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Nata

Client: NT

LumCAT: 3-2994-LM

Luminaire: 92.70.412.00 LED HOLDER

Report No: 20251111-C025

Ballast type: DC

Test No: 20251111-C025

Voltage(V): 36.470

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.708

Lamp flux(lm): 3662.0

Power (W): 25.820

Number of Lamps: 1

PF: 0.000

Length(mm): 85

Width(mm): 85

Phm Type: C

Height(mm): 51

Photometric Results

Lumens(lm): 3435.05, Efficiency(%): 93.80% , Luminous Efficacy(lm/W): 133.04

Central intensity(cd): 8019.861, Maximum intensity(cd): 8019.861

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.6

[C90/270]Total=36.6

Field angle(10%Imax): [C0/180]Total=65.4

[C90/270]Total=65.4

Maximum s/h(1/2): C0_180=0.61 C90_270=0.61

Maximum s/h(1/4): C0_180=0.58 C90_270=0.58

Up flux rate of lamp(%): 0.00%

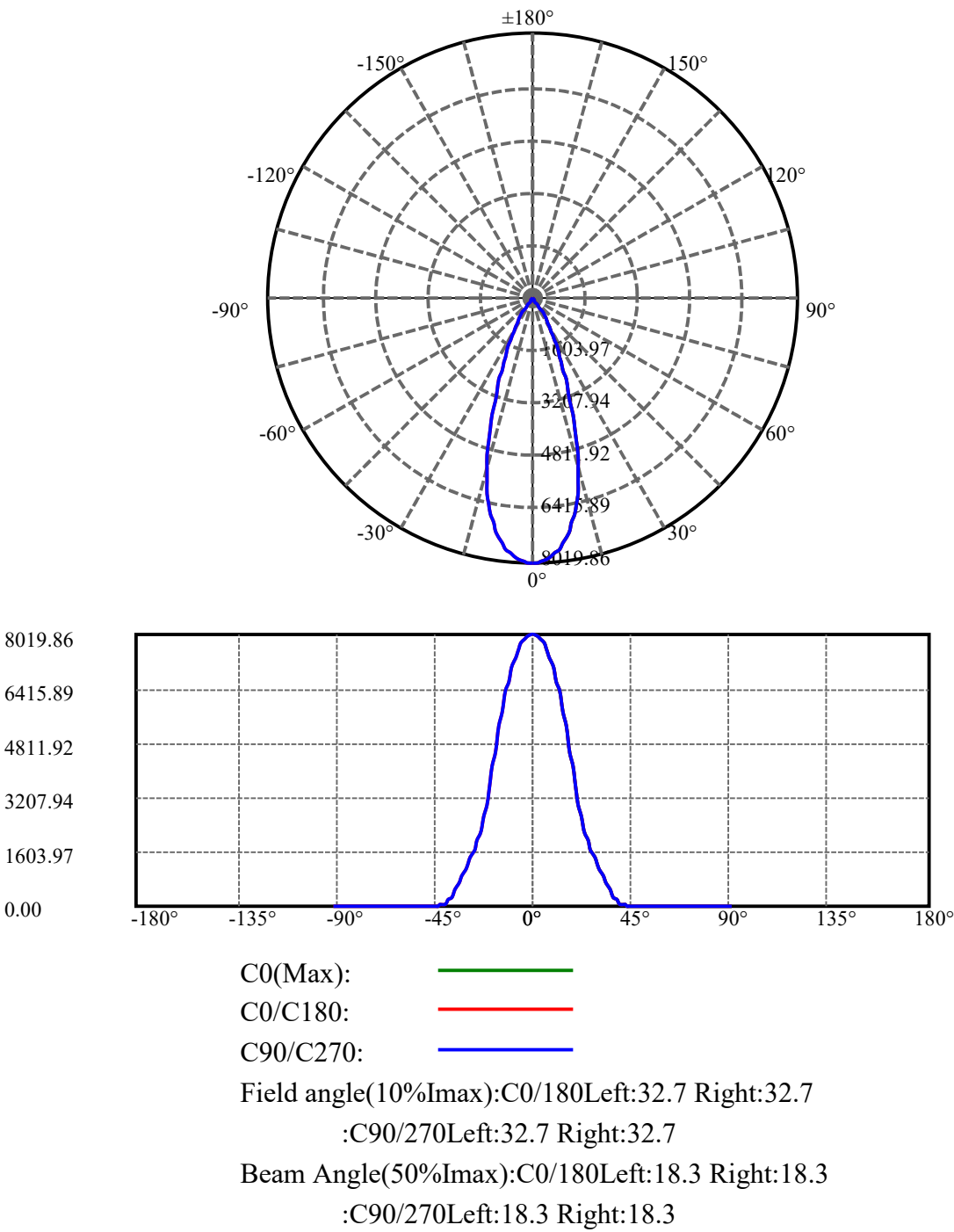
Down flux rate of lamp(%): 93.80%

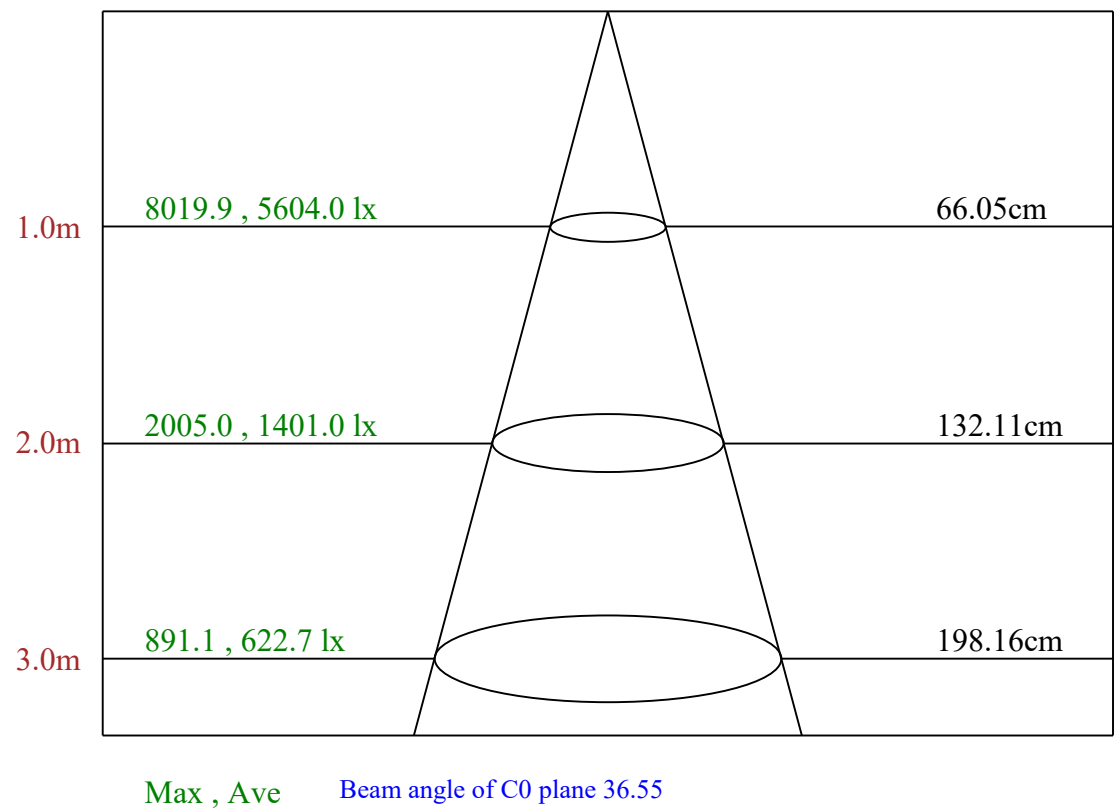
Up flux rate of LUM(%): - -

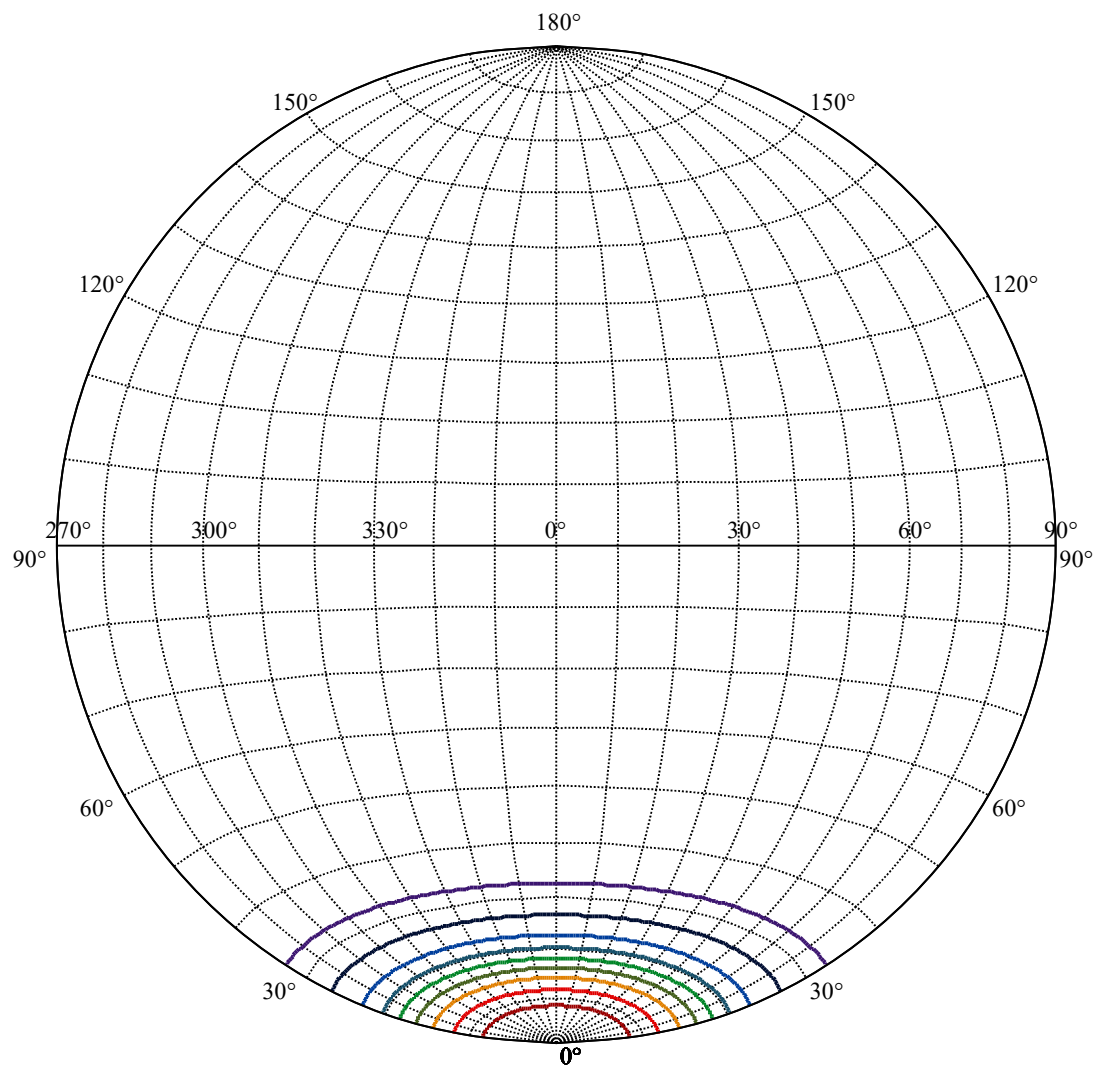
Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.254%





