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Nata

Client: NT

LumCAT: 3-2993-LM

Luminaire: 92.70.412.00 LED HOLDER

Report No: 20251111-B022

Ballast type: DC

Test No: 20251111-C022

Voltage(V): 36.490

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.709

Lamp flux(lm): 3662.0

Power (W): 25.870

Number of Lamps: 1

PF: 0.000

Length(mm): 85

Width(mm): 85

Phm Type: C

Height(mm): 51

Photometric Results

Lumens(lm): 3606.57, Efficiency(%): 98.49% , Luminous Efficacy(lm/W): 139.41

Central intensity(cd): 17546.210, Maximum intensity(cd): 17546.210

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=40.0

[C90/270]Total=40.0

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%

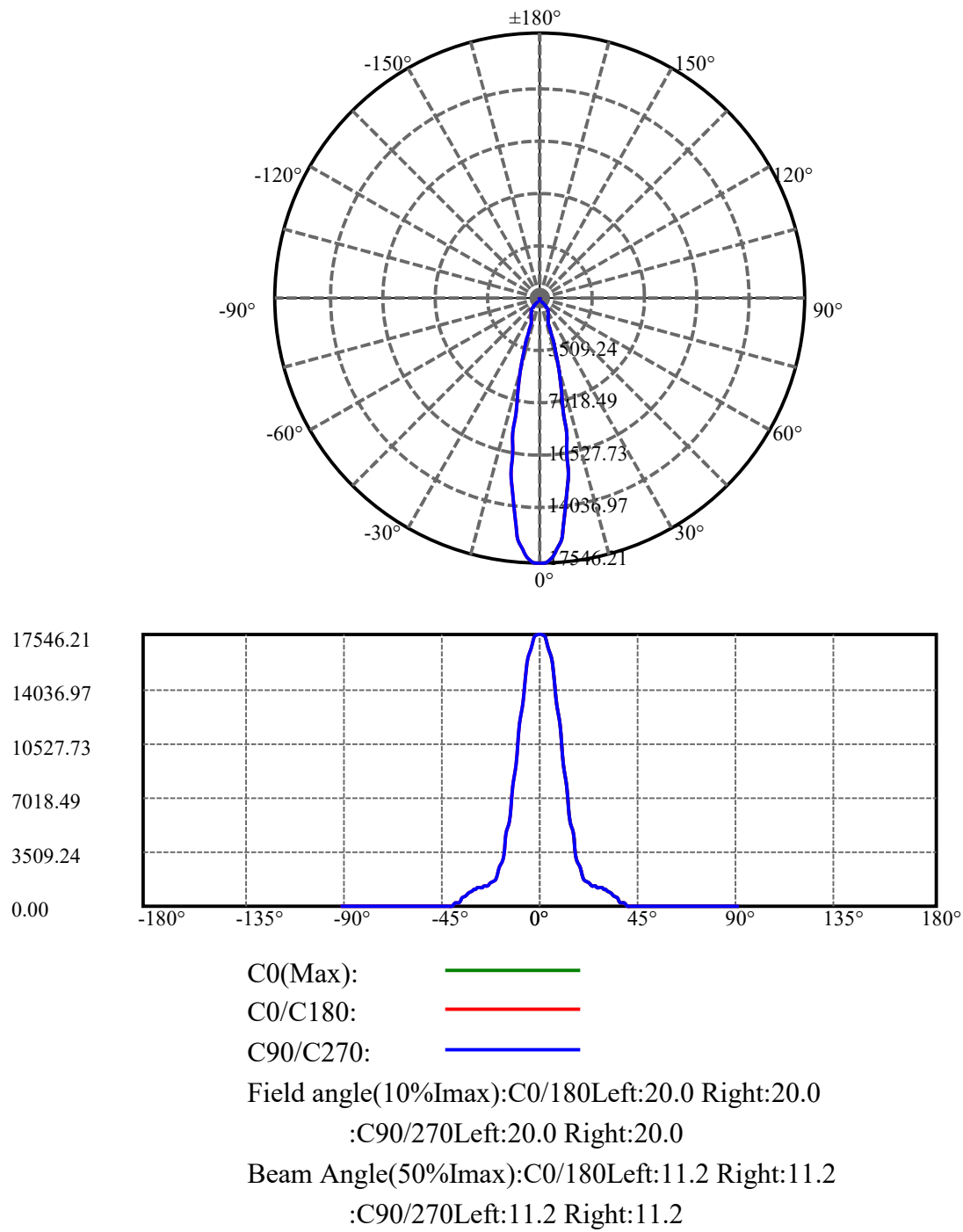
Down flux rate of lamp(%): 98.49%

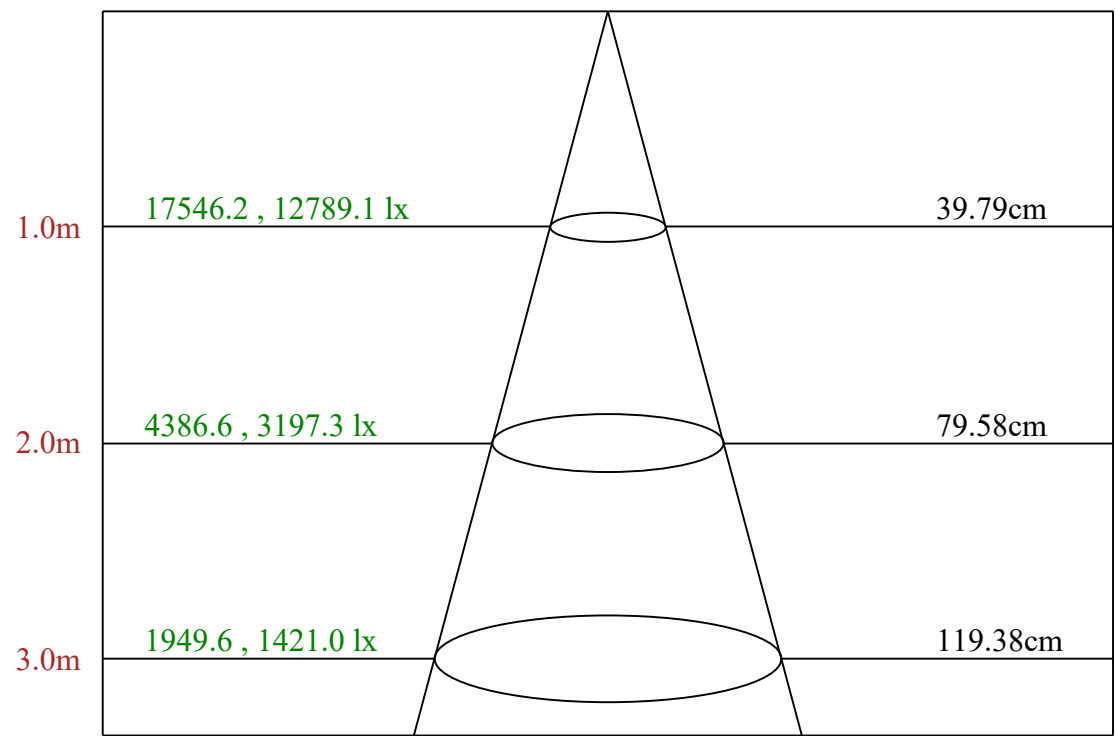
Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

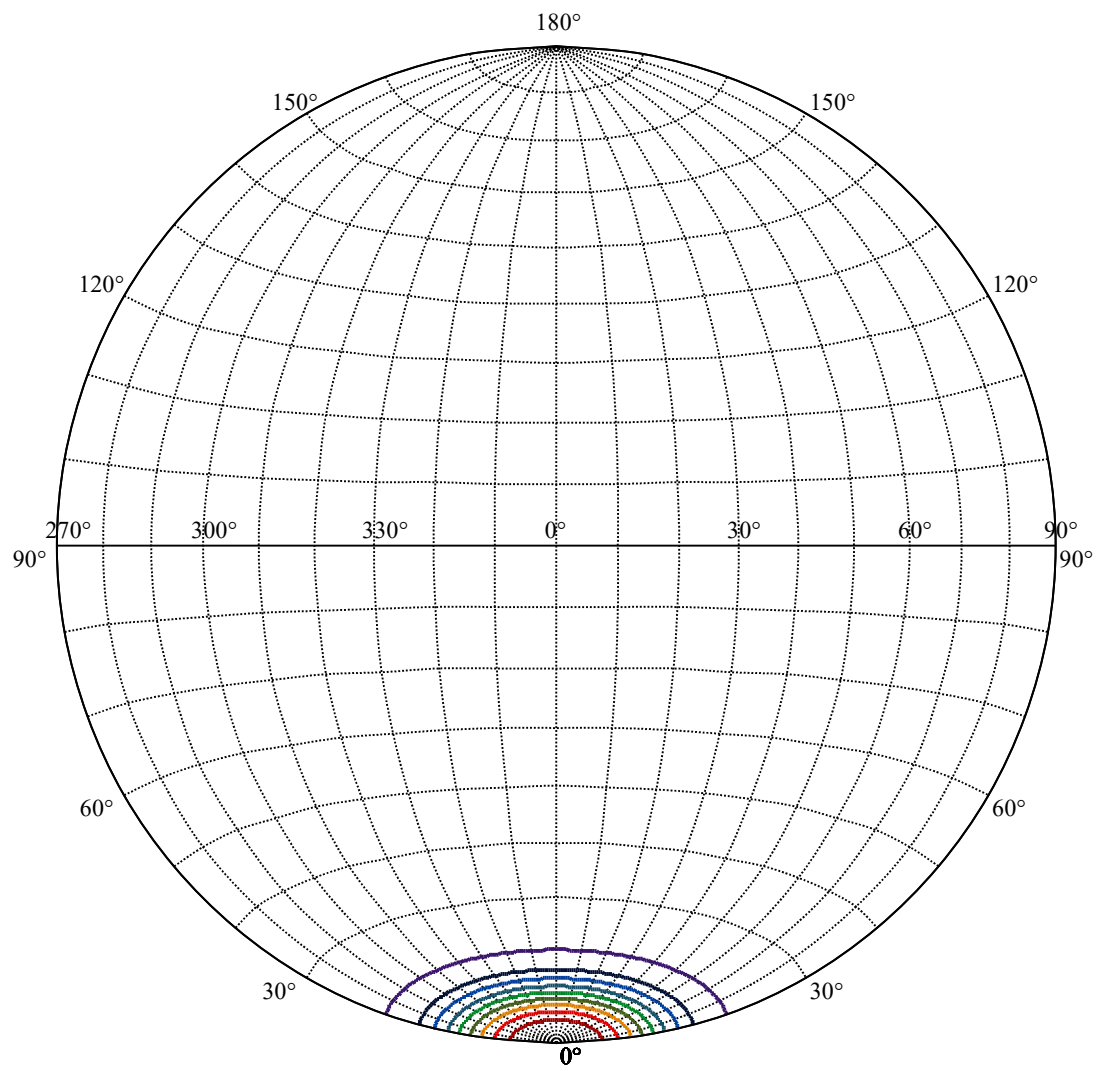
CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.319%





