Client:
LumCAT: TP34-4140DS-CCT-3000K
Luminaire:

Report No:	Voltage(V): 230.0300
Test No: KYZ-A250106036-01-001	Current(A): 0.1710
LampCAT: LED	Power (W): 38.2100
Lamp flux(lm): -1.0	PF: 0.9731
Number of Lamps: 1	Ballast type:
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 5191.75
Efficiency(%): 0.00%
Lumens(lm)/Power(W): 135.87
Central intensity(cd): 1561.242
Maximum intensity(cd): 1609.694
Angle of maximum intensity: C=45.0 γ=6.0
Beam Angle(50%Imax): [C0/180]Total=103.9
[C90/270]Total=124.1
Field angle(10%Imax): [C0/180]Total=157.9
[C90/270]Total=188.9
Maximum s/h(1/2): C0_180=1.23 C90_270=1.40
Maximum s/h(1/4): C0_180=1.34 C90_270=1.46
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 4.52%
Down flux rate of LUM(%): 95.48%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 70.640%

TP34-4140DS-CCT-3000K

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1565.383	0.000	0	.000%	.000%
1.0	1567.557	1.499	1.499	.000%	.029%
2.0	1560.569	4.490	5.989	.000%	.115%
3.0	1557.256	7.457	13.446	.000%	.259%
4.0	1562.122	10.442	23.887	.000%	.460%
5.0	1562.277	13.441	37.328	.000%	.719%
6.0	1558.032	16.398	53.726	.000%	1.035%
7.0	1553.011	19.310	73.036	.000%	1.407%
8.0	1550.682	22.213	95.249	.000%	1.835%
9.0	1549.025	25.121	120.37	.000%	2.318%
10.0	1542.451	27.977	148.347	.000%	2.857%
11.0	1540.846	30.808	179.156	.000%	3.451%
12.0	1533.185	33.604	212.759	.000%	4.098%
13.0	1525.006	36.293	249.052	.000%	4.797%
14.0	1523.453	39.020	288.072	.000%	5.549%
15.0	1515.533	41.721	329.793	.000%	6.352%
16.0	1511.340	44.352	374.145	.000%	7.207%
17.0	1501.712	46.921	421.066	.000%	8.110%
18.0	1496.380	49.432	470.498	.000%	9.062%
19.0	1488.408	51.929	522.427	.000%	10.063%
20.0	1480.488	54.339	576.767	.000%	11.109%
21.0	1471.015	56.675	633.441	.000%	12.201%
22.0	1457.970	58.859	692.301	.000%	13.335%
23.0	1451.189	61.042	753.343	.000%	14.510%
24.0	1440.421	63.221	816.564	.000%	15.728%
25.0	1430.638	65.282	881.845	.000%	16.986%
26.0	1420.854	67.310	949.155	.000%	18.282%
27.0	1408.482	69.220	1018.375	.000%	19.615%
28.0	1392.124	70.905	1089.281	.000%	20.981%
29.0	1377.630	72.465	1161.745	.000%	22.377%
30.0	1363.188	74.002	1235.747	.000%	23.802%
31.0	1352.420	75.571	1311.318	.000%	25.258%
32.0	1335.338	77.001	1388.319	.000%	26.741%
33.0	1327.573	78.450	1466.77	.000%	28.252%
34.0	1304.796	79.663	1546.433	.000%	29.786%
35.0	1291.493	80.631	1627.064	.000%	31.339%
36.0	1275.135	81.722	1708.786	.000%	32.914%
37.0	1259.812	82.676	1791.462	.000%	34.506%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	1244.076	83.576	1875.038	.000%	36.116%
39.0	1224.250	84.251	1959.289	.000%	37.739%
40.0	1197.746	84.471	2043.76	.000%	39.366%
41.0	1178.644	84.622	2128.382	.000%	40.995%
42.0	1162.804	85.069	2213.451	.000%	42.634%
43.0	1145.152	85.493	2298.944	.000%	44.281%
44.0	1123.100	85.610	2384.554	.000%	45.930%
45.0	1103.015	85.552	2470.106	.000%	47.578%
46.0	1077.598	85.279	2555.385	.000%	49.220%
