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Nata

Client: NT

LumCAT: 3-2383-LM4

Luminaire: 92.70.121.00 LED HOLDER

Report No: 20251110-B015

Ballast type: DC

Test No: 20251110-C015

Voltage(V): 36.570

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.709

Lamp flux(lm): 3662.0

Power (W): 25.920

Number of Lamps: 1

PF: 0.000

Length(mm): 85

Width(mm): 85

Phm Type: C

Height(mm): 51

Photometric Results

Lumens(lm): 3551.14, Efficiency(%): 96.97% , Luminous Efficacy(lm/W): 137.00

Central intensity(cd): 17178.940, Maximum intensity(cd): 17178.940

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.4

[C90/270]Total=22.4

Field angle(10%Imax): [C0/180]Total=39.8

[C90/270]Total=39.8

Maximum s/h(1/2): C0_180=0.38 C90_270=0.38

Maximum s/h(1/4): C0_180=0.37 C90_270=0.37

Up flux rate of lamp(%): 0.00%

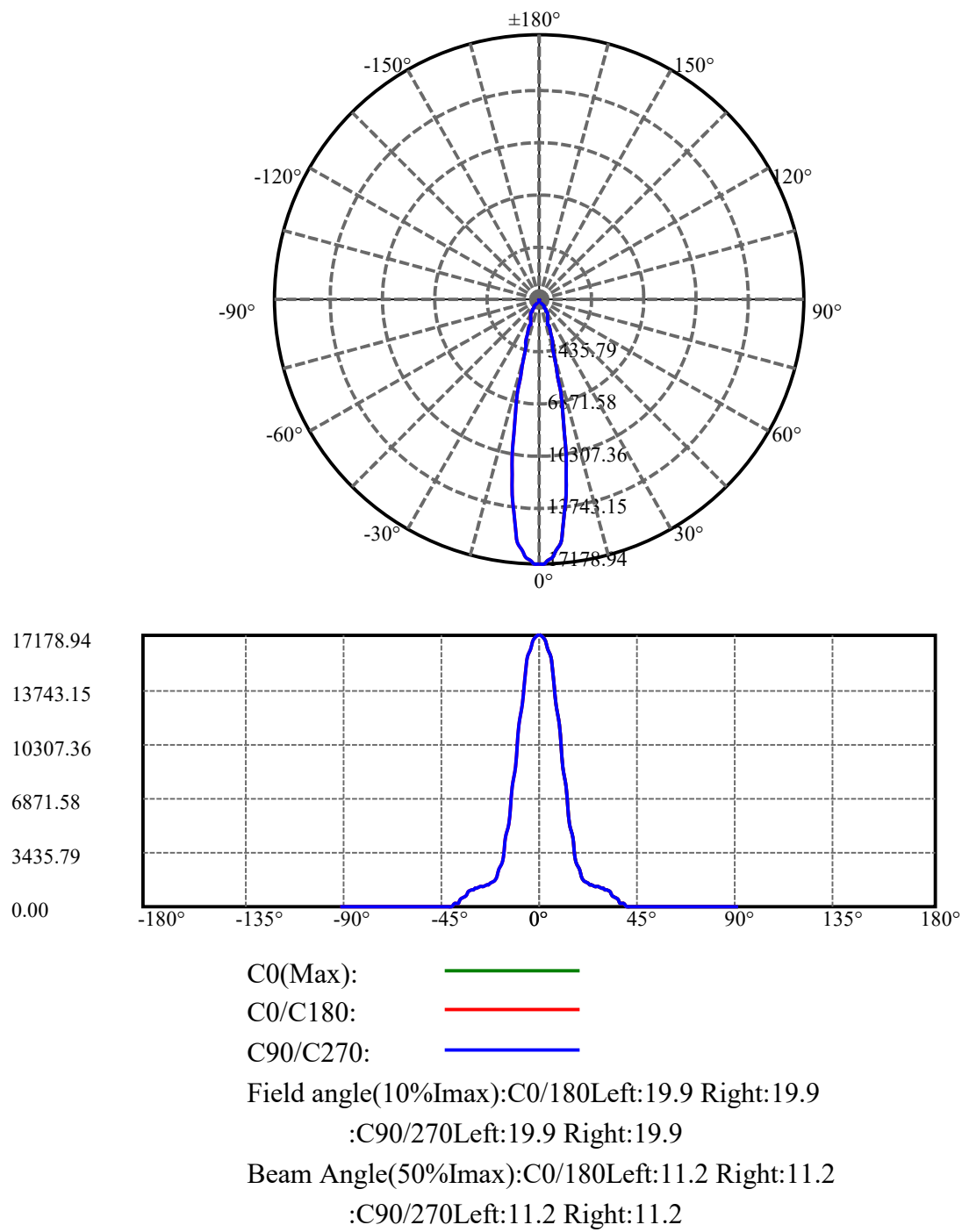
Down flux rate of lamp(%): 96.97%

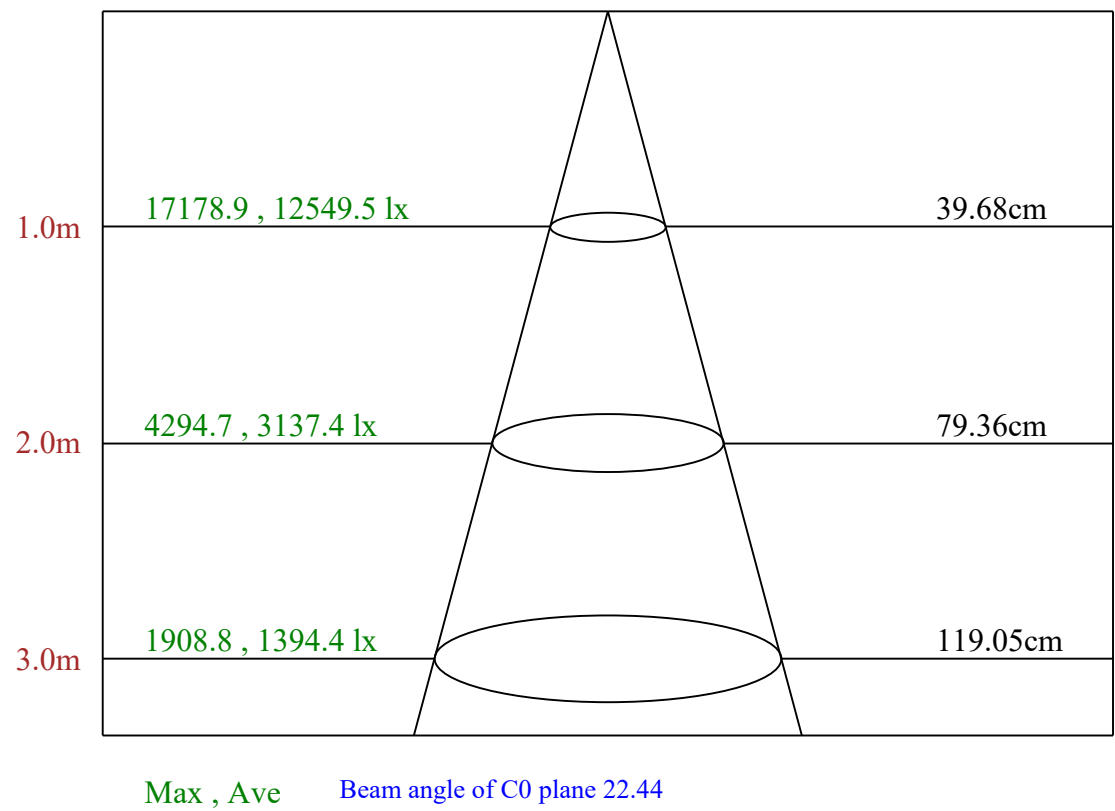
Up flux rate of LUM(%): - -

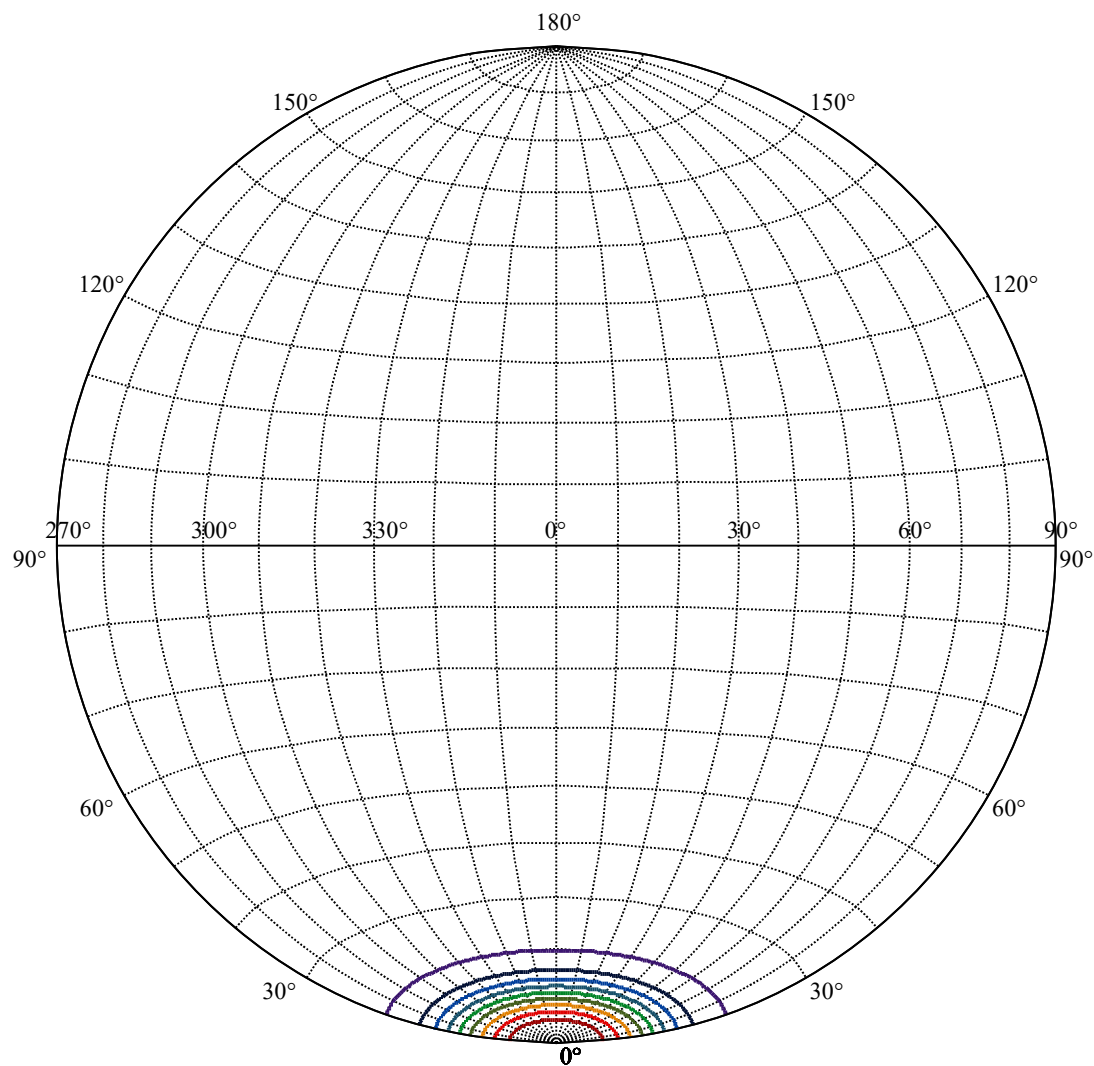
Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.324%