Max , Ave Beam angle of C0 plane 22.51

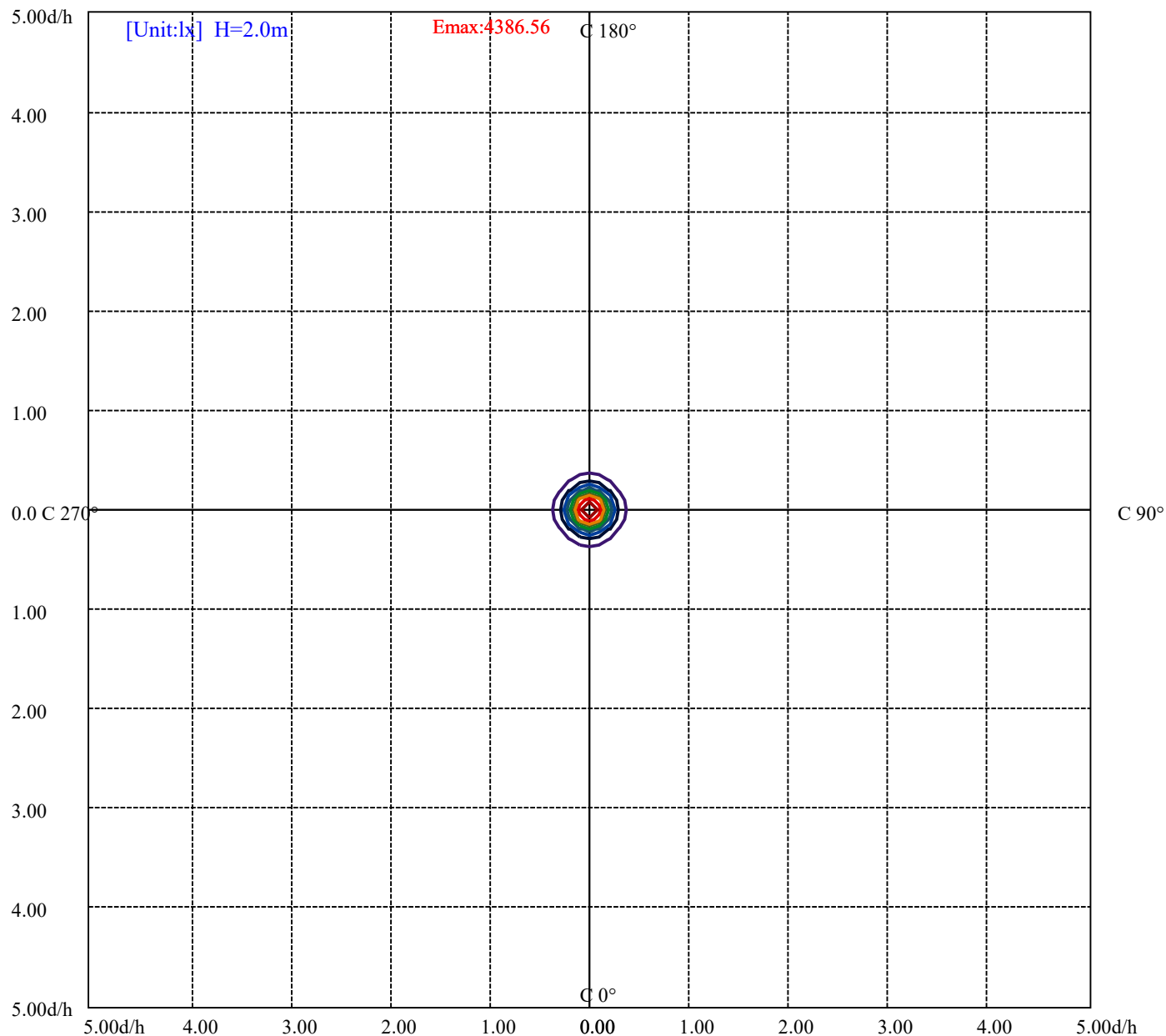


House

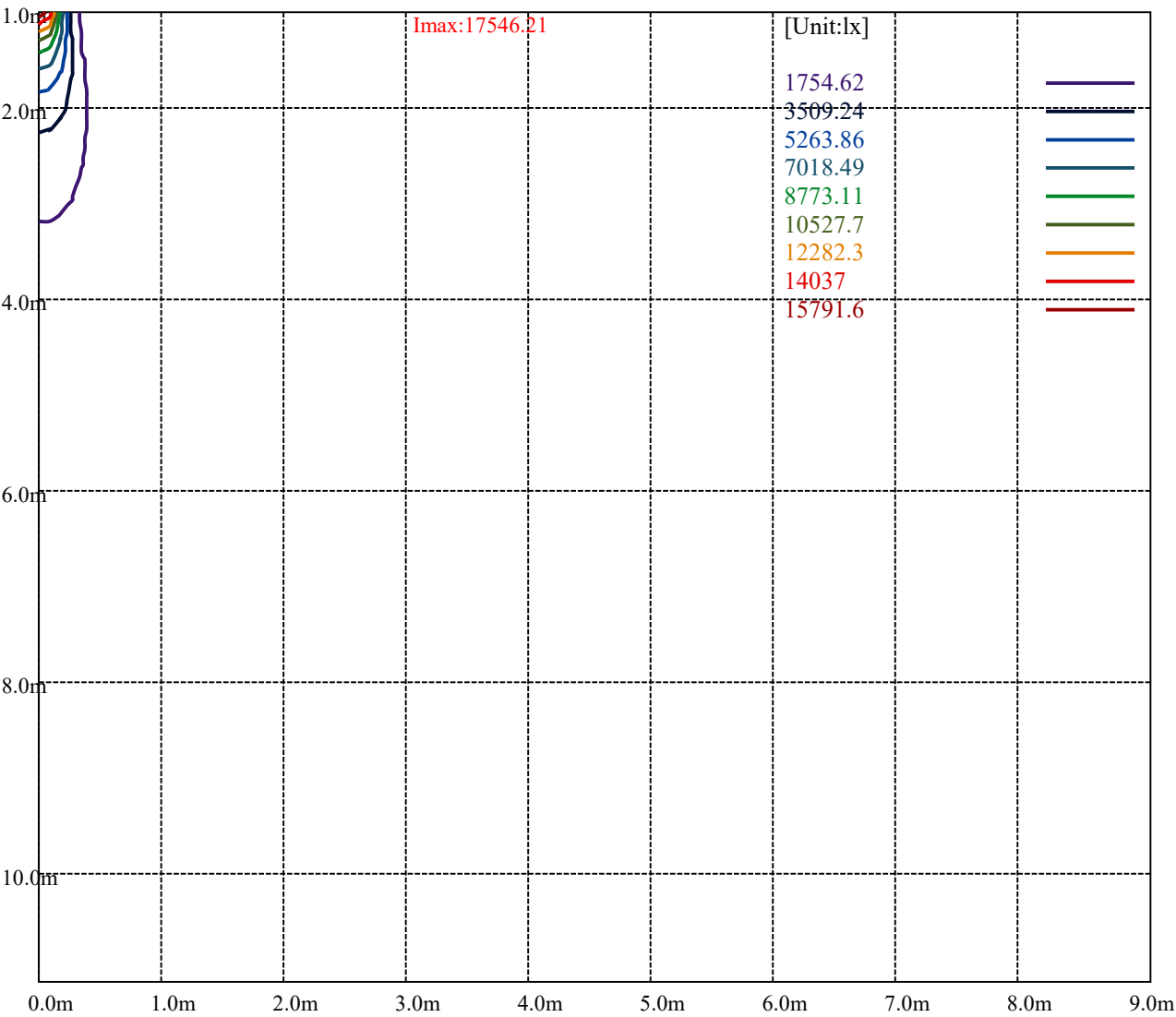
[Unit:cd]

Road

Imax:17546.21	
(10%Imax) 1754.62	
(20%Imax) 3509.24	
(30%Imax) 5263.86	
(40%Imax) 7018.49	
(50%Imax) 8773.11	
(60%Imax) 10527.7	
(70%Imax) 12282.3	
(80%Imax) 14037	
(90%Imax) 15791.6	



(10%Emax) 438.655	—
(20%Emax) 877.31	—