47.0	1055.805	84.851	2640.236	.000%	50.854%
48.0	1028.939	84.276	2724.513	.000%	52.478%
49.0	1010.511	83.751	2808.264	.000%	54.091%
50.0	984.990	83.199	2891.463	.000%	55.693%
51.0	961.385	82.348	2973.811	.000%	57.280%
52.0	941.559	81.657	3055.468	.000%	58.852%
53.0	914.952	80.758	3136.226	.000%	60.408%
54.0	891.088	79.603	3215.829	.000%	61.941%
55.0	867.431	78.497	3294.326	.000%	63.453%
56.0	843.567	77.315	3371.642	.000%	64.942%
57.0	820.428	76.082	3447.723	.000%	66.408%
58.0	793.562	74.637	3522.36	.000%	67.845%
59.0	773.529	73.263	3595.622	.000%	69.257%
60.0	746.352	71.805	3667.427	.000%	70.640%
61.0	724.300	70.182	3737.609	.000%	71.991%
62.0	701.679	68.712	3806.321	.000%	73.315%
63.0	677.556	67.079	3873.401	.000%	74.607%
64.0	657.368	65.504	3938.905	.000%	75.869%
65.0	630.036	63.712	4002.618	.000%	77.096%
66.0	610.261	61.883	4064.5	.000%	78.288%
67.0	588.209	60.262	4124.763	.000%	79.448%
68.0	568.642	58.602	4183.365	.000%	80.577%
69.0	544.519	56.788	4240.153	.000%	81.671%
70.0	522.260	54.788	4294.941	.000%	82.726%
71.0	497.568	52.710	4347.651	.000%	83.742%
72.0	480.589	50.861	4398.513	.000%	84.721%
73.0	454.189	48.882	4447.395	.000%	85.663%
74.0	437.935	46.901	4494.296	.000%	86.566%
75.0	411.586	44.886	4539.181	.000%	87.431%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	387.877	42.439	4581.62	.000%	88.248%
77.0	371.778	40.501	4622.122	.000%	89.028%
78.0	341.185	38.165	4660.287	.000%	89.763%
79.0	324.776	35.782	4696.069	.000%	90.453%
80.0	304.328	33.916	4729.985	.000%	91.106%
81.0	277.773	31.479	4761.464	.000%	91.712%
82.0	259.137	29.116	4790.58	.000%	92.273%
83.0	236.826	26.961	4817.541	.000%	92.792%
84.0	215.861	24.662	4842.203	.000%	93.267%
85.0	205.301	22.986	4865.189	.000%	93.710%
86.0	187.805	21.488	4886.677	.000%	94.124%
87.0	172.171	19.701	4906.378	.000%	94.503%
88.0	158.402	18.108	4924.486	.000%	94.852%
89.0	150.119	16.911	4941.396	.000%	95.178%
90.0	135.936	15.684	4957.08	.000%	95.480%
91.0	132.882	14.739	4971.819	.000%	95.764%
92.0	126.204	14.201	4986.02	.000%	96.037%
93.0	116.265	13.282	4999.302	.000%	96.293%
94.0	108.552	12.304	5011.606	.000%	96.530%
95.0	100.735	11.440	5023.046	.000%	96.751%
96.0	94.782	10.671	5033.717	.000%	96.956%
97.0	90.589	10.099	5043.815	.000%	97.151%
98.0	86.137	9.607	5053.422	.000%	97.336%
99.0	78.735	8.941	5062.363	.000%	97.508%
100.0	77.286	8.437	5070.801	.000%	97.670%
101.0	70.763	7.982	5078.782	.000%	97.824%
102.0	68.071	7.460	5086.242	.000%	97.968%
103.0	64.914	7.119	5093.361	.000%	98.105%
104.0	61.445	6.737	5100.097	.000%	98.235%
105.0	60.410	6.469	5106.566	.000%	98.359%
106.0	56.579	6.181	5112.747	.000%	98.478%
107.0	50.109	5.609	5118.356	.000%	98.586%
108.0	54.354	5.463	5123.819	.000%	98.692%
109.0	44.984	5.165	5128.984	.000%	98.791%
110.0	44.415	4.621	5133.605	.000%	98.880%
111.0	45.916	4.639	5138.244	.000%	98.969%
112.0	40.377	4.402	5142.646	.000%	99.054%
