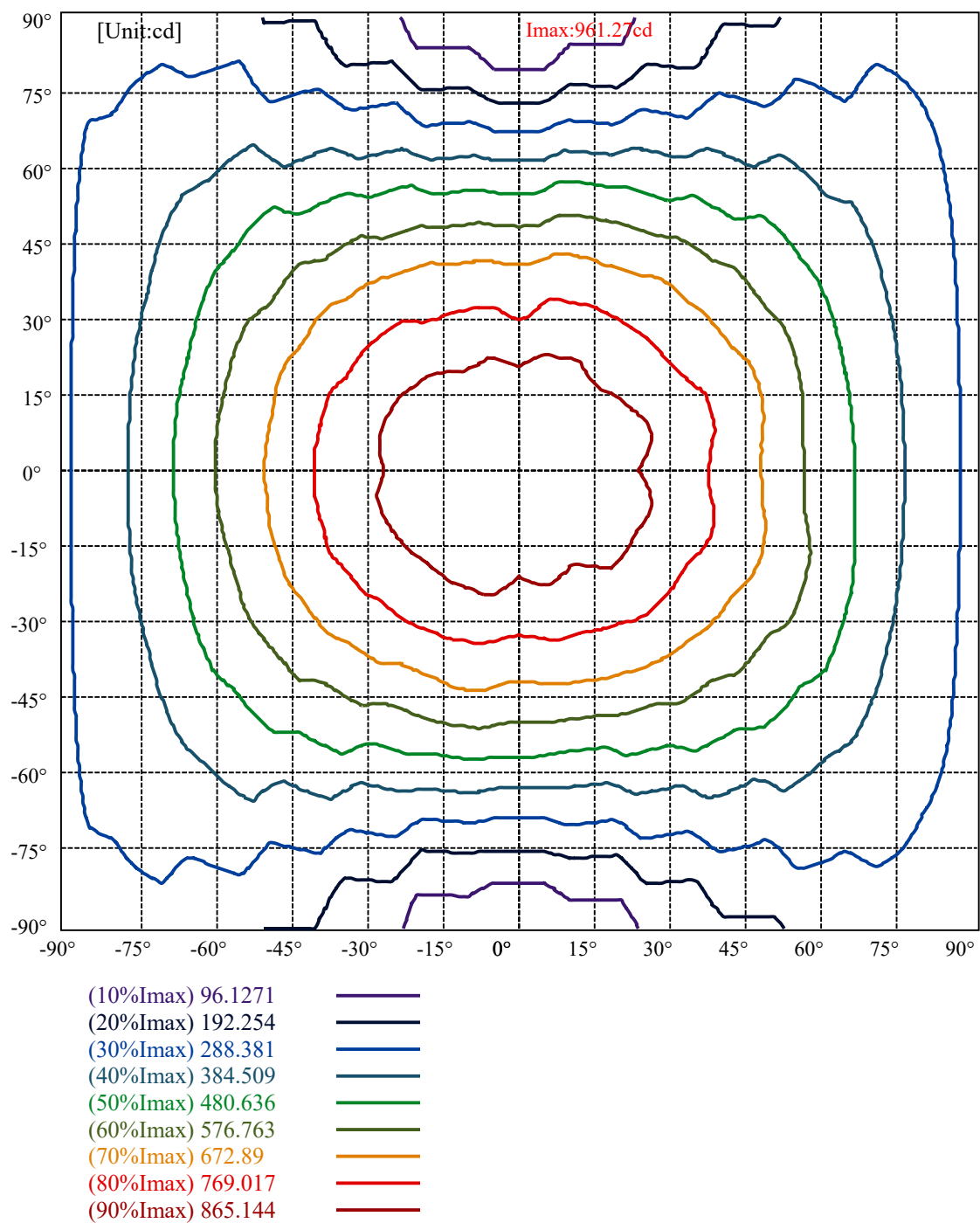
:C90/270Left:81.0 Right:78.7

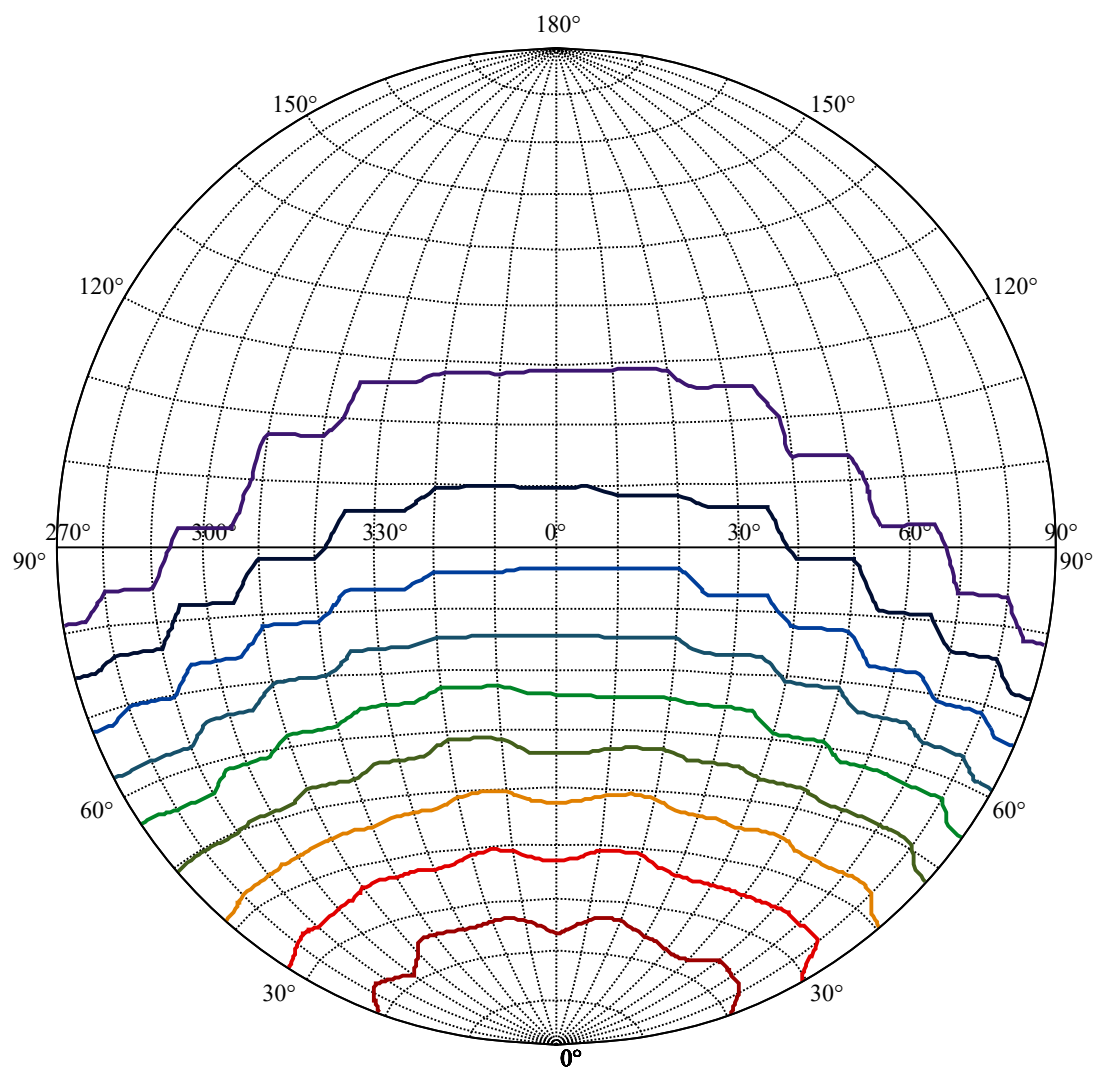
Beam Angle(50%Imax):C0/180Left:62.9 Right:70.8

:C90/270Left:56.5 Right:54.4



Max , Ave Beam angle of C180 plane 135.06





House

[Unit:cd]