(30%Emax) 1315.965	—
(40%Emax) 1754.62	—
(50%Emax) 2193.278	—
(60%Emax) 2631.925	—
(70%Emax) 3070.575	—
(80%Emax) 3509.25	—
(90%Emax) 3947.9	—



Luminance Table

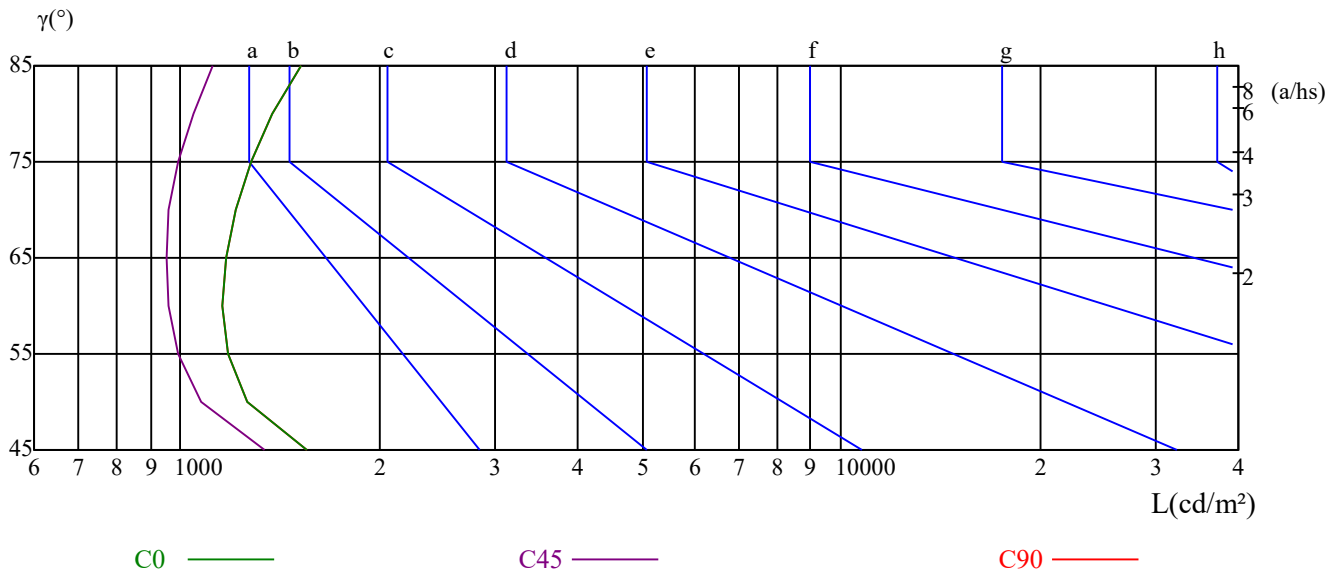
γ	45	50	55	60	65	70	75	80	85
C0	1550	1264	1178	1159	1175	1209	1276	1380	1527
C45	1342	1078	989	957	953	961	992	1045	1122
C90	1550	1264	1178	1159	1175	1209	1276	1380	1527