113.0	33.803	3.758	5146.404	.000%	99.127%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
114.0	37.633	3.592	5149.996	.000%	99.196%
115.0	34.062	3.577	5153.573	.000%	99.265%
116.0	30.749	3.207	5156.78	.000%	99.326%
117.0	32.871	3.122	5159.902	.000%	99.387%
118.0	25.727	2.850	5162.752	.000%	99.442%
119.0	23.501	2.372	5165.124	.000%	99.487%
120.0	24.744	2.302	5167.427	.000%	99.532%
121.0	18.843	2.059	5169.486	.000%	99.571%
122.0	18.998	1.769	5171.255	.000%	99.605%
123.0	16.254	1.630	5172.885	.000%	99.637%
124.0	19.464	1.633	5174.518	.000%	99.668%
125.0	13.200	1.476	5175.994	.000%	99.697%
126.0	13.511	1.192	5177.186	.000%	99.720%
127.0	13.097	1.173	5178.359	.000%	99.742%
128.0	10.042	1.007	5179.366	.000%	99.762%
129.0	12.734	0.977	5180.343	.000%	99.780%
130.0	10.457	0.981	5181.324	.000%	99.799%
131.0	8.541	0.792	5182.116	.000%	99.815%
132.0	8.282	0.691	5182.807	.000%	99.828%
133.0	8.490	0.678	5183.485	.000%	99.841%
134.0	5.539	0.558	5184.043	.000%	99.852%
135.0	4.762	0.403	5184.446	.000%	99.859%
136.0	7.247	0.462	5184.908	.000%	99.868%
137.0	5.280	0.473	5185.38	.000%	99.877%
138.0	6.315	0.430	5185.81	.000%	99.886%
139.0	3.002	0.339	5186.148	.000%	99.892%
140.0	6.885	0.352	5186.501	.000%	99.899%
141.0	5.073	0.417	5186.918	.000%	99.907%
142.0	3.261	0.284	5187.202	.000%	99.912%
143.0	1.605	0.162	5187.364	.000%	99.916%
144.0	4.089	0.186	5187.55	.000%	99.919%
145.0	3.624	0.246	5187.796	.000%	99.924%
146.0	5.642	0.288	5188.084	.000%	99.929%
147.0	3.468	0.276	5188.359	.000%	99.935%
148.0	5.177	0.255	5188.614	.000%	99.940%
149.0	4.089	0.265	5188.879	.000%	99.945%
150.0	1.553	0.157	5189.036	.000%	99.948%
151.0	3.779	0.144	5189.18	.000%	99.951%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
152.0	3.624	0.194	5189.374	.000%	99.954%
153.0	3.520	0.181	5189.555	.000%	99.958%
154.0	2.899	0.157	5189.712	.000%	99.961%
155.0	3.520	0.152	5189.863	.000%	99.964%
156.0	4.245	0.177	5190.04	.000%	99.967%
157.0	3.882	0.178	5190.218	.000%	99.971%
158.0	3.261	0.150	5190.368	.000%	99.973%
159.0	1.605	0.098	5190.465	.000%	99.975%
160.0	3.727	0.102	5190.568	.000%	99.977%
161.0	2.744	0.118	5190.686	.000%	99.980%
162.0	4.814	0.131	5190.818	.000%	99.982%
163.0	3.675	0.140	5190.958	.000%	99.985%
164.0	1.449	0.080	5191.037	.000%	99.986%
165.0	2.433	0.057	5191.094	.000%	99.987%
166.0	1.605	0.055	5191.15	.000%	99.988%
167.0	5.591	0.092	5191.242	.000%	99.990%
168.0	3.675	0.110	5191.352	.000%	99.992%
169.0	2.692	0.070	5191.421	.000%	99.994%
170.0	3.106	0.058	5191.479	.000%	99.995%
171.0	0.880	0.036	5191.515	.000%	99.996%
172.0	2.692	0.029	5191.544	.000%	99.996%
173.0	1.708	0.031	5191.576	.000%	99.997%
174.0	3.261	0.031	5191.607	.000%	99.997%
175.0	6.108	0.049	5191.656	.000%	99.998%
176.0	2.433	0.037	5191.693	.000%	99.999%
177.0	3.365	0.019	5191.712	.000%	99.999%
178.0	5.332	0.021	5191.733	.000%	100.000%
179.0	2.847	0.012	5191.745	.000%	100.000%
180.0	1.967	0.002	5191.747	.000%	100.000%