Road

Imax:961.27

(10%Imax) 96.06466

(20%Imax) 192.1291

(30%Imax) 288.1937

(40%Imax) 384.2592

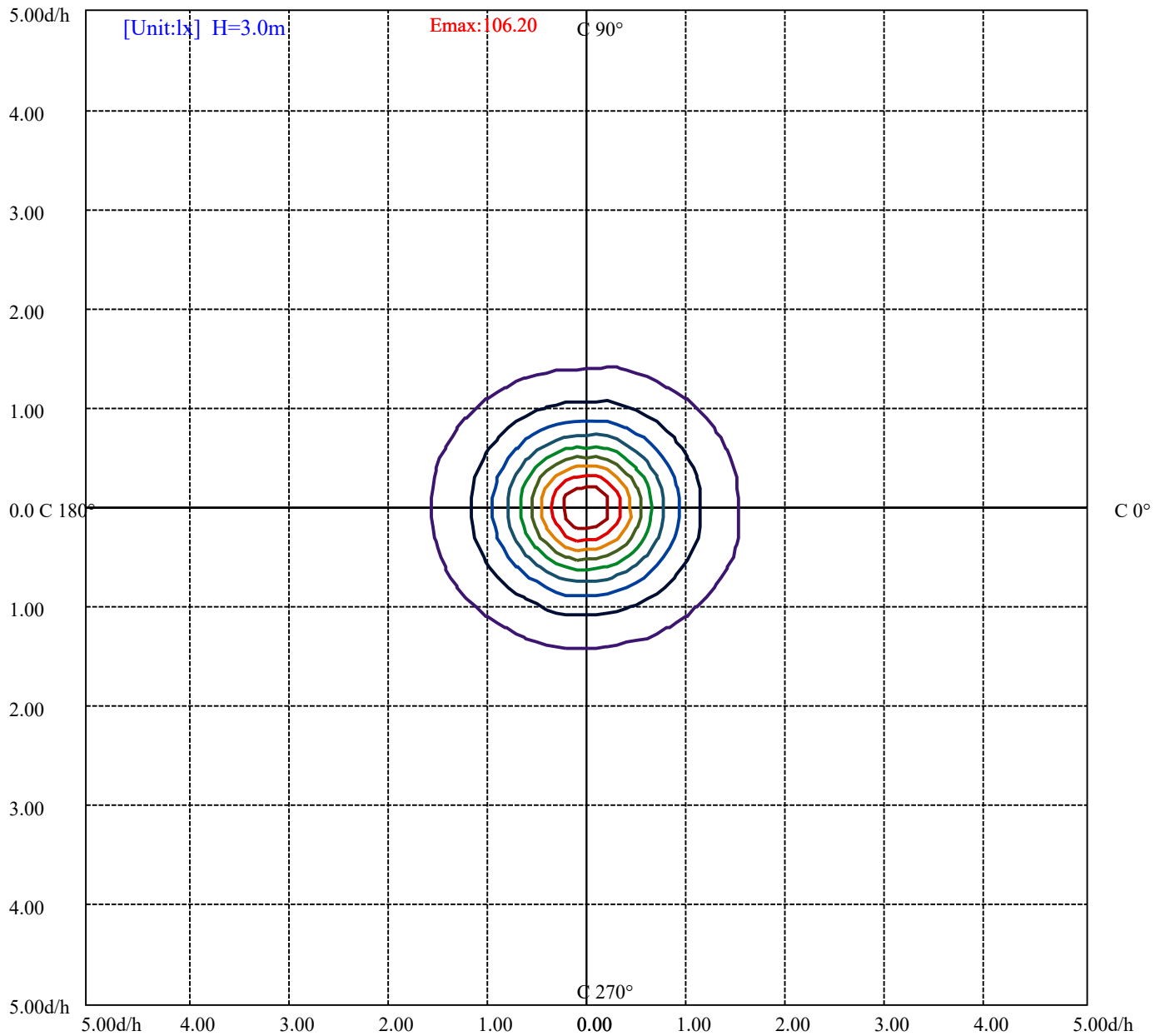
(50%Imax) 480.3238

(60%Imax) 576.3884

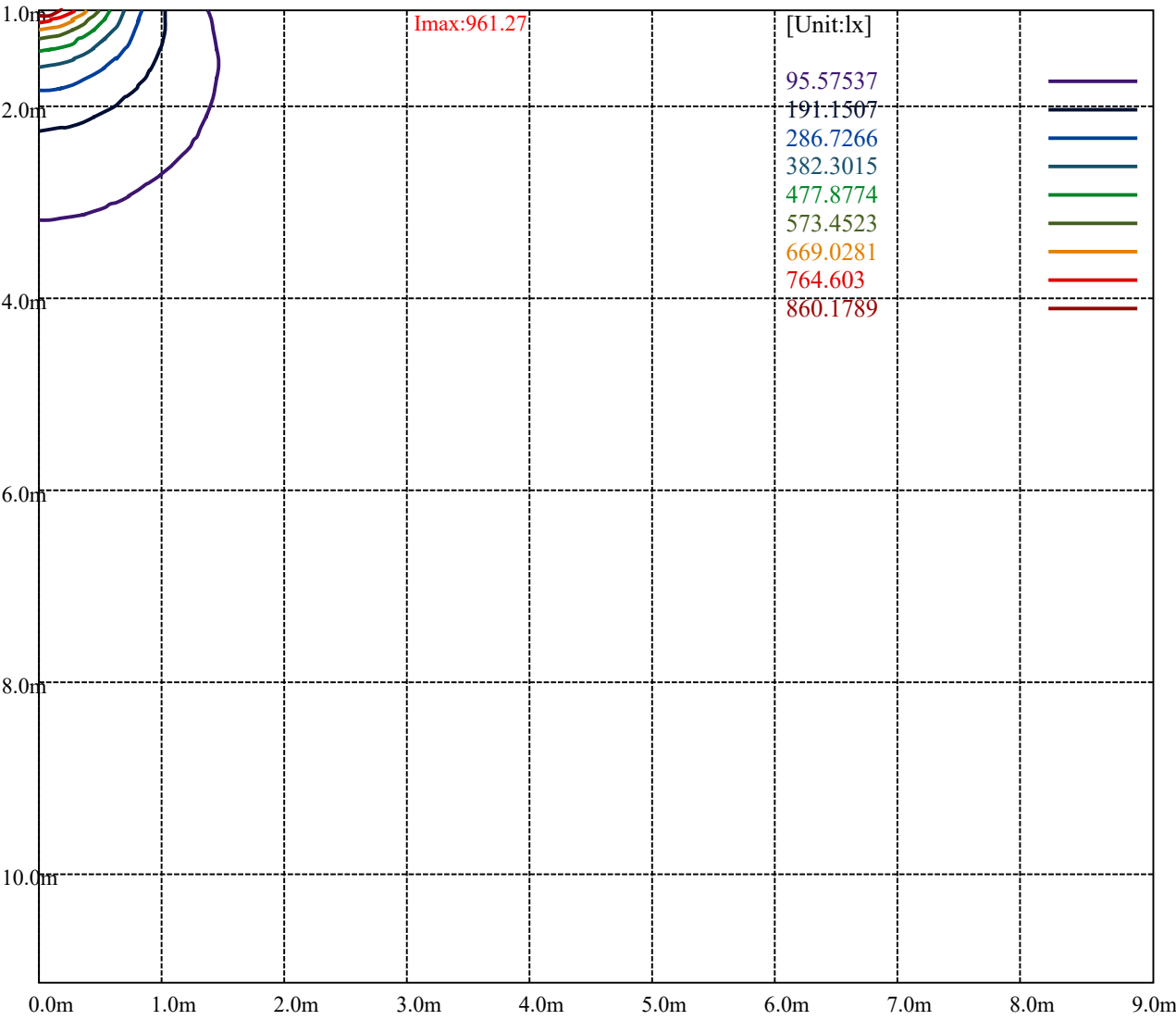
(70%Imax) 672.4529

(80%Imax) 768.5175

(90%Imax) 864.582



(10%Emax) 10.61949	—
(20%Emax) 21.23897	—
(30%Emax) 31.85851	—
(40%Emax) 42.47794	—
(50%Emax) 53.09749	—
(60%Emax) 63.71692	—
(70%Emax) 74.33646	—
(80%Emax) 84.95589	—
(90%Emax) 95.57542	—