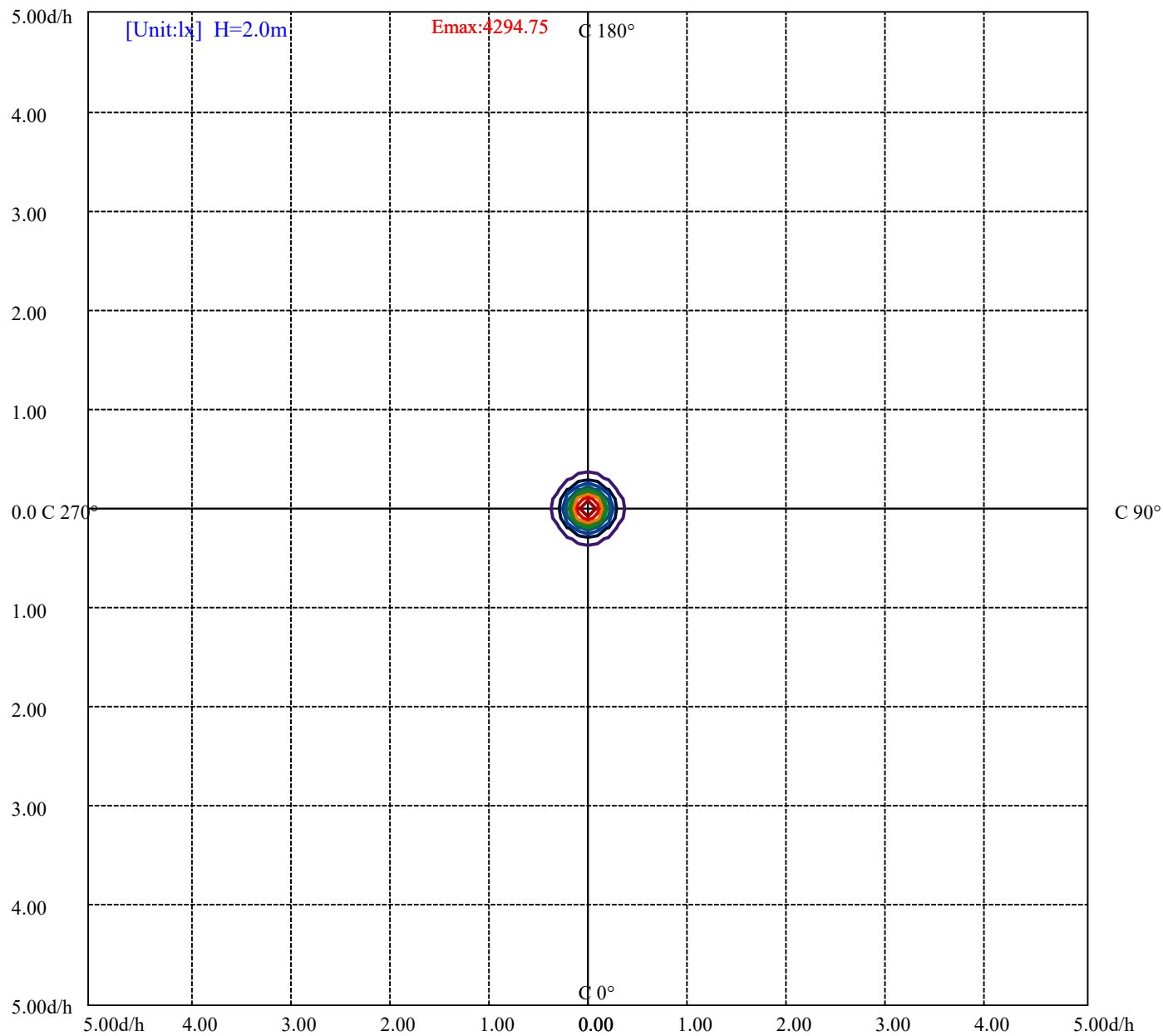
House

[Unit:cd]