Zonal flux distribution table

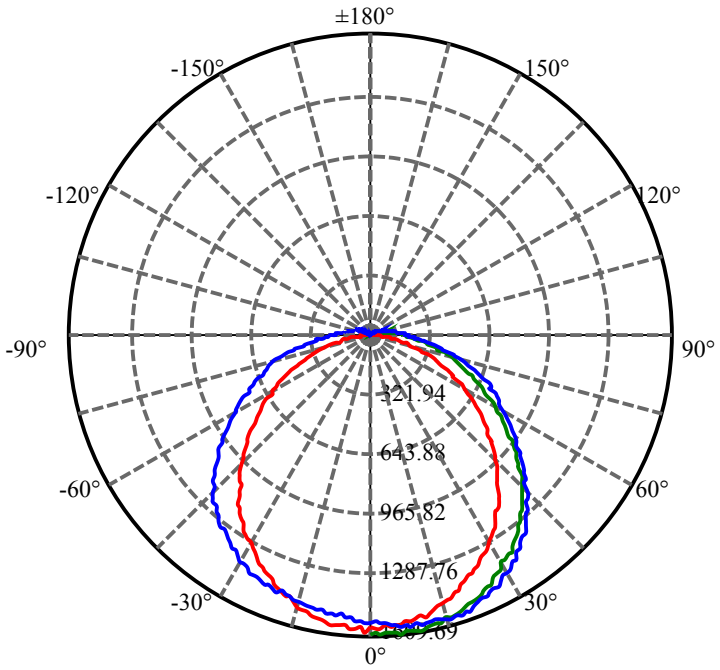
ZONAL LUMEN SUMMARY

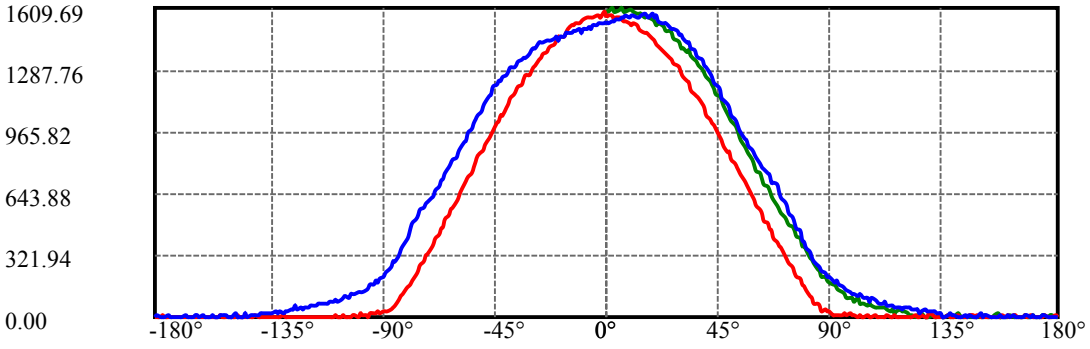
Zone	Lumens	%Lamp	%Fixt
0-30	1235.75	N.A.	23.80%
0-40	2043.76	N.A.	39.37%
0-60	3667.43	N.A.	70.64%
0-90	4957.08	N.A.	95.48%
0-120	5167.43	N.A.	99.53%
0-180	5191.75	N.A.	100.00%
60-90	1361.46	N.A.	26.22%
90-120	226.03	N.A.	4.35%
90-130	239.93	N.A.	4.62%
90-150	247.64	N.A.	4.77%
90-180	250.35	N.A.	4.82%
0-67.49	4153.40	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	148.35
10-20	428.42
20-30	658.98
30-40	808.01
40-50	847.70
50-60	775.96
60-70	627.51
70-80	435.04
80-90	227.09
90-100	113.72
100-110	62.80
110-120	33.82
120-130	13.90
130-140	5.18
140-150	2.54
150-160	1.53
160-170	0.91
170-180	0.27

Light Distribution Curve [Unit:cd]





C45(Max):

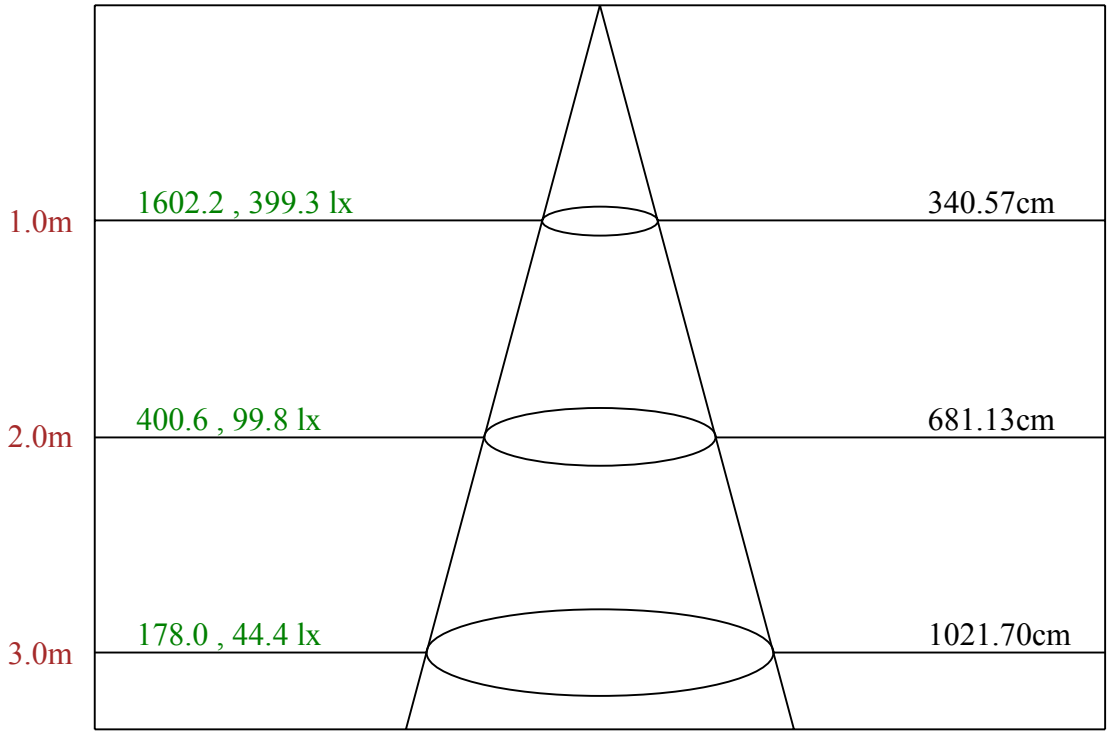
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:77.9 Right:80.0
:C90/270Left:112.5 Right:76.4