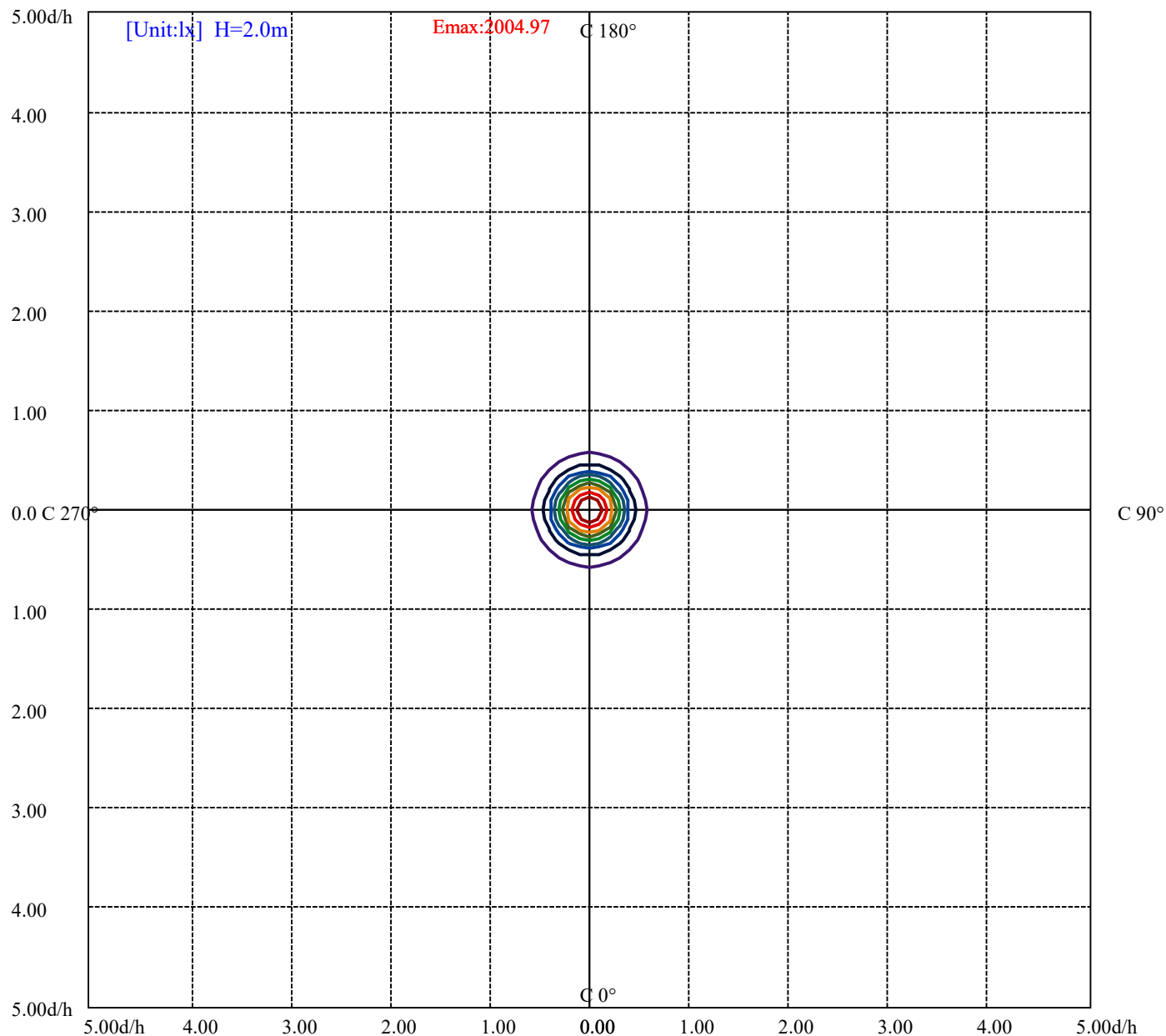


House

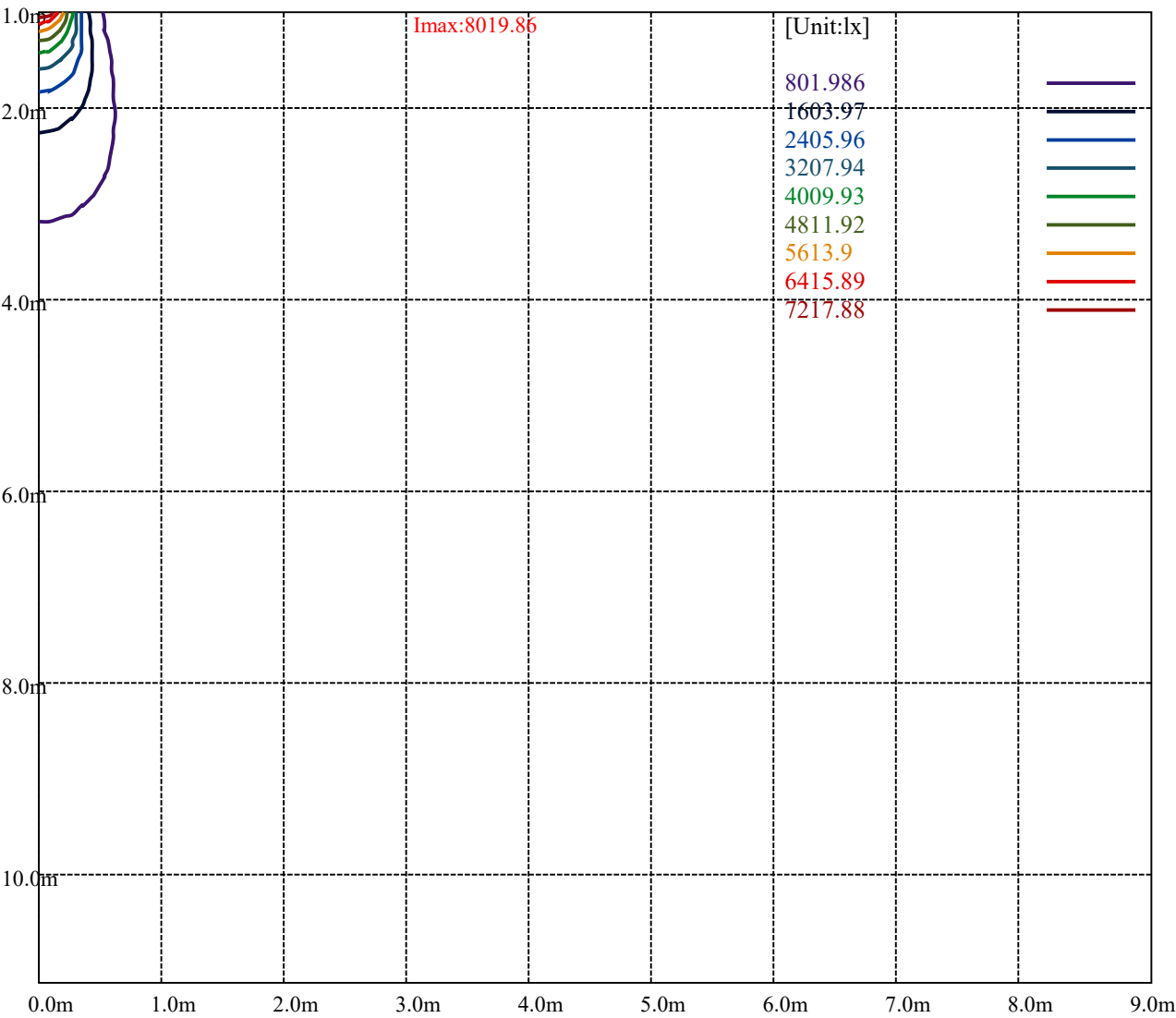
[Unit:cd]

Road

Imax:8019.86	
(10%Imax) 801.986	
(20%Imax) 1603.97	
(30%Imax) 2405.96	
(40%Imax) 3207.94	
(50%Imax) 4009.93	
(60%Imax) 4811.92	
(70%Imax) 5613.9	
(80%Imax) 6415.89	
(90%Imax) 7217.88	



(10%Emax)	200.4965	—
(20%Emax)	400.9925	—
(30%Emax)	601.49	—