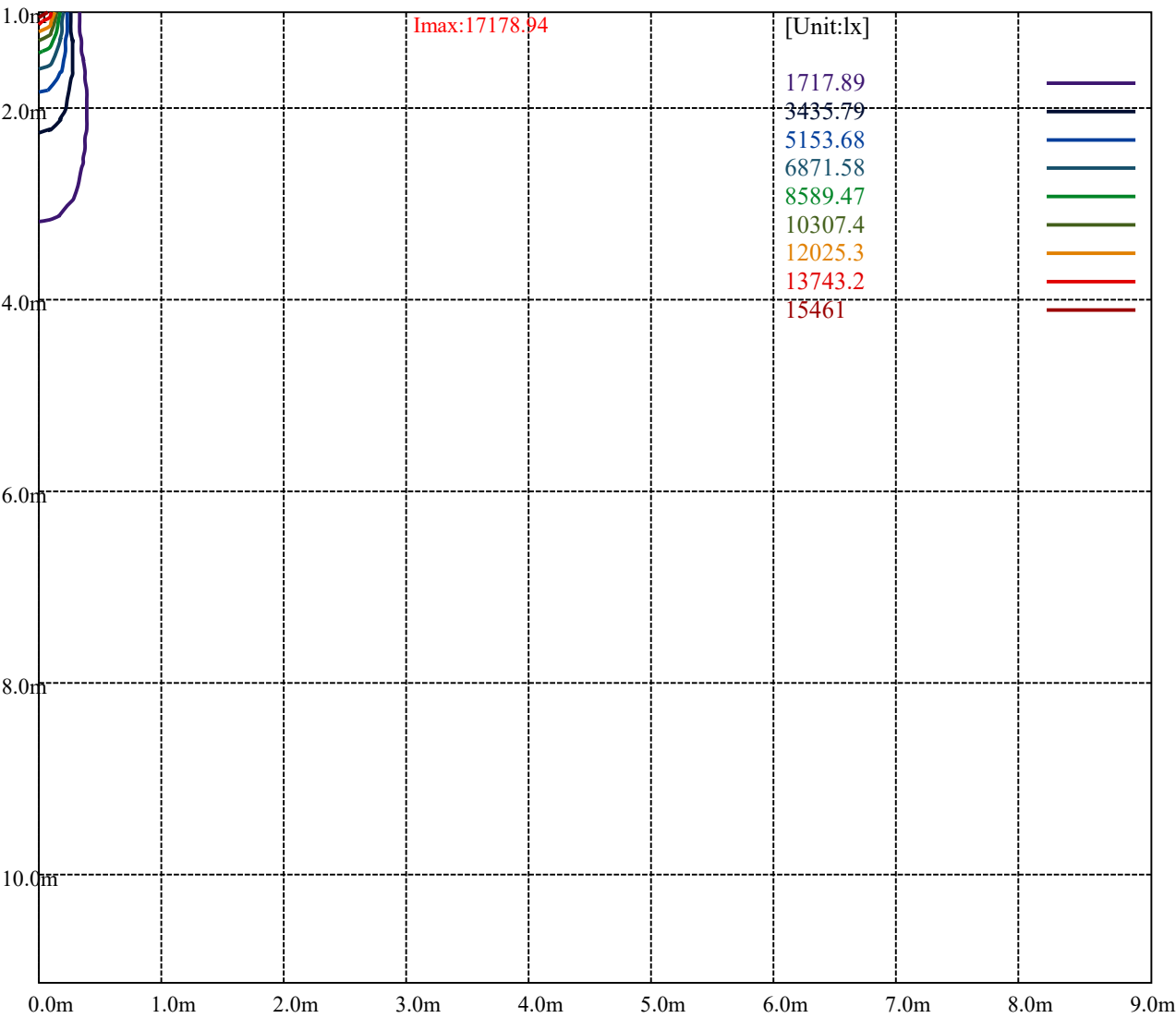
Road

Imax:17178.94

(10%Imax)	1717.89	—
(20%Imax)	3435.79	—
(30%Imax)	5153.68	—
(40%Imax)	6871.58	—
(50%Imax)	8589.47	—
(60%Imax)	10307.4	—
(70%Imax)	12025.3	—
(80%Imax)	13743.2	—
(90%Imax)	15461	—



(10%Emax)	429.4725	
(20%Emax)	858.9475	
(30%Emax)	1288.42	
(40%Emax)	1717.892	
(50%Emax)	2147.367	
(60%Emax)	2576.85	
(70%Emax)	3006.325	
(80%Emax)	3435.775	
(90%Emax)	3865.25	



Luminance Table

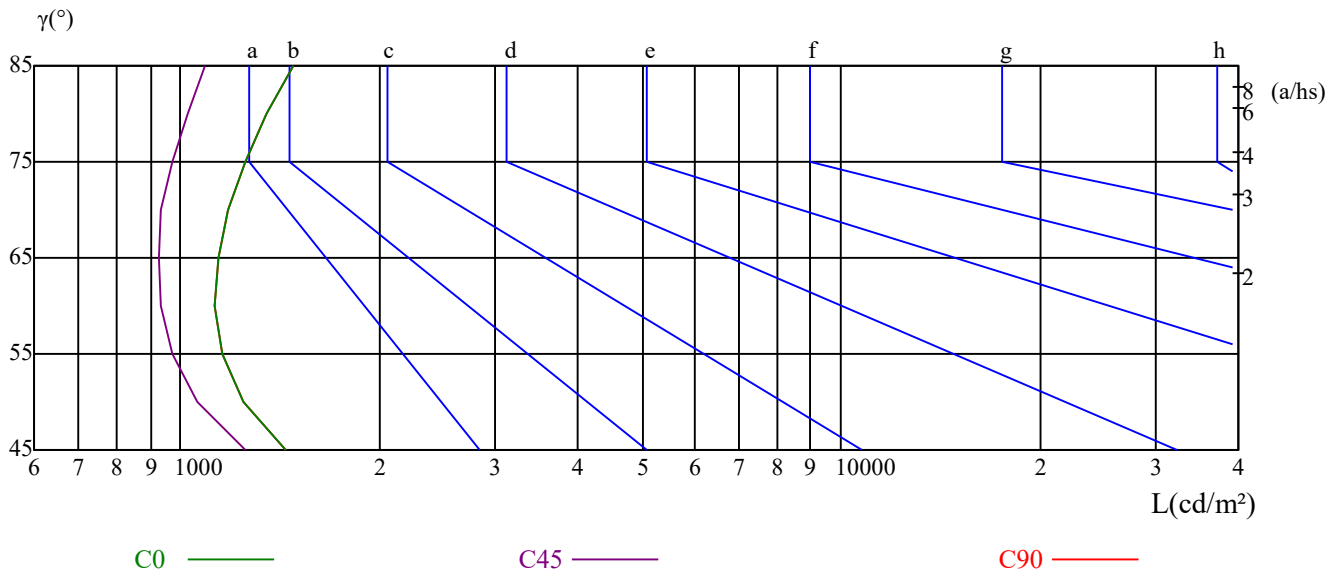
γ	45	50	55	60	65	70	75	80	85
C0	1447	1243	1154	1128	1141	1178	1249	1352	1486
C45	1253	1060	969	931	925	936	971	1025	1091
C90	1447	1243	1154	1128	1141	1178	1249	1352	1486