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Luminance Limiting Curve(no luminous side)

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Luminance Table

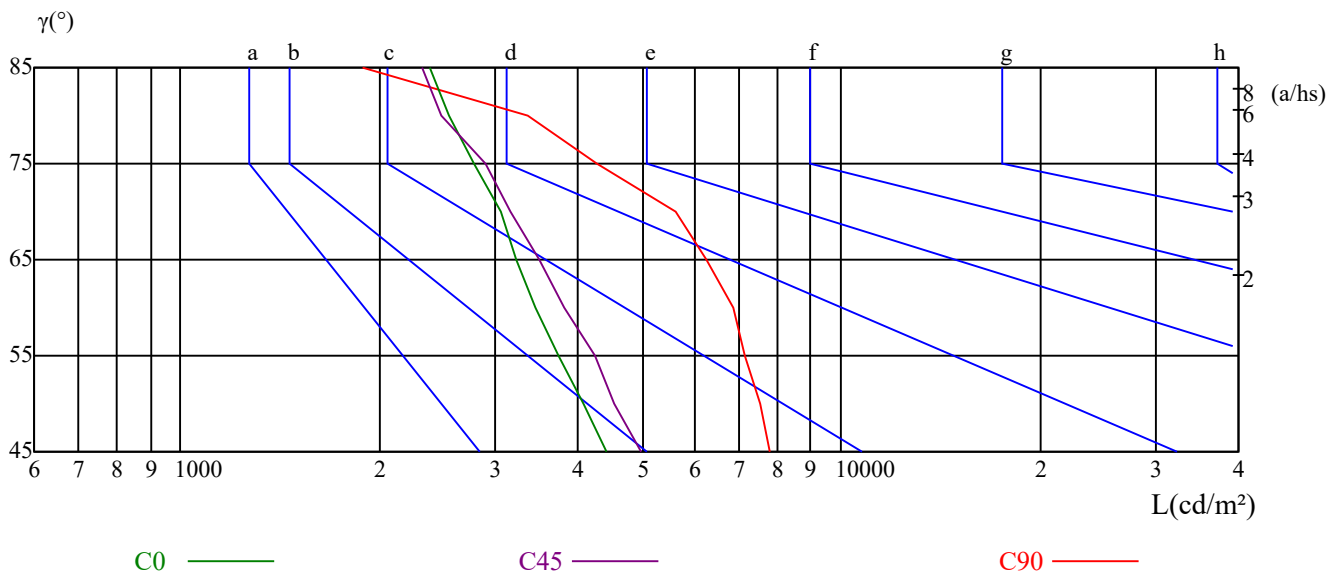
γ	45	50	55	60	65	70	75	80	85
C0	4426	4066	3729	3440	3221	3046	2773	2557	2388
C45	4985	4546	4237	3819	3484	3155	2902	2486	2320
C90	7791	7521	7152	6862	6236	5604	4261	3363	1881

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10997	7171	9765	14389	5933	11741	32884	3611	24589

Glare Table

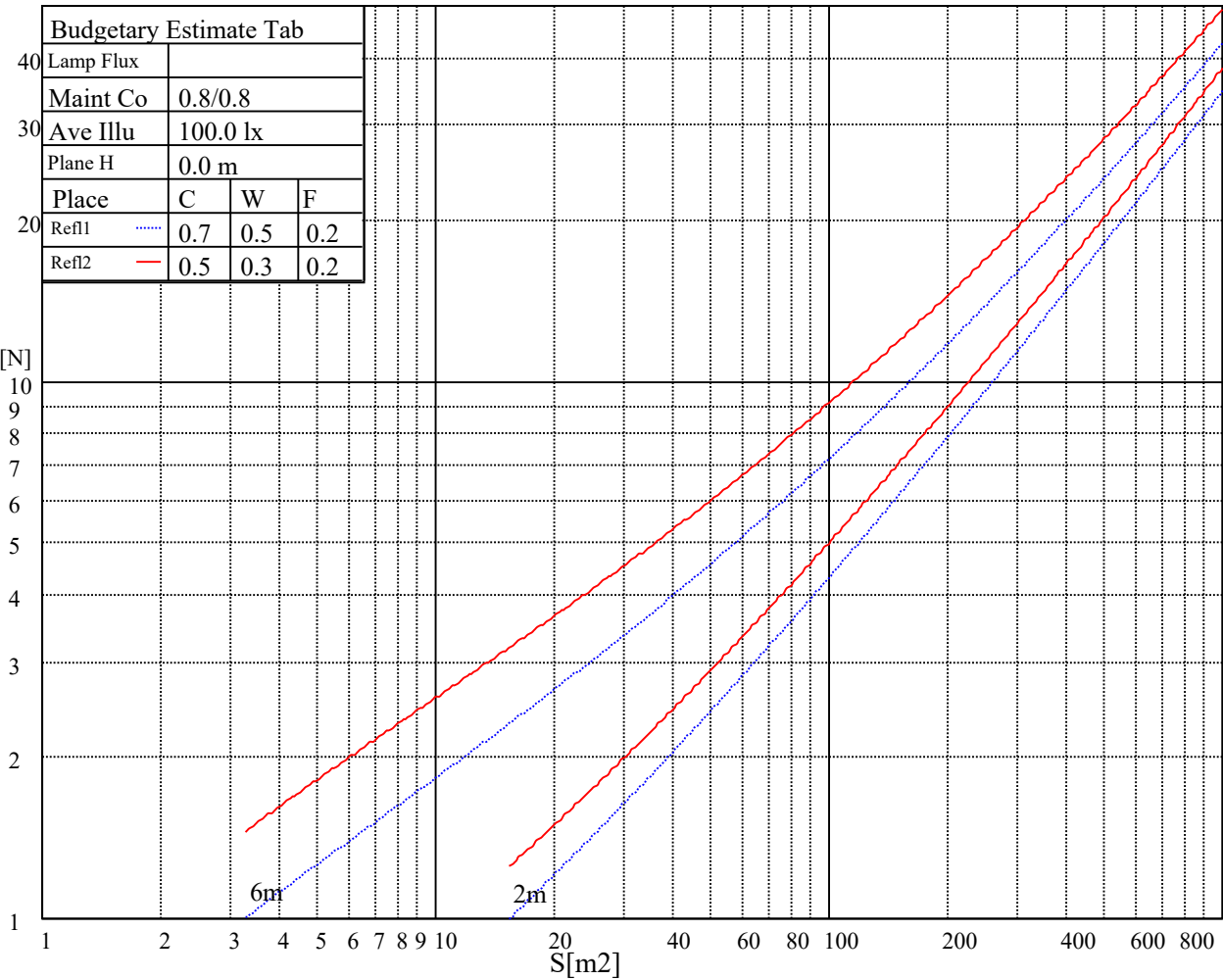
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