(40%Emax)	801.985	—
(50%Emax)	1002.482	—
(60%Emax)	1202.98	—
(70%Emax)	1403.475	—
(80%Emax)	1603.973	—
(90%Emax)	1804.468	—



Luminance Table

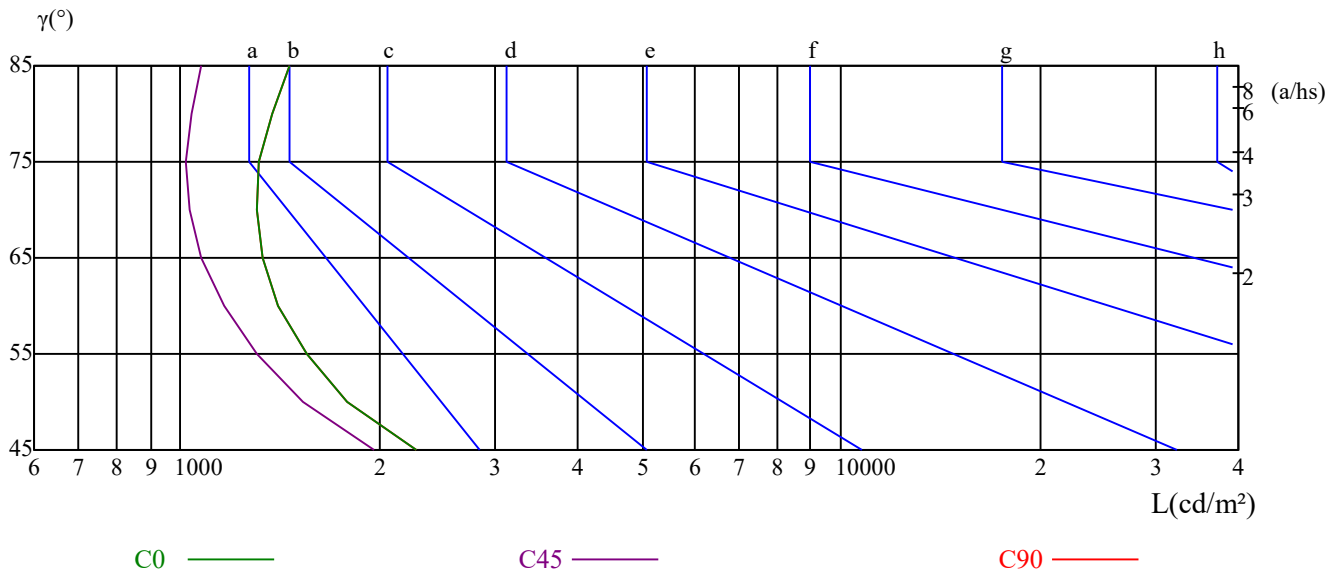
γ	45	50	55	60	65	70	75	80	85
C0	2273	1793	1551	1407	1327	1303	1313	1376	1460
C45	1967	1529	1302	1162	1077	1036	1021	1042	1072
C90	2273	1793	1551	1407	1327	1303	1313	1376	1460