Beam Angle(50%Imax):C0/180Left:51.5 Right:52.4
:C90/270Left:80.5 Right:43.6

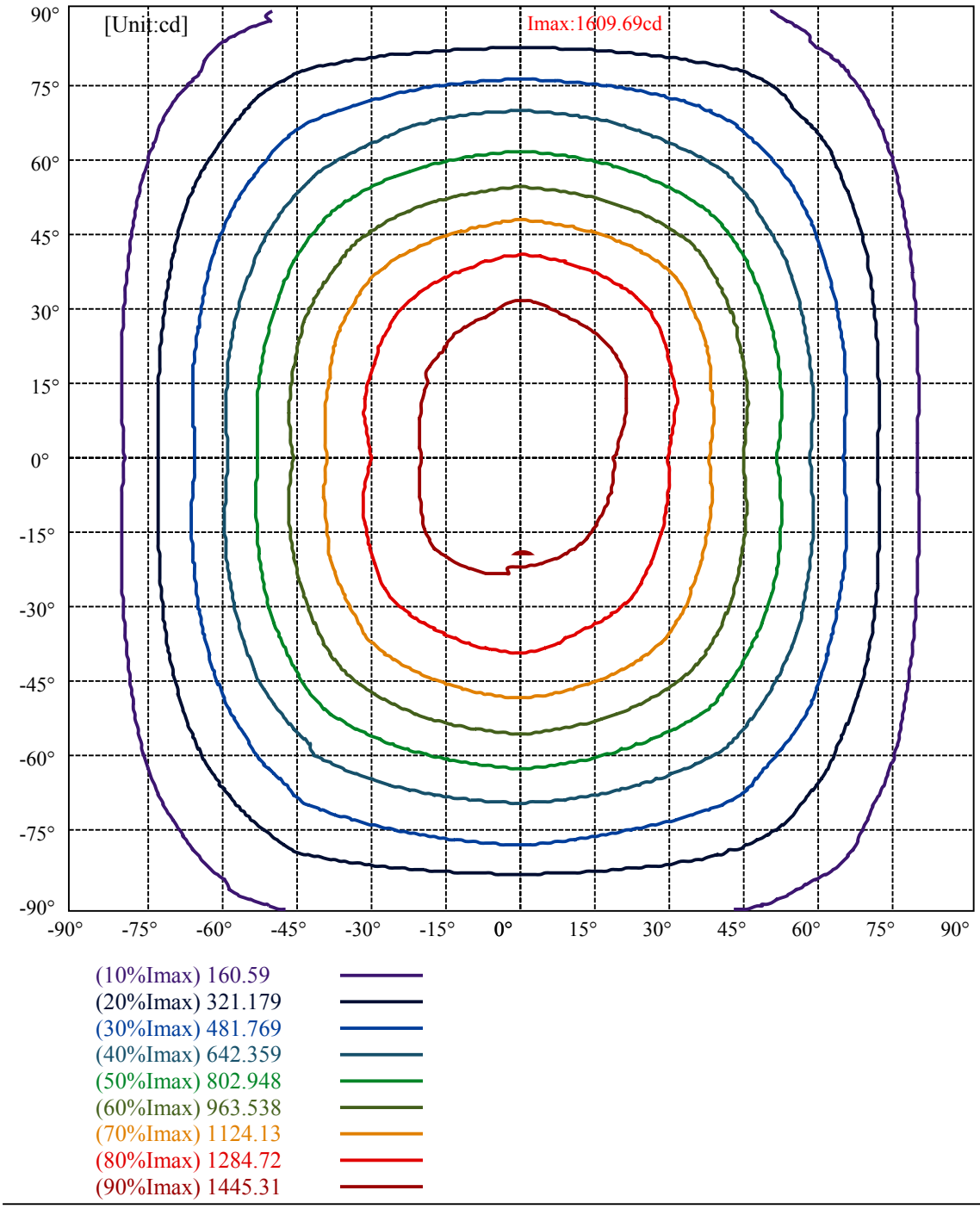
Lux distance Curve



Max , Ave

Beam angle of C45 plane 119.15

ISO-Intensity(V-H)