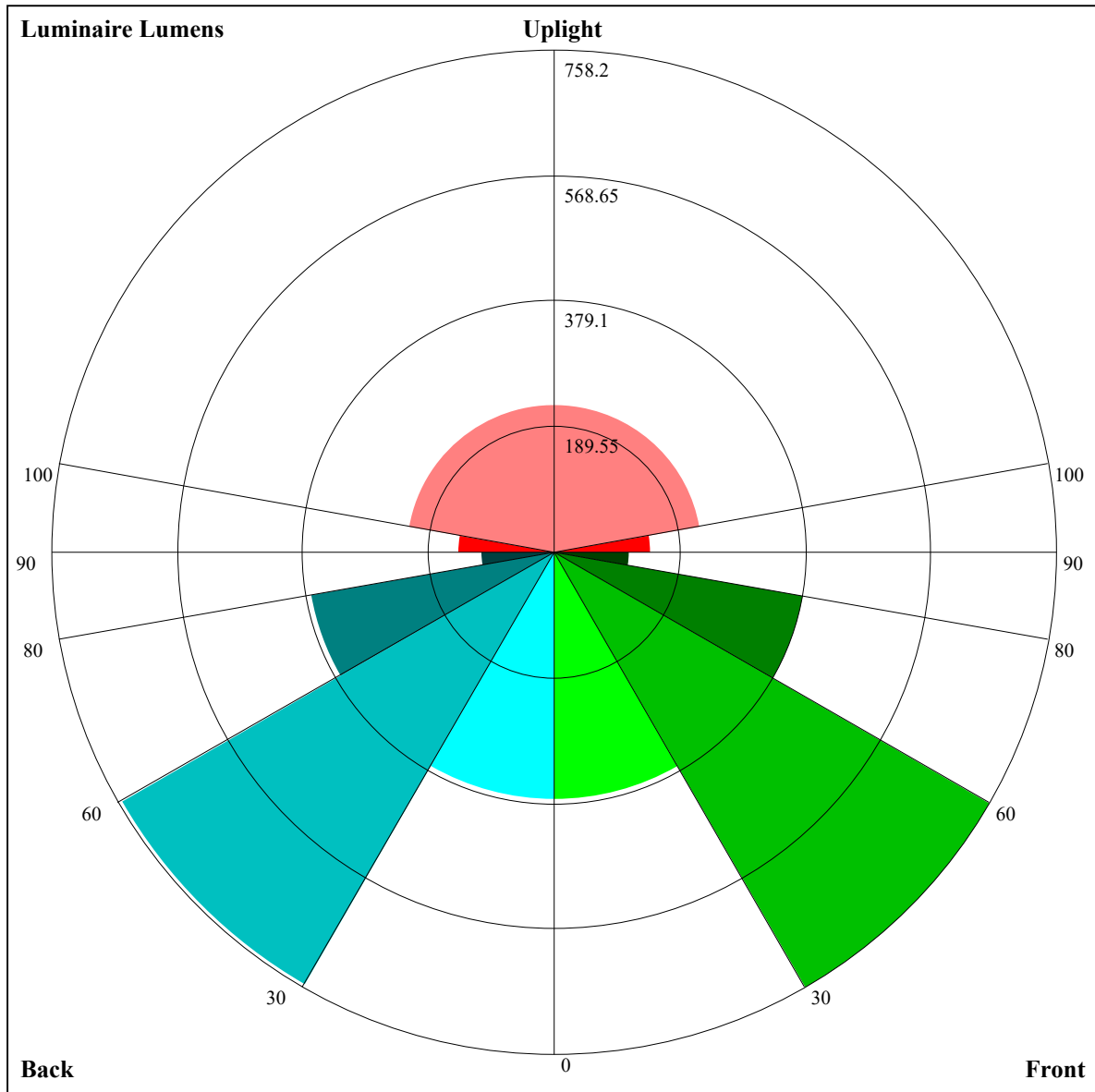


Illumination assessment according UGR											
Rf of Ceiling		70	70	50	50	30	70	70	50	50	30
Rf of Wall		50	30	50	30	30	50	30	50	30	30
Rf of Floor		20	20	20	20	20	20	20	20	20	20
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	15.38	16.88	15.89	17.39	17.95	17.38	18.87	17.89	19.39	19.94
	3H	16.71	18.08	17.24	18.62	19.20	19.85	21.23	20.38	21.76	22.34
	4H	17.16	18.46	17.70	19.00	19.59	21.07	22.37	21.61	22.91	23.51
	6H	17.44	18.66	17.99	19.21	19.83	22.42	23.63	22.97	24.19	24.81
	8H	17.46	18.64	18.02	19.20	19.83	23.12	24.30	23.68	24.86	25.49
	12H	17.44	18.58	18.01	19.14	19.78	23.90	25.04	24.46	25.60	26.24
4H	2H	16.43	17.73	16.97	18.27	18.87	17.96	19.25	18.50	19.80	20.39
	3H	17.96	19.09	18.52	19.65	20.29	20.59	21.72	21.16	22.29	22.93
	4H	18.58	19.60	19.16	20.18	20.85	22.04	23.06	22.62	23.64	24.31
	6H	18.91	19.83	19.52	20.44	21.11	23.54	24.46	24.14	25.07	25.73
	8H	19.01	19.88	19.63	20.49	21.17	24.38	25.24	24.99	25.85	26.53
	12H	19.06	19.87	19.68	20.47	21.19	25.29	26.10	25.91	26.70	27.42
8H	4H	19.30	20.16	19.91	20.77	21.45	22.26	23.12	22.87	23.73	24.41
	6H	19.85	20.59	20.48	21.21	21.92	23.94	24.67	24.56	25.30	26.01
	8H	20.10	20.75	20.74	21.41	22.12	24.96	25.61	25.61	26.27	26.98
	12H	20.20	20.76	20.85	21.43	22.14	26.04	26.60	26.69	27.27	27.99
12H	4H	19.50	20.31	20.12	20.92	21.63	22.27	23.08	22.88	23.68	24.40
	6H	20.22	20.88	20.87	21.54	22.24	24.03	24.69	24.68	25.35	26.05
	8H	20.51	21.08	21.16	21.74	22.46	25.06	25.63	25.71	26.29	27.01
Variation with the observer position at spacings:											
S = 1.0H		0.4/-0.7					0.1/-0.8				
S = 1.5H		0.6/-0.7					0.4/-0.6				
S = 2.0H		0.7/-0.9					0.4/-0.7				
Standard tables:		BKBF					BKBF				
Uncorrected UGR		5.7					7.2				

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



RHOC	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 RHOF=20 CU															
0	1.17	1.17	1.17	1.13	1.13	1.13	1.05	1.05	1.05	0.99	0.99	0.99	0.93	0.93	0.93	0.90
1	0.98	0.93	0.89	0.95	0.90	0.86	0.89	0.85	0.82	0.83	0.80	0.77	0.78	0.75	0.73	0.70
2	0.85	0.77	0.71	0.82	0.75	0.69	0.76	0.71	0.66	0.72	0.67	0.63	0.67	0.63	0.60	0.57
3	0.74	0.65	0.58	0.71	0.63	0.57	0.67	0.60	0.54	0.63	0.57	0.52	0.59	0.54	0.50	0.47
4	0.65	0.55	0.48	0.63	0.54	0.47	0.59	0.52	0.46	0.55	0.49	0.44	0.52	0.47	0.42	0.40
5	0.58	0.48	0.41	0.56	0.47	0.41	0.53	0.45	0.39	0.49	0.43	0.38	0.47	0.41	0.36	0.34
6	0.52	0.42	0.36	0.50	0.41	0.35	0.47	0.40	0.34	0.45	0.38	0.33	0.42	0.36	0.32	0.29
7	0.47	0.38	0.31	0.45	0.37	0.31	0.43	0.35	0.30	0.41	0.34	0.29	0.38	0.33	0.28	0.26
8	0.43	0.34	0.28	0.41	0.33	0.27	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.29	0.25	0.23
9	0.39	0.31	0.25	0.38	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.23	0.32	0.27	0.23	0.21
10	0.36	0.28	0.22	0.35	0.27	0.22	0.33	0.26	0.22	0.32	0.25	0.21	0.30	0.25	0.20	0.19



Luminaire Lumens:

FL=374.88,FM=758.2,FH=382.13,FVH=114.27

BL=372.88,BM=753.11,BH=374.1,BVH=111.56

UL=146.55,UH=222.66

BUG Rating:B1-U3-G1

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Intensity data(cd)										Appendix Page: 15 Total:24	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	956.38	953.50	941.04	896.47	871.13	833.72	797.15	737.60	688.79		
5.0	956.38	954.43	935.53	903.85	878.26	839.30	800.64	742.03	692.53		
10.0	956.38	948.96	934.02	910.26	889.06	844.13	809.14	751.57	700.27		
15.0	956.38	948.56	938.63	916.56	893.05	849.17	807.77	760.50	702.29		
20.0	956.38	946.15	931.28	918.61	886.03	843.41	808.74	756.22	705.42		
25.0	956.38	948.89	933.98	911.19	879.70	842.00	813.46	759.78	710.68		
30.0	956.38	948.82	934.27	910.69	870.16	842.90	812.66	767.12	710.42		
35.0	956.38	954.07	938.52	910.51	880.52	846.94	811.55	770.94	717.01		
40.0	956.38	945.72	939.78	911.23	887.62	859.86	823.86	783.07	735.19		
45.0	956.38	949.57	940.93	915.08	893.38	873.36	831.20	790.24	736.74		
50.0	956.38	951.88	945.29	922.36	892.98	873.36	832.57	789.62	735.26		
55.0	956.38	953.32	939.89	924.95	893.05	873.61	831.35	793.01	740.05		
60.0	956.38	952.63	944.93	929.09	895.28	871.16	831.35	789.80	740.45		
65.0	956.38	951.84	939.71	929.99	895.72	873.40	831.89	792.22	743.62		
70.0	956.38	952.92	939.46	926.35	912.67	879.12	833.11	800.75	758.92		
75.0	956.38	953.21	935.53	922.32	922.21	880.99	839.88	807.01	764.89		
80.0	956.38	948.92	933.01	919.19	907.34	873.76	836.71	801.36	761.36		
85.0	956.38	949.97	925.34	913.14	895.93	864.61	837.54	789.23	748.69		
90.0	956.38	950.26	931.50	908.46	883.15	856.73	835.16	787.14	744.52		
95.0	956.38	951.12	934.16	909.32	890.10	863.03	830.77	793.62	746.89		
100.0	956.38	949.10	935.17	918.25	896.08	874.15	833.18	802.76	762.73		
105.0	956.38	945.32	939.92	925.09	907.45	887.08	833.08	801.29	762.88		
110.0	956.38	947.38	947.41	928.48	897.66	880.96	833.44	797.72	761.72		
115.0	956.38	943.56	947.92	929.45	893.74	869.11	825.77	787.18	741.96		
120.0	956.38	946.91	940.93	922.36	892.33	861.23	822.13	777.46	734.98		
125.0	956.38	948.49	942.48	912.74	891.79	858.28	820.55	773.50	732.60		
130.0	956.38	949.21	940.43	904.18	884.70	851.62	808.52	772.34	730.98		
135.0	956.38	947.34	937.69	907.70	880.78	845.89	808.88	772.67	727.92		
140.0	956.38	949.18	936.97	907.52	882.11	846.86	805.39	769.72	724.00		
145.0	956.38	948.20	935.78	910.62	884.70	853.45	805.39	769.46	710.50		
150.0	956.38	949.43	940.50	913.64	886.72	862.52	805.93	769.03	705.67		
155.0	956.38	948.46	942.52	917.64	890.21	859.43	806.33	769.21	706.68		
160.0	956.38	952.13	941.29	912.20	890.64	853.99	803.92	764.24	711.00		
165.0	956.38	953.21	934.60	909.94	893.84	851.00	801.40	764.21	709.49		
170.0	956.38	953.10	937.22	909.25	884.41	847.80	792.25	762.70	703.55		
175.0	956.38	949.46	927.83	906.34	877.03	834.05	773.82	745.13	682.78		
180.0	956.38	951.66	924.23	906.59	870.05	823.61	763.88	737.96	677.16		
185.0	956.38	949.14	926.42	903.31	873.43	833.72	773.03	737.93	680.94		
190.0	956.38	943.09	929.45	907.96	877.39	844.88	794.66	741.78	693.90		
195.0	956.38	944.82	926.46	908.46	884.20	851.90	803.74	743.90	696.02		
200.0	956.38	945.43	924.91	912.06	881.28	847.04	802.87	746.42	699.52		
205.0	956.38	945.86	927.00	908.86	880.67	844.99	800.42	754.78	714.46		
210.0	956.38	945.18	927.90	911.45	882.11	844.42	799.81	754.52	722.38		
215.0	956.38	947.84	935.28	916.27	887.94	852.70	806.83	761.04	723.46		
220.0	956.38	950.22	936.04	921.42	895.64	859.61	822.60	780.84	738.72		
225.0	956.38	946.98	940.79	928.15	904.50	869.40	829.51	786.20	739.15		
230.0	956.38	950.11	947.52	930.67	908.35	871.56	828.40	790.70	742.07		
235.0	956.38	951.16	946.51	932.29	903.82	877.18	835.31	797.65	745.56		
240.0	956.38	953.28	950.04	936.58	909.54	884.70	840.38	796.50	748.44		
245.0	956.38	956.66	948.96	937.33	908.10	885.82	846.43	798.84	748.48		
250.0	956.38	954.72	949.39	932.94	908.86	882.54	852.52	816.30	765.32		
255.0	956.38	960.30	937.94	931.28	911.38	888.08	851.08	822.28	766.48		
260.0	956.38	959.80	939.74	927.07	913.64	882.79	850.36	818.82	767.23		
265.0	956.38	959.62	936.25	923.18	908.96	878.94	849.42	811.48	770.98		
270.0	956.38	961.27	932.47	920.84	912.67	873.83	844.78	809.64	769.79		
275.0	956.38	958.86	936.18	925.63	913.89	878.26	850.25	813.20	772.02		
280.0	956.38	956.27	939.71	929.05	910.19	895.03	851.22	810.25	769.64		
285.0	956.38	955.37	943.70	930.71	913.25	901.48	844.85	814.57	767.41		

LIT by CARDI LIT by CARDI

Intensity data(cd)										Appendix Page: 16 Total:24	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
290.0	956.38	956.05	945.22	929.99	912.06	893.77	841.89	811.80	769.68		
295.0	956.38	959.62	947.30	925.05	909.11	884.48	843.01	796.93	760.28		
300.0	956.38	957.17	948.78	921.49	906.26	876.42	840.78	795.10	755.10		
305.0	956.38	959.72	944.96	921.49	897.15	875.70	836.21	789.26	755.39		
310.0	956.38	952.27	945.50	919.19	900.36	870.48	825.59	784.30	738.18		
315.0	956.38	955.26	946.40	921.46	889.27	868.14	819.76	782.75	734.00		
320.0	956.38	956.27	944.96	920.16	897.91	867.17	822.82	785.59	729.90		
325.0	956.38	954.43	943.45	927.00	902.23	867.89	819.61	779.26	717.84		
330.0	956.38	954.58	949.21	928.48	912.82	869.51	816.30	773.60	719.17		
335.0	956.38	954.07	951.80	928.62	911.48	866.92	813.13	774.68	719.50		
340.0	956.38	951.08	952.13	928.87	908.64	866.19	815.40	768.71	721.22		
345.0	956.38	951.91	950.94	918.14	908.28	867.81	819.11	768.42	724.57		
350.0	956.38	952.16	946.12	911.41	896.18	859.64	814.36	757.30	717.34		
355.0	956.38	953.78	945.22	904.75	887.26	843.66	803.48	744.69	693.58		
360.0	956.38	953.50	941.04	896.47	871.13	833.72	797.15	737.60	688.79		