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2609	2609	2609	4047	4047	4047	11676	11676	11676

Glare Table

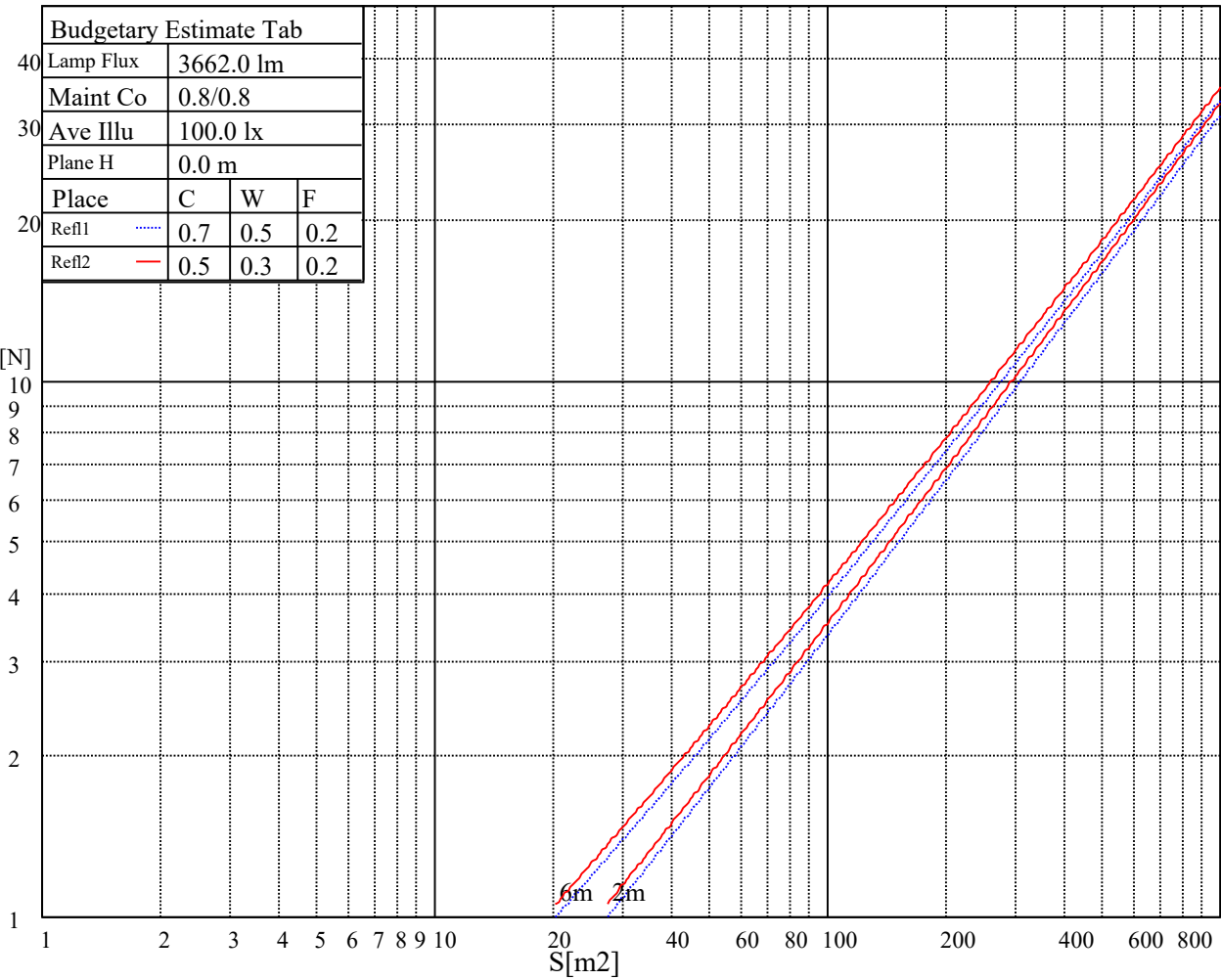
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