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3035	3035	3035	4254	4254	4254	11471	11471	11471

Glare Table

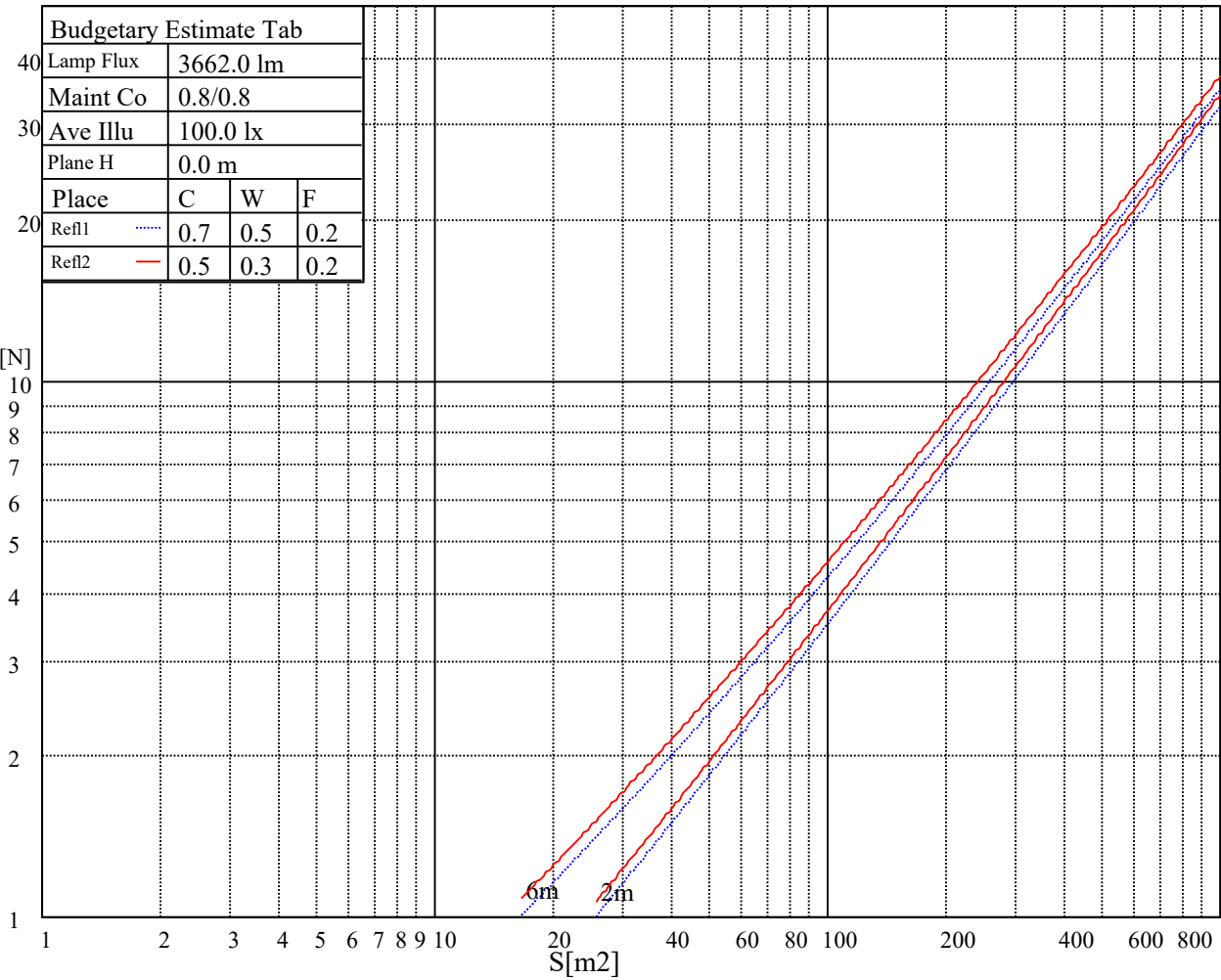
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