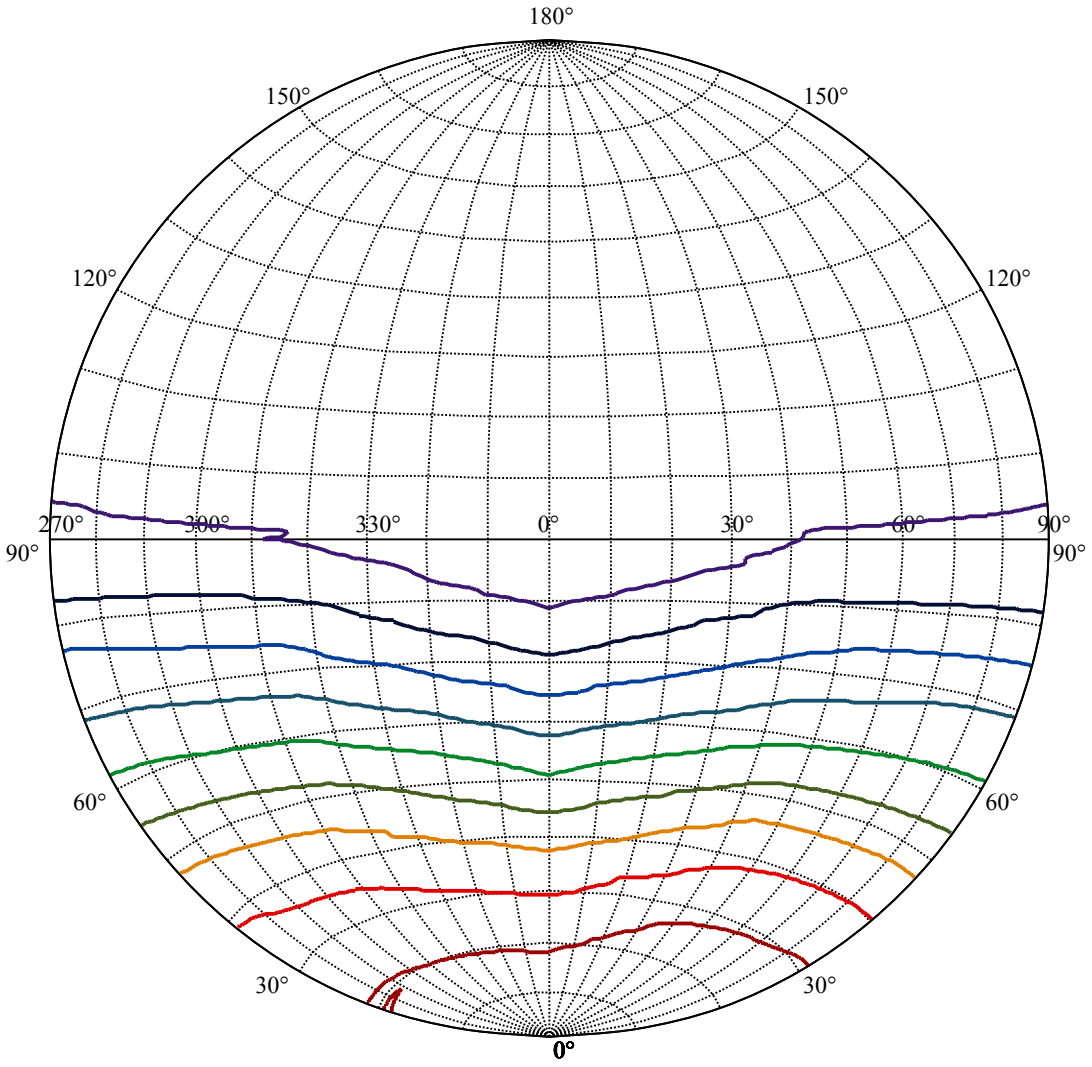
(10%Imax) 160.59
(20%Imax) 321.179
(30%Imax) 481.769
(40%Imax) 642.359
(50%Imax) 802.948
(60%Imax) 963.538
(70%Imax) 1124.13
(80%Imax) 1284.72
(90%Imax) 1445.31