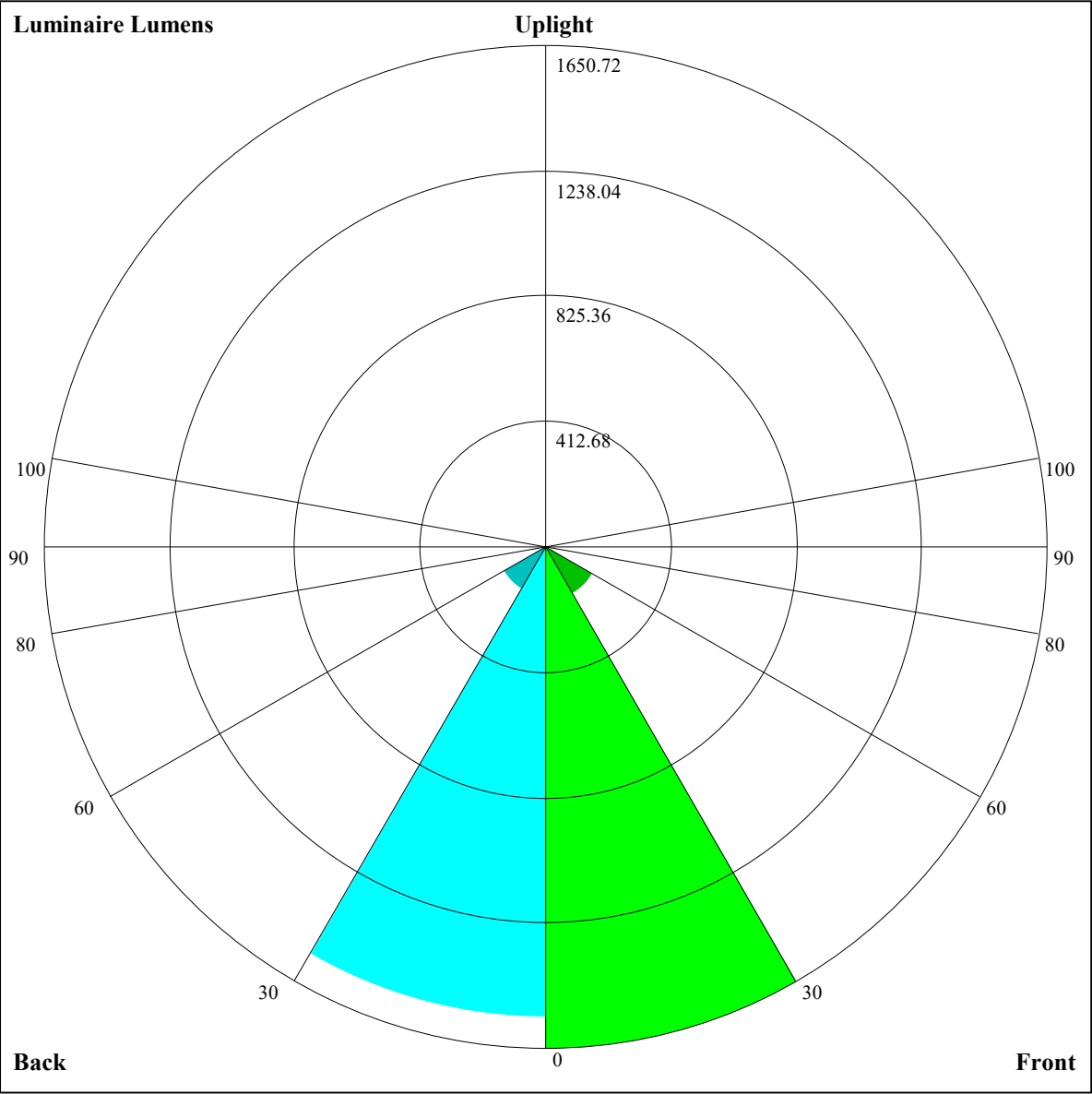


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	15.68	16.58	16.04	16.89	17.20	15.25	16.15	15.61	16.46	16.77
	3H	15.49	16.28	15.88	16.62	16.97	15.06	15.85	15.45	16.19	16.54
	4H	15.40	16.14	15.81	16.49	16.86	14.98	15.71	15.38	16.07	16.44
	6H	15.36	16.03	15.78	16.40	16.80	14.93	15.60	15.35	15.98	16.38
	8H	15.31	15.95	15.73	16.34	16.75	14.89	15.53	15.31	15.92	16.33
	12H	15.28	15.88	15.71	16.28	16.70	14.86	15.47	15.29	15.86	16.28
4H	2H	15.35	16.09	15.75	16.44	16.81	14.92	15.66	15.33	16.01	16.38
	3H	15.13	15.75	15.56	16.15	16.57	14.71	15.33	15.14	15.72	16.14
	4H	15.10	15.63	15.54	16.05	16.50	14.67	15.21	15.11	15.63	16.08
	6H	15.03	15.50	15.50	15.95	16.40	14.61	15.08	15.09	15.54	15.99
	8H	15.02	15.46	15.51	15.92	16.39	14.62	15.05	15.10	15.51	15.99
	12H	15.05	15.45	15.54	15.90	16.42	14.65	15.04	15.14	15.50	16.02
8H	4H	14.91	15.34	15.40	15.80	16.28	14.49	14.93	14.98	15.39	15.86
	6H	14.86	15.22	15.37	15.70	16.21	14.46	14.81	14.96	15.29	15.80
	8H	14.94	15.23	15.47	15.75	16.25	14.54	14.83	15.08	15.36	15.85
	12H	15.01	15.23	15.55	15.74	16.27	14.62	14.84	15.17	15.36	15.88
12H	4H	14.86	15.26	15.35	15.71	16.24	14.45	14.84	14.94	15.30	15.82
	6H	14.86	15.16	15.40	15.68	16.18	14.46	14.75	15.00	15.28	15.77
	8H	14.92	15.13	15.46	15.65	16.18	14.52	14.74	15.07	15.26	15.78
Variation with the observer position at spacings:											
S = 1.0H		6.3/-10.7					6.3/-10.7				
S = 1.5H		8.9/-8.8					8.9/-8.8				
S = 2.0H		10.8/-7.3					10.8/-7.3				
Standard tables:		BK1					BK1				
Uncorrected UGR		-4.5					-4.5				