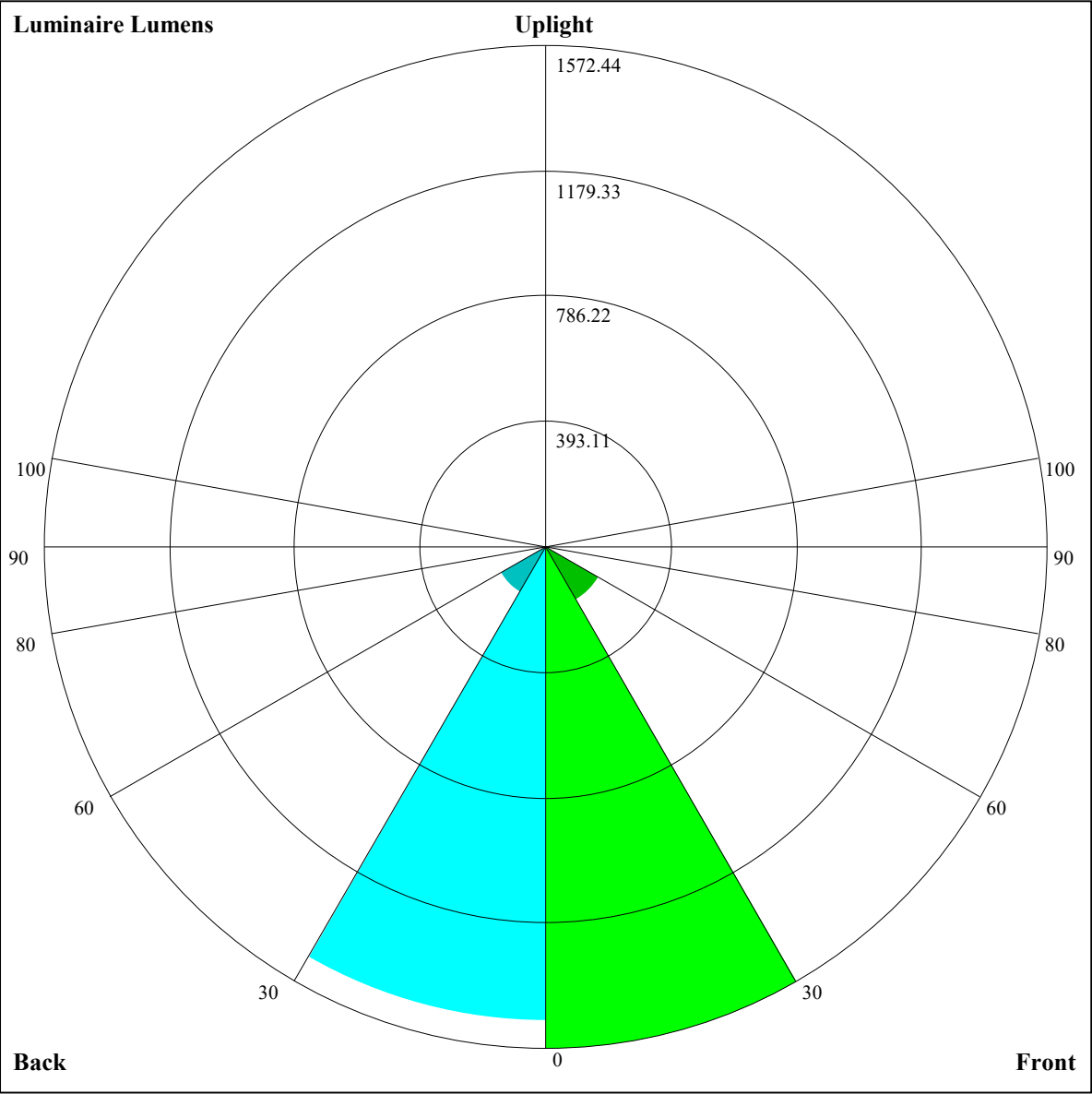


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	16.12	17.02	16.48	17.33	17.64	15.98	16.88	16.35	17.19	17.51
	3H	15.93	16.73	16.32	17.07	17.41	15.80	16.60	16.18	16.93	17.28
	4H	15.85	16.58	16.25	16.94	17.31	15.72	16.45	16.12	16.81	17.18
	6H	15.79	16.47	16.21	16.85	17.25	15.66	16.34	16.08	16.72	17.12
	8H	15.75	16.39	16.17	16.78	17.18	15.62	16.26	16.04	16.65	17.06
	12H	15.71	16.32	16.14	16.71	17.13	15.58	16.19	16.01	16.59	17.00
4H	2H	15.79	16.53	16.19	16.89	17.26	15.66	16.40	16.06	16.76	17.12
	3H	15.58	16.20	16.01	16.60	17.02	15.45	16.07	15.88	16.47	16.89
	4H	15.54	16.08	15.98	16.50	16.95	15.41	15.95	15.85	16.37	16.82
	6H	15.47	15.94	15.94	16.40	16.85	15.34	15.81	15.82	16.27	16.72
	8H	15.46	15.90	15.95	16.36	16.83	15.34	15.77	15.82	16.23	16.71
	12H	15.48	15.88	15.97	16.33	16.85	15.35	15.75	15.84	16.21	16.73
8H	4H	15.36	15.79	15.85	16.25	16.73	15.23	15.67	15.72	16.13	16.60
	6H	15.30	15.66	15.81	16.14	16.65	15.18	15.53	15.69	16.01	16.53
	8H	15.37	15.66	15.91	16.19	16.69	15.25	15.54	15.78	16.06	16.56
	12H	15.42	15.65	15.97	16.16	16.69	15.30	15.53	15.85	16.04	16.57
12H	4H	15.31	15.71	15.80	16.16	16.69	15.18	15.58	15.67	16.04	16.56
	6H	15.30	15.60	15.84	16.12	16.62	15.18	15.47	15.71	16.00	16.50
	8H	15.34	15.57	15.89	16.08	16.61	15.22	15.44	15.77	15.96	16.49
Variation with the observer position at spacings:											
S = 1.0H		6.4/-9.5					6.4/-9.5				
S = 1.5H		9.0/-7.8					9.0/-7.8				
S = 2.0H		10.8/-6.8					10.8/-6.8				
Standard tables:		BK1					BK1				
Uncorrected UGR		-4.6					-4.6				