LIT by CARDI LIT by CARDI

Intensity data(cd)										Appendix Page: 17 Total:24	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	631.12	569.23	500.00	427.28	334.76	261.47	187.67	109.15	39.53		
5.0	633.53	570.10	497.05	425.23	335.66	261.18	187.88	110.05	39.56		
10.0	642.56	571.46	489.46	421.20	348.16	285.52	208.48	143.86	89.75		
15.0	646.06	570.74	490.10	421.09	349.56	285.91	208.51	144.25	90.11		
20.0	649.94	574.81	494.03	422.93	352.69	283.50	209.41	144.54	90.32		
25.0	656.75	587.95	524.81	460.76	392.80	332.86	273.71	212.62	159.84		
30.0	661.39	590.04	528.23	464.26	396.58	337.21	273.46	212.65	160.13		
35.0	668.16	593.71	531.25	468.90	400.03	335.41	275.98	212.51	160.16		
40.0	673.38	621.97	554.22	502.88	442.94	381.85	323.68	270.14	232.24		
45.0	678.67	626.87	553.14	504.36	442.08	385.13	324.18	272.59	233.39		
50.0	679.54	628.45	555.19	510.88	444.17	385.70	324.07	271.69	233.60		
55.0	690.80	635.04	582.59	540.94	476.03	413.93	374.54	313.27	274.46		
60.0	695.16	639.50	584.46	539.75	480.49	415.08	375.62	314.60	276.26		
65.0	700.09	639.18	587.77	541.66	480.67	415.48	377.89	315.36	274.61		
70.0	716.76	661.18	617.22	561.31	514.19	438.84	388.84	346.57	294.80		
75.0	723.13	668.95	620.42	562.79	515.23	438.88	388.66	346.68	296.39		
80.0	720.32	666.83	617.47	560.20	516.20	438.80	389.09	345.35	294.88		
85.0	704.66	648.61	589.64	532.80	493.13	439.45	390.56	342.14	301.39		
90.0	700.74	643.86	586.30	532.69	487.44	446.80	390.56	342.65	301.21		
95.0	699.98	651.24	586.73	532.01	486.83	439.45	389.77	340.49	302.22		
100.0	707.58	663.73	601.92	536.76	485.60	435.20	387.61	335.92	305.68		
105.0	705.02	667.44	605.74	537.84	486.61	434.45	387.58	335.09	306.07		
110.0	703.44	663.41	603.65	540.18	486.68	433.98	387.68	335.99	304.78		
115.0	693.65	641.81	583.85	529.96	477.72	424.55	357.80	308.30	265.18		
120.0	688.18	636.26	580.86	530.53	477.07	423.29	358.70	309.74	264.89		
125.0	686.77	632.92	579.38	525.28	473.22	424.12	357.70	310.39	265.00		
130.0	677.20	618.08	561.85	492.73	433.08	376.13	322.81	259.74	222.77		
135.0	681.48	613.58	560.12	490.43	430.81	372.24	323.17	258.34	222.05		
140.0	678.60	616.61	554.90	491.62	429.44	373.46	321.41	257.33	223.27		
145.0	662.58	599.69	532.84	452.23	397.01	320.47	260.42	199.69	152.17		
150.0	657.54	599.04	527.76	453.38	393.52	317.88	259.31	197.96	151.38		
155.0	652.68	594.72	527.00	451.37	391.79	317.92	259.31	198.76	151.88		
160.0	652.50	590.98	522.72	433.80	361.04	271.84	207.40	130.21	85.32		
165.0	653.51	589.57	522.61	432.83	357.34	270.90	207.22	129.42	85.72		
170.0	647.68	582.55	519.52	428.33	357.23	270.43	205.31	129.31	85.50		
175.0	620.46	550.94	474.05	399.82	313.06	232.92	140.69	80.46	27.94		
180.0	617.00	546.48	468.94	397.80	311.44	232.74	139.75	80.10	27.58		
185.0	617.98	549.00	472.00	398.23	312.44	232.96	141.01	80.60	27.79		
190.0	630.54	564.44	488.38	416.88	341.24	268.20	194.69	136.19	73.44		
195.0	632.41	564.91	489.10	418.00	340.81	270.97	196.34	135.58	73.33		
200.0	636.73	568.15	491.00	423.90	342.72	270.61	197.46	136.15	73.62		
205.0	654.80	586.22	518.22	464.04	388.40	329.11	272.95	202.68	155.99		
210.0	658.08	588.38	522.18	466.70	389.99	331.02	274.39	203.15	155.95		
215.0	661.86	591.41	524.09	467.96	392.04	332.35	275.47	203.90	156.31		
220.0	674.68	628.88	553.46	496.48	435.02	371.16	323.78	269.78	222.23		
225.0	681.52	632.41	555.88	498.35	437.83	370.94	324.68	271.48	223.74		
230.0	686.59	629.46	561.71	506.16	439.09	375.91	325.33	268.34	223.49		
235.0	710.03	643.14	590.47	532.19	487.55	424.22	378.22	321.05	284.62		
240.0	712.01	647.06	592.42	534.74	492.48	425.45	380.88	321.05	284.00		
245.0	710.39	645.26	592.56	535.50	492.44	425.41	381.60	319.72	284.29		
250.0	723.02	663.19	617.65	560.38	499.54	450.90	394.38	352.04	301.50		
255.0	720.90	670.90	622.69	563.47	499.57	451.44	395.82	352.26	302.80		
260.0	720.86	665.28	623.23	565.63	497.02	453.89	392.90	352.22	301.57		
265.0	722.45	669.89	618.91	573.88	501.16	463.03	401.40	349.20	311.36		
270.0	721.80	673.31	616.97	573.37	503.53	463.43	403.52	350.60	309.89		
275.0	726.30	668.66	614.52	571.54	500.15	462.92	402.44	351.25	312.37		
280.0	718.31	671.65	611.57	560.52	510.59	446.29	394.78	341.39	303.30		
285.0	720.94	666.11	615.60	554.80	513.43	446.62	394.56	341.60	303.88		

LIT by CARDI LIT by CARDI

Intensity data(cd)										Appendix Page: 18 Total:24	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
290.0	717.44	665.82	615.42	556.78	510.48	444.96	394.74	342.04	304.67		
295.0	702.04	655.16	598.90	552.13	488.63	428.69	386.57	332.39	275.33		
300.0	696.49	655.49	592.42	547.85	487.40	427.36	386.28	331.06	275.62		
305.0	696.13	654.23	592.81	542.77	483.98	425.63	384.91	331.38	275.80		
310.0	682.70	635.58	563.44	516.17	451.12	388.40	326.23	275.69	236.41		
315.0	679.90	631.26	557.39	513.14	449.14	385.85	323.78	275.11	234.72		
320.0	676.26	628.16	555.41	508.61	447.84	383.76	322.16	273.38	235.26		
325.0	654.37	595.84	523.87	464.76	391.86	335.48	272.23	209.38	158.87		
330.0	648.97	588.46	524.12	459.86	389.20	331.38	271.01	209.52	157.68		
335.0	648.25	591.01	521.78	458.35	387.43	330.37	270.18	208.98	157.54		
340.0	658.58	596.99	510.77	441.36	367.31	279.72	195.59	140.40	79.31		
345.0	661.32	594.22	511.63	440.86	365.04	277.81	195.37	140.83	78.48		
350.0	656.10	593.24	509.15	439.02	363.85	278.28	194.18	139.50	78.98		
355.0	635.76	572.36	499.72	427.68	337.97	262.12	187.02	109.48	39.60		
360.0	631.12	569.23	500.00	427.28	334.76	261.47	187.67	109.15	39.53		