Equipment: Goniophotometer
Temperature(°C): 0.0

Date: 2025/1/6
Humidity(%): 0.0%

Operator: ZBY
Distance(m): 20.35

ISO candela diagram on circular web



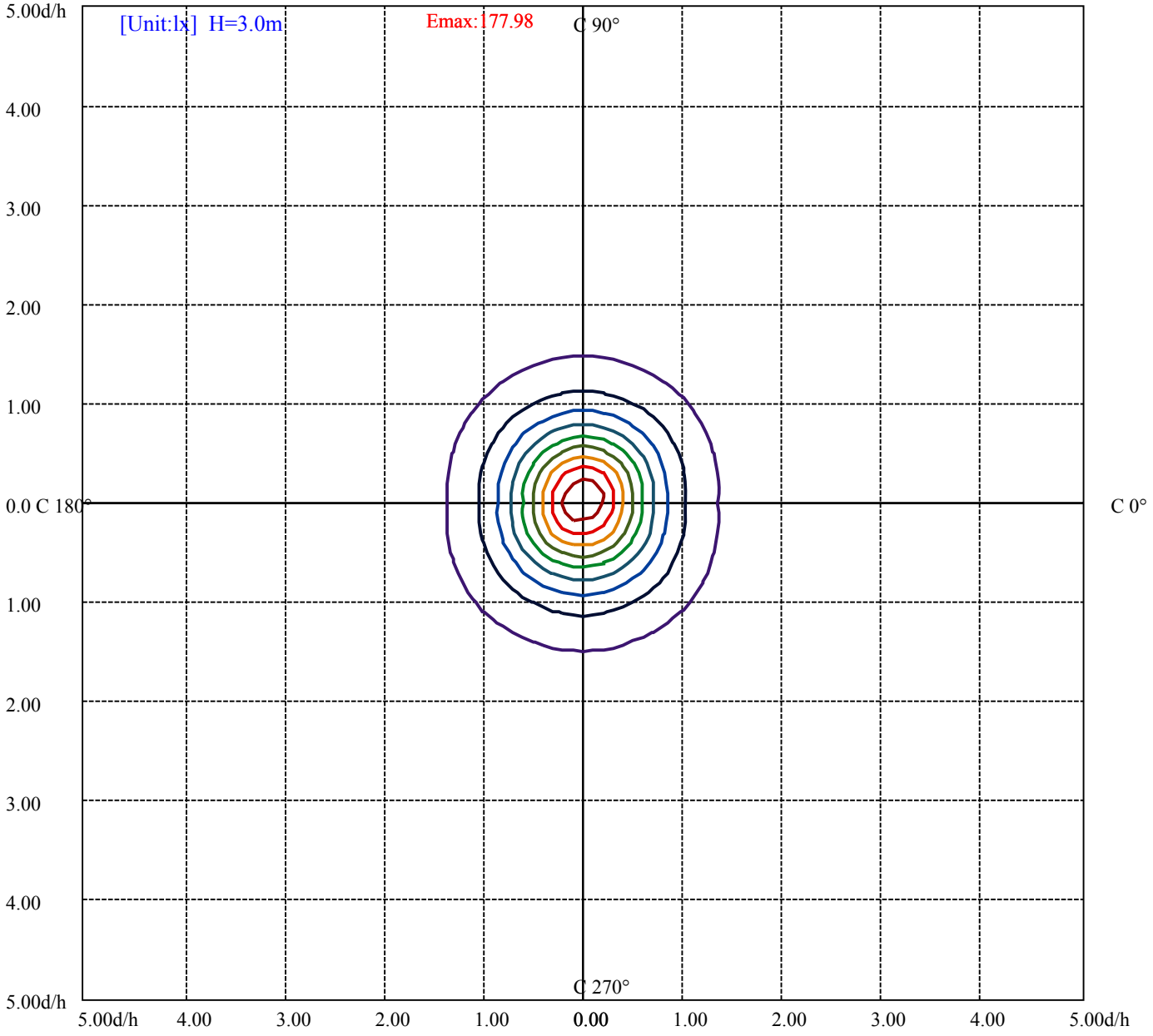
House [Unit:cd] Road

Imax:1609.69

(10%Imax) 160.969
(20%Imax) 321.939
(30%Imax) 482.908
(40%Imax) 643.878
(50%Imax) 804.847
(60%Imax) 965.817
(70%Imax) 1126.79
(80%Imax) 1287.76
(90%Imax) 1448.72