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



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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.05	1.03	1.01	1.03	1.01	0.99	0.99	0.98	0.96	0.96	0.95	0.94	0.93	0.92	0.91	0.89
2	0.99	0.96	0.93	0.97	0.95	0.92	0.95	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.85
3	0.94	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.85	0.88	0.86	0.83	0.86	0.84	0.82	0.81
4	0.89	0.85	0.82	0.88	0.84	0.81	0.86	0.83	0.80	0.85	0.82	0.79	0.83	0.80	0.78	0.77
5	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.74
6	0.81	0.77	0.73	0.81	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
7	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.68
8	0.74	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.62
10	0.69	0.64	0.61	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.60



Luminaire Lumens:

FL=1572.44,FM=189.05,FH=8.89,FVH=3.97

BL=1488.78,BM=164.34,BH=8.84,BVH=3.97

UL=0,UH=0

BUG Rating:B3-U0-G0

Intensity data(cd)

C/ γ (°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	8028.04	8024.60	8017.71	8006.51	7970.34	7900.59	7798.97	7664.62	7544.92
45.0	8014.26	8022.88	8018.57	8016.85	8000.49	7966.04	7890.25	7785.19	7668.93
90.0	8022.02	8020.29	8021.15	8004.79	7941.92	7842.89	7701.65	7561.28	7402.82
135.0	8015.13	8022.02	8017.71	8028.04	8017.71	7940.20	7856.67	7727.49	7606.06
180.0	8028.04	8034.07	7983.26	7910.06	7803.27	7697.35	7566.45	7404.55	7180.64
225.0	8014.26	7959.15	7867.86	7778.30	7658.60	7531.14	7321.87	7135.00	6934.34
270.0	8022.02	8009.96	7974.65	7885.09	7761.08	7651.71	7512.19	7308.09	7117.77
315.0	8015.13	7996.18	7908.34	7812.75	7721.46	7585.39	7434.69	7218.53	7025.63
360.0	8028.04	8024.60	8017.71	8006.51	7970.34	7900.59	7798.97	7664.62	7544.92
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7396.80	7179.78	6979.98	6766.41	6527.86	6178.22	5869.92	5527.17	5151.69
45.0	7493.25	7337.37	7159.11	6918.84	6701.82	6484.80	6217.83	5862.17	5548.69
90.0	7231.45	6981.70	6781.05	6567.48	6334.96	6004.26	5725.24	5323.93	4953.62
135.0	7471.72	7252.12	7044.57	6853.39	6569.20	6294.48	5993.93	5585.73	5217.14
180.0	6991.18	6770.71	6440.88	6134.30	5727.82	5354.07	4938.98	4504.08	3961.53
225.0	6641.54	6363.37	6064.54	5641.70	5261.06	4858.03	4322.37	3895.22	3492.19
270.0	6940.37	6737.13	6417.63	6139.47	5826.00	5488.41	5003.57	4589.34	4167.36
315.0	6818.94	6585.56	6235.92	5934.51	5594.34	5223.17	4690.96	4248.31	3828.91
360.0	7396.80	7179.78	6979.98	6766.41	6527.86	6178.22	5869.92	5527.17	5151.69
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	4629.81	4202.66	3795.32	3338.04	3016.81	2657.70	2402.79	2167.69	1683.27
45.0	5191.30	4804.63	4299.98	3892.64	3520.61	3111.54	2817.02	2482.02	2242.61
90.0	4567.81	4067.46	3682.51	3333.73	3025.43	2668.90	2417.43	2190.08	1709.28
135.0	4813.24	4398.15	3884.89	3512.86	3174.41	2879.02	2541.44	2300.31	2082.43
180.0	3565.39	3214.02	2895.39	2549.19	2302.89	2081.57	1834.41	1666.48	1521.80
225.0	3138.24	2749.85	2482.02	2241.75	1704.02	1704.02	1626.95	1486.32	1347.58
270.0	3654.09	3294.98	2891.08	2607.75	2358.01	2128.93	1877.47	1700.92	1548.49
315.0	3358.70	3025.43	2727.46	2403.65	2171.13	1688.70	1688.70	1573.56	1440.50
360.0	4629.81	4202.66	3795.32	3338.04	3016.81	2657.70	2402.79	2167.69	1683.27
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1683.27	1567.27	1430.68	1299.35	1197.99	1075.36	947.82	786.00	645.72
45.0	2024.73	1783.60	1613.94	1472.71	1355.59	1226.41	1104.99	976.67	844.91
90.0	1709.28	1593.19	1454.80	1339.74	1198.77	1076.31	911.91	772.05	623.93
135.0	1838.71	1669.06	1489.07	1371.95	1268.61	1158.38	995.61	864.71	726.93
180.0	1369.37	1268.61	1121.35	994.75	865.58	731.23	565.88	464.26	464.26
225.0	1254.31	1112.22	981.23	846.46	678.87	542.98	415.44	292.97	159.06
270.0	1422.76	1295.31	1189.38	1077.43	917.25	780.32	596.03	448.76	448.76
315.0	1299.44	1198.51	1082.68	955.57	790.31	653.04	518.86	390.20	242.94
360.0	1683.27	1567.27	1430.68	1299.35	1197.99	1075.36	947.82	786.00	645.72
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	509.30	381.59	236.91	134.86	54.00	35.05	29.28	24.11	21.79
45.0	676.98	534.02	434.12	434.12	128.75	63.56	37.20	31.26	26.78
90.0	437.40	305.20	192.99	106.87	48.92	35.57	29.80	26.18	22.99
135.0	585.69	443.60	443.60	168.88	83.53	37.89	30.40	24.54	22.22
180.0	189.12	82.59	40.13	30.14	24.80	21.62	19.63	18.08	17.05
225.0	80.35	42.97	32.29	25.84	23.42	21.27	19.46	18.26	17.31
270.0	289.96	92.58	49.52	34.71	28.68	24.63	22.30	19.81	18.69
315.0	142.35	69.58	34.28	28.68	23.34	21.27	18.69	17.14	16.28
360.0	509.30	381.59	236.91	134.86	54.00	35.05	29.28	24.11	21.79