LIT by CARDI LIT by CARDI

Intensity data(cd)									Appendix Page: 19 Total:24
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	12.13	8.24	6.23	4.54	7.92	0.00	2.09	11.09	13.18
5.0	12.13	8.32	6.30	4.50	7.70	0.68	2.38	11.48	12.35
10.0	48.82	29.95	20.66	4.86	0.25	13.50	6.30	15.08	6.77
15.0	48.74	29.92	20.81	4.86	0.00	14.29	6.59	15.55	5.90
20.0	48.78	30.20	21.02	5.62	1.15	15.16	6.59	14.94	7.34
25.0	115.92	78.84	66.60	50.04	36.18	35.57	5.98	9.90	16.85
30.0	115.49	79.45	66.85	50.83	37.37	36.54	5.98	9.36	18.29
35.0	115.63	79.24	67.14	51.91	38.41	37.66	9.36	11.20	18.07
40.0	169.70	148.28	112.57	110.59	70.52	55.12	54.11	28.19	16.45
45.0	170.03	148.10	112.54	111.85	71.28	55.84	57.31	30.31	16.27
50.0	170.71	148.61	113.11	112.28	72.50	58.46	58.79	32.72	18.65
55.0	227.34	196.38	165.38	137.77	111.20	99.25	76.21	55.30	33.73
60.0	228.10	196.78	165.46	138.67	112.75	101.05	77.83	57.67	36.04
65.0	227.66	196.09	165.89	138.53	112.97	102.17	78.73	58.10	40.07
70.0	255.13	219.10	188.96	146.12	131.08	120.46	82.98	63.76	67.36
75.0	255.64	218.05	190.84	146.20	132.12	121.32	83.41	64.76	71.64
80.0	255.64	218.45	191.41	146.09	132.37	121.14	83.84	65.77	69.88
85.0	257.15	227.05	190.19	165.02	132.59	115.81	90.50	75.92	58.18
90.0	258.84	226.26	190.22	165.24	132.08	115.49	91.01	76.90	56.56
95.0	258.59	226.73	190.73	165.46	132.26	115.45	91.01	76.43	56.77
100.0	251.32	212.94	182.48	157.75	141.84	105.01	93.85	68.87	59.18
105.0	251.57	212.00	182.23	158.47	142.02	105.44	93.92	68.18	59.54
110.0	250.31	213.08	182.02	156.89	141.62	105.52	92.66	67.32	57.38
115.0	222.55	201.82	166.57	139.57	122.72	99.07	72.58	58.10	44.03
120.0	222.26	201.85	166.61	139.68	122.00	98.64	70.85	57.35	42.05
125.0	223.85	201.13	166.10	139.03	121.57	97.13	69.41	54.61	38.27
130.0	173.77	144.68	125.14	87.95	87.88	59.69	52.34	32.83	14.40
135.0	174.17	144.18	124.60	86.87	86.58	58.14	50.83	30.38	10.76
140.0	173.99	144.25	124.45	86.11	85.14	56.41	48.53	28.62	12.38
145.0	123.16	78.01	68.54	48.82	45.04	31.72	18.04	12.42	22.57
150.0	124.31	78.16	67.64	48.02	43.70	30.38	15.59	10.69	24.16
155.0	123.84	77.94	67.21	47.30	42.80	29.38	14.65	9.97	22.18
160.0	53.78	29.41	15.23	10.98	15.12	7.38	3.02	3.49	8.93
165.0	53.57	29.48	14.90	10.37	14.15	6.26	2.09	2.77	6.88
170.0	53.68	29.27	14.69	10.26	14.00	6.12	1.94	2.81	6.26
175.0	0.68	2.12	0.47	4.93	8.78	3.60	0.14	3.10	2.05
180.0	0.68	2.09	0.36	4.86	8.68	3.46	0.00	3.10	1.37
185.0	0.68	2.16	0.43	5.11	8.71	3.49	0.50	3.35	1.76
190.0	48.56	31.86	11.74	20.38	11.95	3.78	7.13	5.65	4.14
195.0	48.31	31.79	11.77	20.74	12.10	3.82	7.63	5.90	4.50
200.0	48.28	31.97	12.06	21.35	12.89	5.36	9.11	7.20	5.15
205.0	108.97	85.57	63.29	53.64	40.36	34.81	28.51	19.15	9.43
210.0	108.29	86.15	63.54	54.32	41.15	36.61	30.13	20.34	10.08
215.0	108.40	85.68	64.01	55.15	42.08	37.55	31.43	21.24	11.84
220.0	180.18	143.57	126.00	95.72	72.18	56.48	49.57	30.28	23.58
225.0	180.40	143.78	126.76	96.37	72.61	57.89	51.08	31.10	25.31
230.0	180.00	143.60	127.94	97.09	73.66	58.79	53.03	33.98	28.44
235.0	249.80	191.38	162.36	137.20	104.65	80.14	76.50	59.15	49.00
240.0	248.76	191.81	162.36	138.20	106.09	81.32	78.16	61.96	51.84
245.0	247.46	191.34	162.32	139.03	106.27	82.40	78.19	62.42	52.88
250.0	255.31	207.47	184.18	154.51	123.12	106.88	82.48	64.76	59.90
255.0	254.30	206.60	184.00	155.20	123.62	108.18	83.05	65.38	60.73
260.0	254.48	208.08	183.49	155.02	123.91	107.96	82.15	66.28	60.19
265.0	273.89	226.69	195.73	163.08	132.30	109.37	72.83	76.75	58.28
270.0	272.56	227.59	196.06	163.30	132.55	109.40	72.14	77.83	57.71
275.0	274.43	227.81	195.05	162.40	133.06	109.84	73.19	78.41	58.10
280.0	262.15	225.97	187.74	155.74	128.56	113.00	88.92	80.57	59.00
285.0	263.34	223.20	187.42	154.98	129.42	112.86	90.54	81.07	59.22

LIT by CARDI LIT by CARDI

Intensity data(cd)										Appendix Page: 20 Total:24	
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
290.0	261.43	224.96	188.17	154.73	129.06	112.21	88.74	79.02	57.38		
295.0	240.05	202.03	165.31	140.00	112.61	97.85	72.32	63.04	47.63		
300.0	239.98	203.11	165.31	139.46	112.14	97.06	70.99	61.38	46.08		
305.0	239.72	202.61	164.27	138.71	111.35	95.87	70.20	59.65	44.21		
310.0	191.48	146.59	127.62	108.79	83.23	64.69	59.08	44.60	33.19		
315.0	191.77	145.94	127.08	108.65	81.47	63.14	58.25	42.62	31.43		
320.0	191.45	145.80	127.33	107.39	80.32	61.56	56.16	41.69	29.81		
325.0	125.93	100.22	68.80	41.65	34.49	29.02	25.88	30.49	19.58		
330.0	125.89	100.66	68.87	40.57	33.16	27.36	23.44	29.05	18.04		
335.0	126.07	100.33	68.33	39.85	32.26	26.78	21.96	27.36	16.45		
340.0	64.15	29.20	32.47	13.00	1.04	16.81	1.62	12.02	5.80		
345.0	64.19	29.12	32.11	12.46	0.00	16.31	0.04	10.33	4.18		
350.0	63.86	29.12	31.93	12.38	0.25	15.48	0.18	10.40	5.18		
355.0	12.10	8.39	6.44	4.64	7.70	0.76	1.94	10.94	12.10		
360.0	12.13	8.24	6.23	4.54	7.92	0.00	2.09	11.09	13.18		