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2686	2686	2686	4133	4133	4133	12001	12001	12001

Glare Table

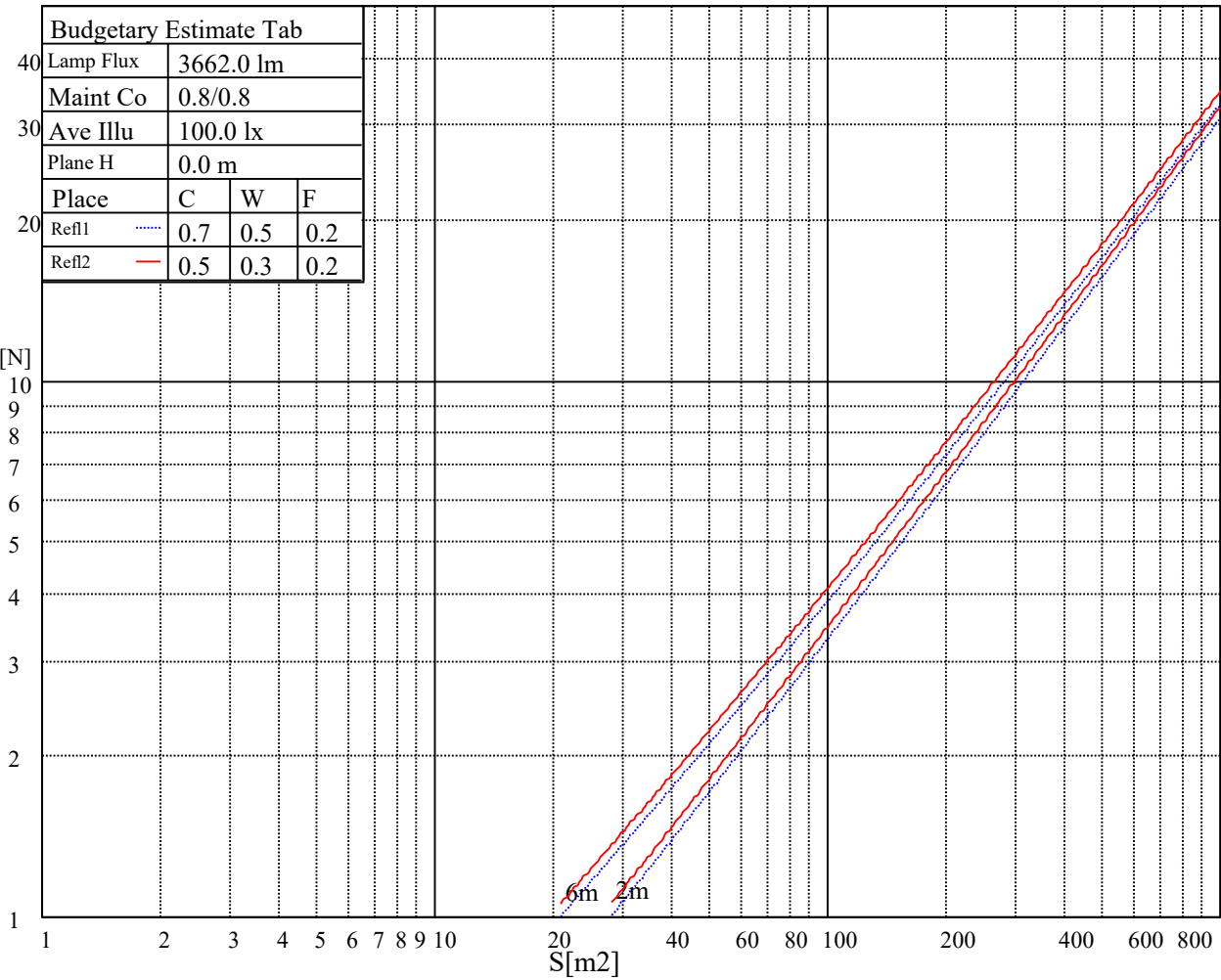
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