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	1.15	1.15	1.15	1.13	1.13	1.13	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.97
1	1.09	1.07	1.05	1.07	1.05	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.96	0.96	0.95	0.93
2	1.04	1.01	0.98	1.02	0.99	0.97	0.99	0.97	0.95	0.96	0.95	0.93	0.94	0.92	0.91	0.90
3	0.99	0.95	0.93	0.98	0.94	0.92	0.95	0.93	0.90	0.93	0.91	0.89	0.91	0.89	0.88	0.86
4	0.95	0.91	0.88	0.94	0.90	0.87	0.92	0.89	0.86	0.90	0.88	0.85	0.89	0.86	0.85	0.83
5	0.91	0.87	0.84	0.90	0.87	0.84	0.89	0.86	0.83	0.87	0.85	0.82	0.86	0.84	0.82	0.81
6	0.88	0.84	0.81	0.87	0.83	0.80	0.86	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.79	0.78
7	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.80	0.77	0.82	0.79	0.77	0.81	0.79	0.77	0.75
8	0.82	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.73
9	0.80	0.76	0.73	0.79	0.75	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.74	0.72	0.71
10	0.77	0.73	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.69



Luminaire Lumens:

FL=1650.72,FM=179.32,FH=7.99,FVH=4.02

BL=1546.33,BM=160.67,BH=7.92,BVH=4.02

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	17237.46	17556.10	17178.98	17178.98	16974.02	16600.27	16068.06	15346.38	14377.55
45.0	17093.73	17171.23	17171.23	17246.07	17159.95	16901.60	16582.96	16049.03	15015.60
90.0	17228.85	17185.87	17185.87	17037.75	16795.76	16388.42	15497.09	14502.42	13343.27
135.0	17155.73	17155.73	17237.46	17159.95	16979.10	16712.14	16290.16	15368.69	14361.10
180.0	17237.46	17082.45	16849.93	16462.39	15911.24	15093.11	13792.72	12630.12	11424.47
225.0	17093.73	16849.15	16430.62	15975.91	15294.71	14362.05	12979.85	11744.05	10465.19
270.0	17228.85	17082.45	16910.21	16539.90	16143.76	15609.82	14757.25	13465.47	12302.87
315.0	17155.73	17042.92	16732.89	16348.80	15648.66	14777.14	13697.22	12222.01	11000.85
360.0	17237.46	17556.10	17178.98	17178.98	16974.02	16600.27	16068.06	15346.38	14377.55
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	12985.88	11768.17	10499.64	8855.64	7540.61	6000.82	4894.19	3915.89	3127.05
45.0	13973.57	12819.59	11596.70	10003.51	8737.57	7437.19	6197.08	4767.51	4509.16
90.0	12153.98	10931.96	9369.77	8086.60	6831.00	5615.87	4247.45	3338.04	2559.52
135.0	13207.12	12010.07	10503.00	9254.28	8005.57	6464.05	5292.84	4483.32	4483.32
180.0	9848.50	8556.72	7273.56	6050.68	4681.40	4431.65	4431.65	2492.35	2072.09
225.0	9163.08	7613.81	6421.07	5306.70	4050.23	3200.25	2572.44	1927.42	1718.41
270.0	11079.99	9831.28	8289.76	7058.26	5887.05	4784.74	4526.38	3449.13	2298.59
315.0	9734.05	8479.30	6944.67	5776.91	4679.76	3477.55	2756.74	2287.39	1711.34
360.0	12985.88	11768.17	10499.64	8855.64	7540.61	6000.82	4894.19	3915.89	3127.05
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2469.96	2142.71	1687.92	1687.92	1601.03	1505.26	1431.03	1373.33	1319.25
45.0	4509.16	2391.59	2090.18	1843.02	1698.34	1584.66	1475.29	1407.26	1355.59
90.0	2201.27	1689.38	1689.38	1628.41	1526.97	1430.08	1371.00	1324.16	1288.59
135.0	2580.19	2210.75	1930.00	1770.68	1642.36	1539.02	1439.12	1379.70	1335.78
180.0	1867.99	1719.87	1573.47	1483.04	1413.29	1345.26	1306.50	1266.89	1238.47
225.0	1718.41	1568.30	1476.16	1405.19	1349.04	1307.11	1266.97	1239.59	1213.24
270.0	1959.28	1787.90	1621.70	1514.05	1433.10	1368.51	1313.39	1280.67	1253.11
315.0	1711.34	1644.43	1534.54	1431.63	1369.45	1323.47	1276.79	1247.51	1223.31
360.0	2469.96	2142.71	1687.92	1687.92	1601.03	1505.26	1431.03	1373.33	1319.25
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1285.75	1259.48	1224.69	1201.78	1140.98	1057.53	946.10	780.75	634.00
45.0	1315.11	1274.64	1247.94	1220.38	1194.55	1122.21	1026.62	909.50	780.32
90.0	1253.02	1228.22	1203.25	1170.44	1077.60	972.79	849.90	685.24	547.71
135.0	1297.89	1261.72	1234.16	1207.47	1168.71	1096.37	962.89	838.88	703.67
180.0	1212.63	1186.80	1121.35	1033.51	925.86	802.71	617.56	469.43	435.85
225.0	1181.72	1143.39	1059.51	920.43	789.36	660.44	497.85	372.63	226.06
270.0	1228.13	1197.13	1166.99	1097.23	996.48	848.35	723.48	564.16	436.71
315.0	1196.70	1162.08	1100.16	1001.21	849.99	716.51	581.64	448.68	295.56
360.0	1285.75	1259.48	1224.69	1201.78	1140.98	1057.53	946.10	780.75	634.00
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	487.17	349.64	204.01	113.85	55.89	34.71	29.02	20.75	15.76
45.0	612.39	475.46	442.73	289.62	100.24	40.65	31.00	24.46	17.91
90.0	416.30	263.69	161.04	79.14	35.31	29.02	22.05	16.02	12.14
135.0	526.27	457.37	457.37	151.22	61.32	35.22	29.28	22.39	15.07
180.0	435.85	104.55	53.14	33.50	25.92	19.38	13.95	12.75	12.23
225.0	127.54	61.57	34.79	28.16	20.15	14.90	12.06	11.45	11.02
270.0	436.71	168.28	86.03	42.28	29.19	22.56	16.62	12.83	11.71
315.0	186.79	99.98	43.58	30.57	22.65	16.79	12.92	11.80	11.28
360.0	487.17	349.64	204.01	113.85	55.89	34.71	29.02	20.75	15.76