Intensity data(cd)

C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	18.86	17.48	16.53	15.85	15.24	14.64	14.04	13.43	13.00
45.0	23.51	20.24	18.69	17.65	16.53	15.85	15.16	14.55	13.87
90.0	20.32	19.12	17.83	16.88	16.10	15.24	14.64	13.95	13.43
135.0	19.98	18.26	17.40	16.53	15.85	15.07	14.55	14.04	13.35
180.0	16.36	15.50	14.98	14.47	13.95	13.35	12.92	12.49	12.14
225.0	16.36	15.67	14.98	14.21	13.69	13.18	12.75	12.23	11.88
270.0	17.57	16.71	16.02	15.24	14.55	14.04	13.35	12.92	12.40
315.0	15.67	15.07	14.47	13.87	13.43	12.92	12.57	12.06	11.71
360.0	18.86	17.48	16.53	15.85	15.24	14.64	14.04	13.43	13.00
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	12.57	12.14	11.71	11.45	11.11	10.76	10.51	10.33	10.08
45.0	13.35	12.83	12.31	11.97	11.54	11.20	10.94	10.59	10.33
90.0	12.92	12.49	12.06	11.63	11.37	11.02	10.68	10.42	10.16
135.0	12.92	12.57	12.14	11.71	11.37	11.11	10.76	10.51	10.16
180.0	11.71	11.45	11.20	10.85	10.59	10.33	10.08	9.90	9.65
225.0	11.54	11.28	10.94	10.68	10.42	10.16	9.90	9.73	9.56
270.0	12.06	11.71	11.37	11.02	10.76	10.51	10.33	10.08	9.82
315.0	11.37	11.02	10.85	10.51	10.25	9.99	9.73	9.65	9.39
360.0	12.57	12.14	11.71	11.45	11.11	10.76	10.51	10.33	10.08
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.82	9.65	9.47	9.30	9.04	8.87	8.78	8.61	8.53
45.0	10.08	9.82	9.65	9.39	9.21	9.04	8.96	8.78	8.61
90.0	9.90	9.65	9.39	9.21	9.04	8.96	8.70	8.61	8.44
135.0	9.90	9.73	9.47	9.30	9.13	8.96	8.78	8.61	8.44
180.0	9.39	9.21	9.13	8.96	8.78	8.61	8.53	8.44	8.27
225.0	9.30	9.04	8.96	8.87	8.70	8.61	8.44	8.35	8.27
270.0	9.65	9.39	9.21	9.04	8.87	8.78	8.61	8.53	8.35
315.0	9.21	8.96	8.87	8.70	8.61	8.44	8.35	8.27	8.10
360.0	9.82	9.65	9.47	9.30	9.04	8.87	8.78	8.61	8.53
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.44	8.27	8.18	8.01	7.92	7.84	7.75	7.66	7.66
45.0	8.44	8.35	8.18	8.10	8.01	7.92	7.84	7.66	7.66
90.0	8.27	8.18	8.10	8.01	7.84	7.75	7.66	7.58	7.58
135.0	8.35	8.27	8.10	8.01	7.92	7.84	7.75	7.66	7.58
180.0	8.18	8.10	7.92	7.84	7.75	7.75	7.58	7.58	7.49
225.0	8.18	8.10	8.01	7.92	7.84	7.75	7.66	7.66	7.66
270.0	8.27	8.27	8.10	8.01	7.92	7.84	7.75	7.75	7.66
315.0	8.01	7.92	7.84	7.75	7.66	7.66	7.58	7.49	7.49
360.0	8.44	8.27	8.18	8.01	7.92	7.84	7.75	7.66	7.66
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.58	7.49	7.49	7.41	7.32	7.23	7.23	7.23	7.15
45.0	7.58	7.49	7.49	7.41	7.41	7.32	7.23	7.15	7.15
90.0	7.49	7.41	7.41	7.32	7.32	7.15	7.15	7.15	7.06
135.0	7.49	7.41	7.41	7.32	7.23	7.23	7.15	7.06	7.06
180.0	7.49	7.41	7.41	7.41	7.15	7.15	7.15	7.23	7.15
225.0	7.66	7.58	7.58	7.15	7.15	6.98	7.06	7.06	7.06
270.0	7.58	7.58	7.58	7.23	7.15	7.06	7.06	6.98	7.06
315.0	7.41	7.41	7.23	7.15	7.06	6.98	6.98	6.98	6.98
360.0	7.58	7.49	7.49	7.41	7.32	7.23	7.23	7.23	7.15

Intensity data(cd)

C/ γ (°)	90.0
0.0	7.15
45.0	7.06
90.0	6.98
135.0	6.98
180.0	7.06
225.0	7.06
270.0	6.98
315.0	6.98
360.0	7.15