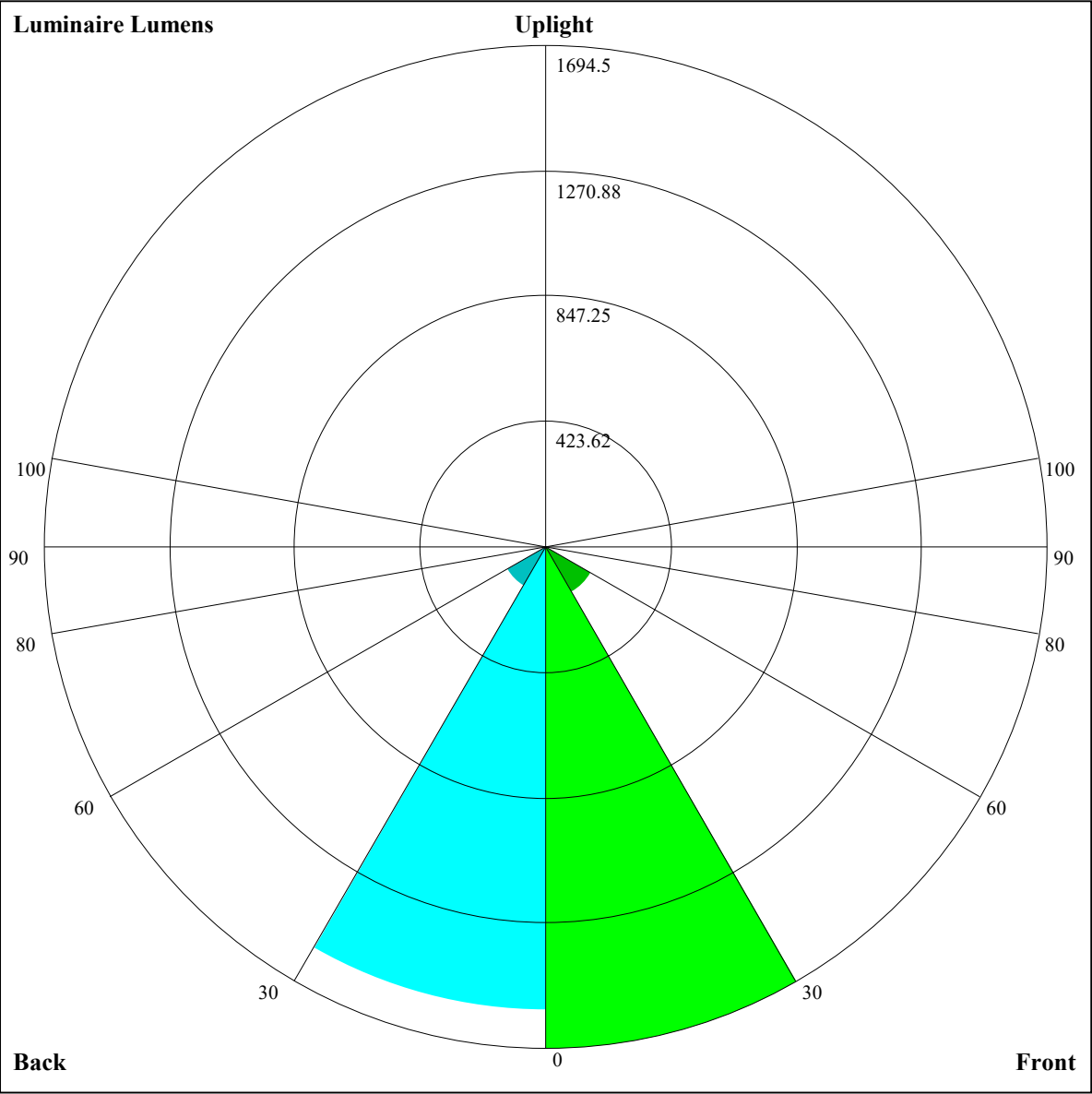


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	15.73	16.62	16.09	16.93	17.25	15.47	16.37	15.84	16.68	16.99
	3H	15.53	16.33	15.92	16.67	17.01	15.28	16.08	15.67	16.41	16.76
	4H	15.45	16.19	15.85	16.54	16.91	15.20	15.94	15.60	16.29	16.66
	6H	15.40	16.07	15.82	16.45	16.85	15.15	15.82	15.57	16.20	16.60
	8H	15.36	16.00	15.78	16.38	16.79	15.11	15.75	15.53	16.14	16.55
	12H	15.33	15.93	15.75	16.33	16.75	15.08	15.69	15.51	16.08	16.50
4H	2H	15.40	16.14	15.80	16.49	16.86	15.15	15.88	15.55	16.24	16.60
	3H	15.18	15.80	15.61	16.20	16.61	14.93	15.55	15.36	15.94	16.36
	4H	15.14	15.68	15.58	16.10	16.55	14.90	15.43	15.34	15.85	16.30
	6H	15.07	15.54	15.55	16.00	16.45	14.83	15.30	15.31	15.75	16.21
	8H	15.07	15.51	15.56	15.97	16.44	14.83	15.27	15.32	15.73	16.20
	12H	15.10	15.49	15.59	15.95	16.47	14.86	15.26	15.35	15.71	16.24
8H	4H	14.96	15.39	15.45	15.85	16.33	14.71	15.15	15.20	15.61	16.08
	6H	14.91	15.26	15.42	15.74	16.26	14.67	15.02	15.18	15.51	16.02
	8H	14.99	15.28	15.52	15.80	16.30	14.75	15.04	15.29	15.57	16.07
	12H	15.06	15.28	15.60	15.79	16.32	14.83	15.05	15.38	15.57	16.09
12H	4H	14.91	15.31	15.40	15.76	16.28	14.66	15.06	15.16	15.52	16.04
	6H	14.91	15.20	15.45	15.73	16.23	14.67	14.97	15.21	15.49	15.99
	8H	14.96	15.18	15.51	15.70	16.23	14.73	14.95	15.28	15.47	16.00
Variation with the observer position at spacings:											
S = 1.0H		6.4/-10.1					6.4/-10.1				
S = 1.5H		9.0/-8.2					9.0/-8.2				
S = 2.0H		10.8/-6.8					10.8/-6.8				
Standard tables:		BK1					BK1				
Uncorrected UGR		-5.0					-5.0				