LIT by CARDI LIT by CARDI

Intensity data(cd)										Appendix Page: 21 Total:24	
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	7.60	7.96	0.04	3.46	6.19	0.14	5.62	5.76	5.94		
5.0	8.03	7.74	2.77	4.68	5.72	2.41	5.98	5.83	5.80		
10.0	10.01	6.84	10.15	7.06	5.00	4.90	7.06	5.94	5.65		
15.0	10.33	6.55	12.78	8.32	4.50	7.24	7.42	5.94	5.54		
20.0	9.68	7.99	10.80	7.85	6.80	8.21	6.19	5.94	5.36		
25.0	6.55	13.36	5.51	7.02	10.15	9.18	4.57	5.76	5.22		
30.0	5.90	14.83	3.53	6.55	12.42	10.01	3.85	5.58	5.04		
35.0	7.13	14.62	6.84	7.81	14.98	10.55	5.40	5.44	4.79		
40.0	12.92	13.50	15.70	10.26	18.76	10.98	7.78	5.51	4.54		
45.0	14.15	13.18	18.97	11.41	21.24	11.56	9.68	5.72	4.36		
50.0	14.22	14.08	16.92	10.04	17.39	11.77	9.83	6.01	4.46		
55.0	14.54	17.21	11.63	7.27	11.74	12.20	8.89	6.30	4.61		
60.0	14.54	17.89	9.68	5.90	7.92	12.42	7.34	6.70	4.75		
65.0	18.00	15.59	10.19	10.48	8.14	12.46	5.26	7.13	4.79		
70.0	34.78	7.27	11.56	19.66	8.46	12.42	3.60	7.45	4.93		
75.0	38.27	5.00	12.02	24.19	8.78	12.38	2.27	7.52	5.22		
80.0	37.08	6.01	12.67	21.92	9.36	11.95	2.52	7.56	5.80		
85.0	32.22	9.79	14.29	17.39	10.30	11.48	3.53	7.52	6.37		
90.0	31.21	10.73	14.83	15.16	10.84	10.98	5.00	7.74	6.91		
95.0	29.27	11.63	13.93	15.30	9.97	8.46	6.66	7.92	7.34		
100.0	19.87	14.76	11.30	15.44	8.82	5.76	7.92	8.17	7.67		
105.0	18.07	15.62	10.33	15.44	8.03	3.28	9.07	8.28	8.06		
110.0	18.04	16.34	13.36	13.21	6.70	4.25	9.36	8.39	8.68		
115.0	17.71	19.26	21.20	8.64	4.79	5.44	9.22	7.78	9.36		
120.0	17.60	20.05	24.08	6.30	3.49	6.52	9.14	6.55	9.90		
125.0	18.94	20.30	20.45	4.79	4.93	7.31	9.36	5.33	10.04		
130.0	24.59	20.63	10.62	1.87	7.13	8.17	9.61	4.46	10.08		
135.0	25.67	20.84	6.98	0.40	8.57	8.86	9.72	3.92	10.04		
140.0	23.65	19.15	8.50	0.72	7.81	6.48	9.43	3.42	10.15		
145.0	14.40	13.54	12.64	1.44	6.62	3.92	9.11	3.78	10.19		
150.0	12.53	12.10	14.26	1.80	5.83	1.48	8.82	5.22	9.97		
155.0	11.20	9.97	13.72	2.56	4.25	2.09	8.96	6.59	9.29		
160.0	4.79	2.20	12.28	4.14	1.94	2.77	9.22	7.24	8.35		
165.0	3.46	0.00	11.70	4.90	0.40	3.46	9.76	6.73	7.60		
170.0	2.95	0.94	10.87	6.34	2.30	4.68	10.51	6.12	7.38		
175.0	0.50	4.28	8.50	9.25	5.08	5.98	11.16	5.15	7.45		
180.0	0.00	5.15	7.60	10.69	6.95	7.20	12.13	4.54	7.60		
185.0	1.76	4.61	8.14	9.61	8.14	6.26	13.18	4.03	7.74		
190.0	10.30	2.38	9.72	7.38	9.90	5.22	13.93	4.50	7.85		
195.0	12.13	1.76	10.33	6.26	11.09	4.21	13.21	5.40	7.99		
200.0	12.53	2.95	8.14	6.73	11.16	3.20	10.01	6.34	8.32		
205.0	14.18	7.16	2.20	7.78	11.27	2.12	6.44	6.23	8.93		
210.0	14.58	8.35	0.04	8.21	11.41	1.12	2.77	5.40	9.61		
215.0	16.34	8.71	2.02	8.32	12.31	0.79	1.01	4.46	10.30		
220.0	24.88	10.08	7.34	8.53	13.61	0.47	0.72	3.67	10.73		
225.0	26.64	10.48	9.32	8.68	14.51	0.25	1.01	2.74	10.80		
230.0	27.36	13.43	10.91	7.74	11.34	4.25	2.16	1.84	10.19		
235.0	31.03	24.48	14.83	5.83	6.62	8.57	3.42	1.73	9.36		
240.0	32.00	27.61	16.31	4.90	3.46	12.67	5.69	2.74	8.46		
245.0	34.31	27.11	17.53	7.67	2.52	14.87	8.60	3.82	7.70		
250.0	45.22	24.88	20.92	13.25	1.08	17.17	10.91	5.69	7.09		
255.0	47.41	24.41	22.21	15.91	0.11	19.22	12.60	8.64	6.62		
260.0	48.13	26.57	22.21	17.39	1.40	14.98	12.17	11.56	6.16		
265.0	49.90	34.31	22.28	20.41	3.28	10.33	10.66	12.53	5.72		
270.0	50.36	36.94	22.25	21.92	4.57	5.94	9.32	11.12	5.51		
275.0	50.51	36.94	22.72	22.32	5.44	4.57	8.86	9.58	5.90		
280.0	52.16	36.76	24.16	23.47	6.59	3.13	9.04	7.45	6.66		
285.0	52.42	36.68	24.66	24.19	7.38	1.91	8.71	5.47	7.31		

LIT by CARDI LIT by CARDI

Intensity data(cd)										Appendix Page: 22 Total:24	
C/ $\gamma(^{\circ})$	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
290.0	49.82	35.21	24.66	18.40	6.01	4.10	7.67	3.49	7.74		
295.0	38.23	30.38	25.20	6.41	4.10	6.59	6.52	2.99	8.06		
300.0	35.71	28.73	25.24	0.50	2.74	8.82	5.40	2.95	8.46		
305.0	35.10	29.20	22.61	3.64	6.05	6.08	4.86	2.95	8.82		
310.0	31.32	31.00	15.48	9.97	10.84	3.02	4.86	2.84	9.14		
315.0	30.46	31.43	12.85	13.07	14.15	0.22	4.28	3.31	9.18		
320.0	27.11	28.01	12.56	11.63	10.08	0.07	3.02	3.85	8.64		
325.0	11.02	15.80	12.06	8.75	4.10	0.07	1.76	4.93	7.81		
330.0	7.67	12.38	11.77	7.31	0.07	0.00	1.73	6.19	7.06		
335.0	8.03	11.77	9.29	5.58	1.01	0.47	4.03	7.27	6.70		
340.0	9.72	9.40	2.56	2.09	2.48	0.94	6.88	7.42	6.52		
345.0	10.01	8.71	0.04	0.36	3.46	1.37	9.04	6.70	6.37		
350.0	9.68	8.53	0.04	1.12	4.25	0.97	8.57	6.08	6.26		
355.0	7.96	8.10	0.04	2.66	5.44	0.50	6.88	5.72	6.16		
360.0	7.60	7.96	0.04	3.46	6.19	0.14	5.62	5.76	5.94		

LIT by CARDI LIT by CARDI

Appendix Page: 23 Total:24

Intensity data(cd)

C/γ(°)	180.0
0.0	6.70
5.0	6.70
10.0	6.70
15.0	6.70
20.0	6.70
25.0	6.70
30.0	6.70
35.0	6.70
40.0	6.70
45.0	6.70
50.0	6.70
55.0	6.70
60.0	6.70
65.0	6.70
70.0	6.70
75.0	6.70
80.0	6.70
85.0	6.70
90.0	6.70
95.0	6.70
100.0	6.70
105.0	6.70
110.0	6.70
115.0	6.70
120.0	6.70
125.0	6.70
130.0	6.70
135.0	6.70
140.0	6.70
145.0	6.70
150.0	6.70
155.0	6.70
160.0	6.70
165.0	6.70
170.0	6.70
175.0	6.70
180.0	6.70
185.0	6.70
190.0	6.70
195.0	6.70
200.0	6.70
205.0	6.70
210.0	6.70
215.0	6.70
220.0	6.70
225.0	6.70
230.0	6.70
235.0	6.70
240.0	6.70
245.0	6.70
250.0	6.70
255.0	6.70
260.0	6.70
265.0	6.70
270.0	6.70
275.0	6.70
280.0	6.70
285.0	6.70

Intensity data(cd)

C/ γ (°)	180.0
290.0	6.70
295.0	6.70
300.0	6.70
305.0	6.70
310.0	6.70
315.0	6.70
320.0	6.70
325.0	6.70
330.0	6.70
335.0	6.70
340.0	6.70
345.0	6.70
350.0	6.70
355.0	6.70
360.0	6.70