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	13.35	12.75	12.23	11.80	11.37	11.02	10.59	10.33	10.08
45.0	12.75	11.97	11.45	11.02	10.51	10.16	9.90	9.47	9.30
90.0	11.54	11.11	10.59	10.25	9.90	9.65	9.30	9.13	8.96
135.0	12.23	11.63	11.02	10.68	10.33	9.90	9.56	9.39	9.04
180.0	11.88	11.37	10.94	10.68	10.42	10.08	9.90	9.65	9.47
225.0	10.59	10.16	9.90	9.65	9.30	9.21	9.04	8.87	8.70
270.0	11.37	10.94	10.59	10.16	9.99	9.73	9.47	9.30	9.13
315.0	10.94	10.59	10.25	9.90	9.73	9.47	9.30	9.13	8.96
360.0	13.35	12.75	12.23	11.80	11.37	11.02	10.59	10.33	10.08
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.90	9.65	9.47	9.30	9.13	8.96	8.87	8.70	8.53
45.0	9.13	8.87	8.78	8.61	8.53	8.44	8.35	8.27	8.18
90.0	8.70	8.61	8.53	8.35	8.27	8.18	8.10	8.01	8.01
135.0	8.96	8.78	8.61	8.44	8.35	8.27	8.18	8.18	8.01
180.0	9.21	9.04	8.87	8.78	8.61	8.44	8.44	8.27	8.18
225.0	8.61	8.53	8.44	8.35	8.27	8.27	8.10	8.10	8.01
270.0	8.96	8.87	8.70	8.61	8.44	8.35	8.27	8.18	8.10
315.0	8.78	8.70	8.61	8.44	8.44	8.27	8.18	8.18	8.10
360.0	9.90	9.65	9.47	9.30	9.13	8.96	8.87	8.70	8.53
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.44	8.35	8.27	8.18	8.10	8.01	8.01	7.92	7.92
45.0	8.18	8.10	8.01	8.01	7.92	7.92	7.84	7.84	7.75
90.0	7.92	7.92	7.84	7.84	7.75	7.66	7.66	7.58	7.58
135.0	8.01	7.92	7.84	7.84	7.84	7.75	7.75	7.58	7.58
180.0	8.18	8.10	8.01	7.92	7.92	7.84	7.75	7.66	7.66
225.0	7.92	7.92	7.92	7.84	7.84	7.75	7.66	7.66	7.66
270.0	8.10	8.01	7.92	7.92	7.84	7.75	7.75	7.75	7.66
315.0	8.10	8.01	7.92	7.84	7.84	7.75	7.66	7.66	7.66
360.0	8.44	8.35	8.27	8.18	8.10	8.01	8.01	7.92	7.92
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.84	7.75	7.75	7.75	7.66	7.66	7.66	7.58	7.58
45.0	7.75	7.66	7.66	7.66	7.66	7.66	7.58	7.66	7.58
90.0	7.49	7.49	7.49	7.49	7.49	7.49	7.41	7.41	7.41
135.0	7.58	7.49	7.49	7.49	7.49	7.49	7.49	7.41	7.41
180.0	7.66	7.66	7.58	7.58	7.58	7.58	7.49	7.49	7.49
225.0	7.66	7.58	7.58	7.58	7.58	7.58	7.58	7.49	7.49
270.0	7.58	7.58	7.58	7.49	7.49	7.49	7.49	7.49	7.41
315.0	7.58	7.49	7.58	7.49	7.49	7.41	7.41	7.41	7.41
360.0	7.84	7.75	7.75	7.75	7.66	7.66	7.66	7.58	7.58
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	7.58	7.49	7.41	7.41	7.49	7.41	7.41
45.0	7.58	7.49	7.49	7.49	7.41	7.41	7.32	7.41	7.32
90.0	7.41	7.41	7.41	7.41	7.41	7.32	7.32	7.32	7.23
135.0	7.41	7.41	7.32	7.32	7.32	7.32	7.32	7.32	7.32
180.0	7.41	7.49	7.49	7.41	7.41	7.41	7.41	7.41	7.41
225.0	7.49	7.49	7.41	7.32	7.32	7.32	7.32	7.32	7.32
270.0	7.41	7.41	7.41	7.32	7.32	7.32	7.32	7.23	7.32
315.0	7.41	7.32	7.32	7.32	7.23	7.23	7.23	7.23	7.23
360.0	7.58	7.49	7.58	7.49	7.41	7.41	7.49	7.41	7.41

Intensity data(cd)

C/ $\gamma(^{\circ})$	90.0
0.0	7.49
45.0	7.32
90.0	7.23
135.0	7.23
180.0	7.32
225.0	7.32
270.0	7.23
315.0	7.23
360.0	7.49