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	1.17	1.17	1.17	1.15	1.15	1.15	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	0.98
1	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95
2	1.05	1.02	1.00	1.04	1.01	0.99	1.01	0.99	0.97	0.98	0.96	0.95	0.95	0.94	0.93	0.91
3	1.01	0.97	0.94	0.99	0.96	0.93	0.97	0.94	0.92	0.95	0.92	0.91	0.93	0.91	0.89	0.88
4	0.97	0.93	0.90	0.96	0.92	0.89	0.94	0.90	0.88	0.92	0.89	0.87	0.90	0.88	0.86	0.85
5	0.93	0.89	0.86	0.92	0.88	0.85	0.90	0.87	0.85	0.89	0.86	0.84	0.88	0.85	0.83	0.82
6	0.90	0.85	0.82	0.89	0.85	0.82	0.88	0.84	0.82	0.86	0.83	0.81	0.85	0.83	0.81	0.79
7	0.87	0.82	0.79	0.86	0.82	0.79	0.85	0.81	0.79	0.84	0.81	0.78	0.83	0.80	0.78	0.77
8	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.82	0.78	0.76	0.81	0.78	0.76	0.75
9	0.81	0.77	0.74	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.79	0.76	0.74	0.73
10	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.77	0.74	0.72	0.71



Luminaire Lumens:

FL=1694.5,FM=175.28,FH=8.18,FVH=4.12

BL=1563.36,BM=151.36,BH=8.13,BVH=4.12

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	17685.27	17762.78	17693.89	17143.68	17143.68	16967.99	16515.01	15881.18	14734.94
45.0	17154.87	17668.05	17728.33	17676.66	17556.10	17297.74	16910.21	16445.17	15773.45
90.0	17685.27	17719.72	17607.77	17132.48	17132.48	16845.71	16137.81	15297.30	14269.04
135.0	17659.44	17702.50	17702.50	17607.77	17401.08	17125.51	16746.58	15945.68	15032.83
180.0	17685.27	17547.49	17332.19	17048.00	16367.66	15506.48	14447.22	12948.76	11656.99
225.0	17154.87	17154.87	16947.33	16347.94	15446.28	14040.83	12798.14	11519.28	10205.12
270.0	17685.27	17581.93	17340.80	17030.77	16557.12	15583.99	14541.95	13086.55	11855.06
315.0	17659.44	17119.56	17119.56	16601.99	15922.52	15014.83	13653.30	12399.41	11095.58
360.0	17685.27	17762.78	17693.89	17143.68	17143.68	16967.99	16515.01	15881.18	14734.94
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	13656.74	12476.92	10869.09	9541.14	8225.25	6637.23	5476.36	4405.90	3499.94
45.0	14585.01	13525.76	12345.93	11114.44	9521.25	8229.47	6989.37	5775.10	4371.37
90.0	13128.84	11603.68	10316.21	8983.10	7350.29	6113.63	4976.01	3749.68	3004.76
135.0	13956.35	12776.53	11174.72	9831.28	8505.05	7204.67	5680.37	4603.89	4362.76
180.0	10313.54	8617.01	7308.01	6059.29	4646.95	4397.21	4397.21	2427.76	2116.88
225.0	8542.17	7252.98	6032.68	4606.56	3650.65	2809.27	2376.09	1914.50	1693.00
270.0	10554.67	9245.67	7936.67	6352.09	5172.27	4379.98	4379.98	2615.50	2244.33
315.0	9740.94	8090.05	6843.05	5661.51	4596.23	3506.83	2863.52	2410.54	1891.25
360.0	13656.74	12476.92	10869.09	9541.14	8225.25	6637.23	5476.36	4405.90	3499.94
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2717.98	2311.50	1715.31	1715.31	1648.74	1534.97	1442.91	1350.77	1297.55
45.0	4371.37	3354.40	2271.89	2007.51	1811.16	1638.92	1532.99	1421.04	1347.84
90.0	2513.02	2113.43	1692.40	1692.40	1599.39	1473.83	1391.41	1324.76	1274.72
135.0	3420.71	2435.51	2070.37	1868.86	1711.26	1588.97	1471.85	1393.48	1331.48
180.0	1894.69	1725.90	1567.44	1469.27	1390.90	1325.45	1264.30	1223.83	1195.41
225.0	1658.73	1542.38	1448.68	1368.08	1292.72	1249.58	1211.77	1180.42	1150.89
270.0	1989.42	1762.93	1624.28	1513.19	1403.82	1333.20	1266.89	1227.27	1196.27
315.0	1683.87	1683.87	1539.19	1448.86	1371.52	1299.10	1251.56	1215.22	1186.63
360.0	2717.98	2311.50	1715.31	1715.31	1648.74	1534.97	1442.91	1350.77	1297.55
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1243.81	1211.17	1182.66	1153.73	1111.87	1029.29	921.73	807.10	640.55
45.0	1291.86	1248.80	1214.36	1179.05	1157.52	1126.51	1059.34	933.61	813.90
90.0	1224.00	1192.65	1167.94	1137.45	1085.44	1004.05	863.94	735.88	555.38
135.0	1282.39	1234.16	1202.30	1178.19	1147.18	1068.82	965.47	814.77	683.87
180.0	1162.68	1133.40	1065.37	941.36	832.85	707.12	579.66	450.49	450.49
225.0	1122.90	1065.54	939.98	821.91	663.54	531.95	406.74	258.96	153.55
270.0	1172.16	1139.43	1090.35	1017.14	914.66	754.48	614.97	471.15	434.12
315.0	1153.56	1117.13	1049.01	948.08	797.71	667.16	502.24	375.73	258.87
360.0	1243.81	1211.17	1182.66	1153.73	1111.87	1029.29	921.73	807.10	640.55
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	507.15	378.49	234.67	131.33	57.35	26.01	21.36	17.48	15.59
45.0	687.31	512.49	446.18	446.18	119.19	51.50	24.97	20.58	17.22
90.0	411.90	283.16	172.93	75.87	34.53	22.82	18.60	15.93	14.47
135.0	547.80	443.60	443.60	143.82	65.71	28.33	23.34	19.03	17.31
180.0	173.79	73.03	33.33	22.99	18.08	16.02	14.38	11.88	11.54
225.0	72.77	33.67	21.53	17.22	15.76	14.38	11.88	11.45	11.11
270.0	283.59	103.51	47.19	23.25	18.69	15.93	14.55	12.66	11.80
315.0	130.56	59.85	29.71	23.25	18.00	16.53	14.73	12.92	12.23
360.0	507.15	378.49	234.67	131.33	57.35	26.01	21.36	17.48	15.59

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	13.52	12.14	11.54	11.11	10.68	10.33	9.99	9.73	9.56
45.0	15.76	13.43	12.06	11.63	11.20	10.68	10.33	10.08	9.82
90.0	12.49	11.80	11.28	10.85	10.33	10.08	9.82	9.47	9.30
135.0	14.90	13.18	12.57	12.06	11.45	11.02	10.59	10.33	10.08
180.0	11.11	10.59	10.33	9.99	9.73	9.56	9.39	9.13	9.04
225.0	10.59	10.33	9.99	9.73	9.47	9.30	9.13	8.96	8.87
270.0	11.28	10.85	10.51	10.16	9.82	9.65	9.39	9.21	9.04
315.0	11.71	11.20	10.85	10.42	10.25	9.90	9.73	9.47	9.21
360.0	13.52	12.14	11.54	11.11	10.68	10.33	9.99	9.73	9.56
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.39	9.21	9.13	8.96	8.87	8.78	8.61	8.53	8.53
45.0	9.56	9.39	9.21	9.04	8.96	8.87	8.78	8.70	8.61
90.0	9.21	9.04	8.87	8.78	8.70	8.61	8.53	8.44	8.35
135.0	9.82	9.65	9.47	9.30	9.13	9.04	8.96	8.78	8.70
180.0	8.87	8.78	8.70	8.53	8.44	8.35	8.35	8.27	8.27
225.0	8.78	8.61	8.53	8.44	8.44	8.35	8.27	8.18	8.10
270.0	8.96	8.78	8.70	8.53	8.53	8.35	8.35	8.27	8.18
315.0	9.13	9.04	8.87	8.78	8.70	8.61	8.44	8.35	8.35
360.0	9.39	9.21	9.13	8.96	8.87	8.78	8.61	8.53	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	8.35	8.27	8.18	8.10	8.10	8.01	8.01
45.0	8.53	8.44	8.44	8.35	8.27	8.18	8.10	8.10	8.01
90.0	8.35	8.35	8.27	8.18	8.10	8.01	8.01	7.92	7.92
135.0	8.61	8.53	8.44	8.35	8.27	8.18	8.10	8.01	7.92
180.0	8.18	8.10	8.01	8.01	8.01	7.92	7.84	7.92	7.84
225.0	8.10	8.01	8.01	7.92	7.84	7.84	7.75	7.75	7.75
270.0	8.18	8.10	8.01	8.01	7.92	7.84	7.84	7.84	7.75
315.0	8.27	8.18	8.10	8.01	8.01	7.92	7.84	7.75	7.75
360.0	8.44	8.35	8.35	8.27	8.18	8.10	8.10	8.01	8.01
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.92	7.84	7.84	7.84	7.75	7.75	7.75	7.66	7.66
45.0	7.92	7.92	7.84	7.84	7.84	7.84	7.75	7.66	7.66
90.0	7.92	7.84	7.84	7.75	7.75	7.66	7.66	7.58	7.58
135.0	7.84	7.84	7.75	7.75	7.66	7.66	7.58	7.66	7.58
180.0	7.75	7.66	7.66	7.66	7.66	7.66	7.66	7.66	7.58
225.0	7.66	7.66	7.66	7.66	7.66	7.66	7.66	7.66	7.66
270.0	7.75	7.75	7.66	7.66	7.66	7.66	7.66	7.58	7.66
315.0	7.75	7.66	7.66	7.66	7.58	7.58	7.58	7.58	7.58
360.0	7.92	7.84	7.84	7.84	7.75	7.75	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	7.66	7.66	7.66	7.66	7.66	7.66	7.58	7.58	7.58
45.0	7.66	7.66	7.66	7.66	7.58	7.58	7.49	7.49	7.58
90.0	7.58	7.58	7.58	7.58	7.58	7.49	7.49	7.49	7.49
135.0	7.58	7.49	7.58	7.58	7.49	7.58	7.49	7.49	7.49
180.0	7.66	7.58	7.58	7.58	7.58	7.58	7.49	7.58	7.58
225.0	7.66	7.58	7.66	7.58	7.58	7.49	7.49	7.49	7.49
270.0	7.66	7.66	7.66	7.49	7.49	7.49	7.49	7.49	7.49
315.0	7.58	7.49	7.49	7.49	7.49	7.41	7.41	7.41	7.41
360.0	7.66	7.66	7.66	7.66	7.66	7.66	7.58	7.58	7.58

Intensity data(cd)

C/ γ (°)	90.0
0.0	7.66
45.0	7.58
90.0	7.49
135.0	7.41
180.0	7.58
225.0	7.49
270.0	7.41
315.0	7.41
360.0	7.66