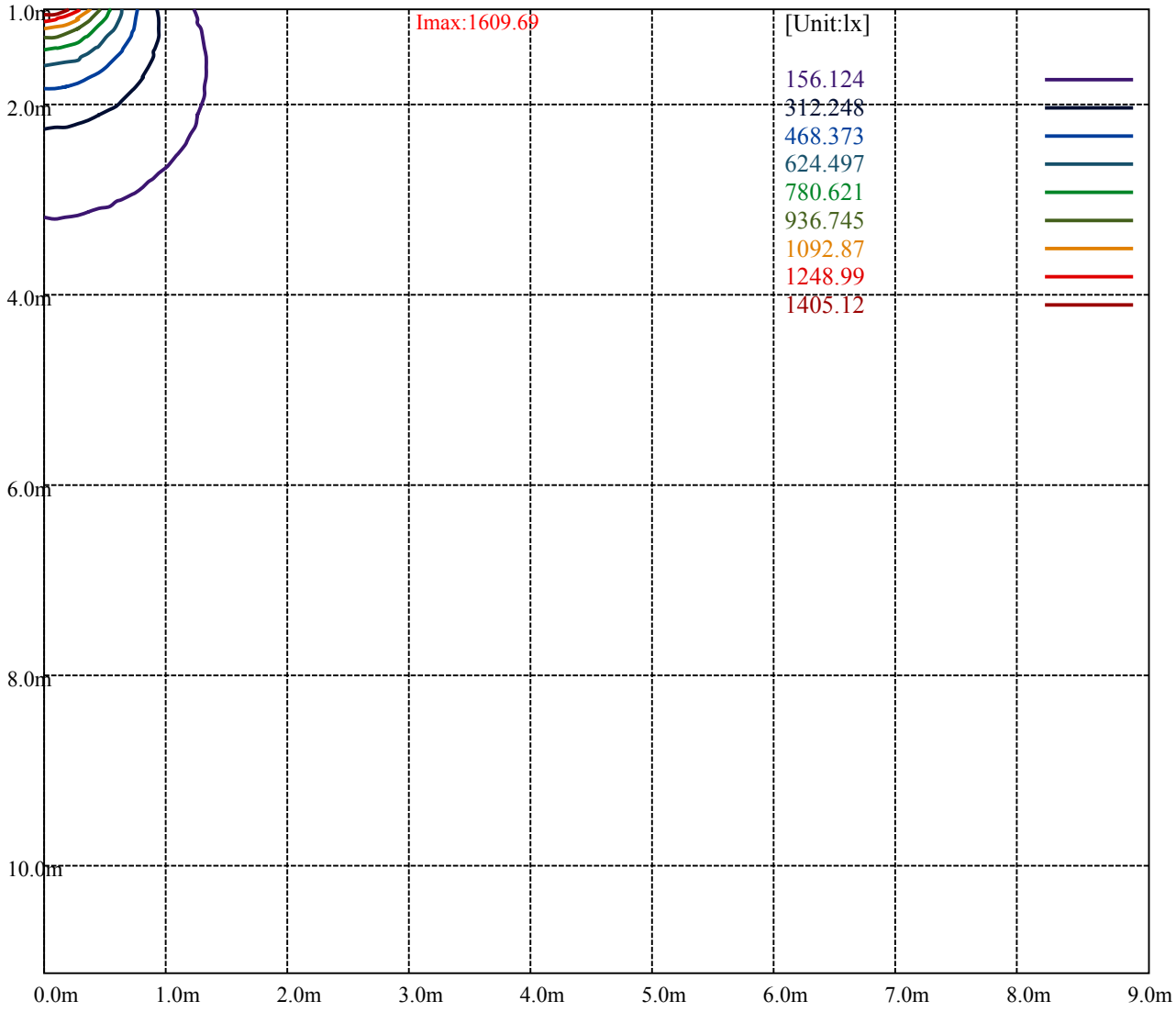
TP34-4140DS-CCT-3000K

ISO illuminance diagram



Equipment: Goniophotometer
Temperature(°C): 0.0
Date: 2025/1/6
Humidity(%): 0.0%
Operator: ZBY
Distance(m): 20.35

Space ISO Lux diagram



Equipment: Goniophotometer
Temperature(°C): 0.0

Date: 2025/1/6
Humidity(%): 0.0%

Operator: ZBY
Distance(m): 20.35

TP34-4140DS-CCT-3000K

Luminance Limitting Curve(no luminous side)

Luminance Table

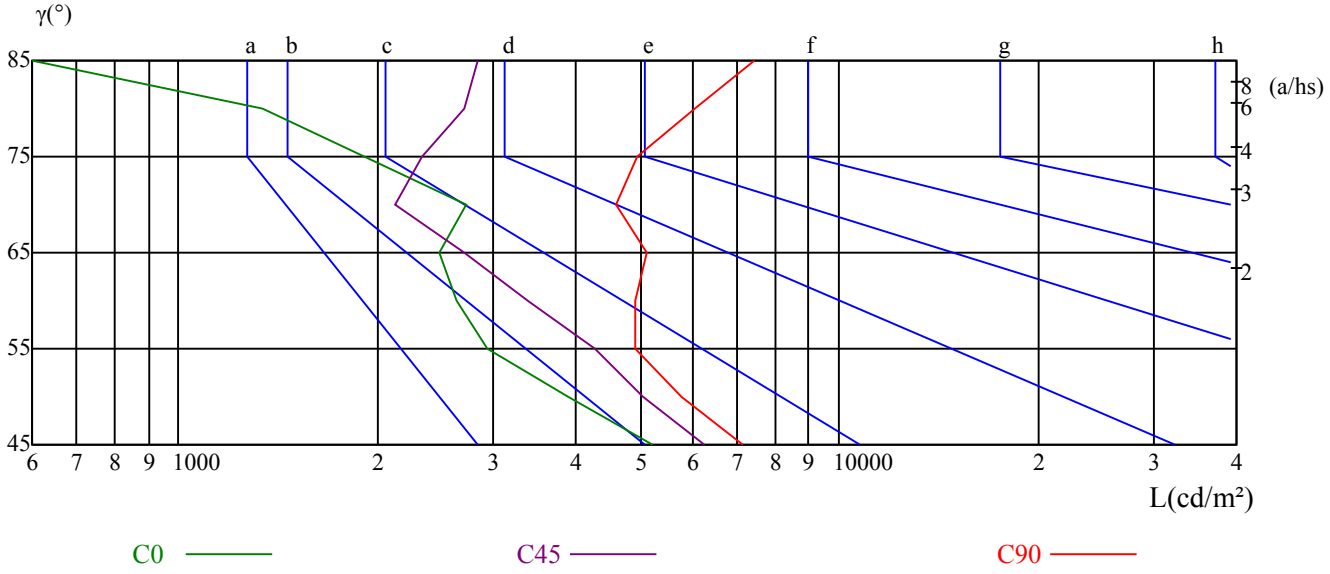
γ	45	50	55	60	65	70	75	80	85
C0	5204	3899	2932	2629	2486	2718	1912	1344	587
C45	6257	5049	4281	3388	2706	2125	2341	2703	2843
C90	7164	5771	4906	4901	5129	4602	4939	6053	7436

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3266	5543	3969	2834	5984	3617	1961	10106	7029

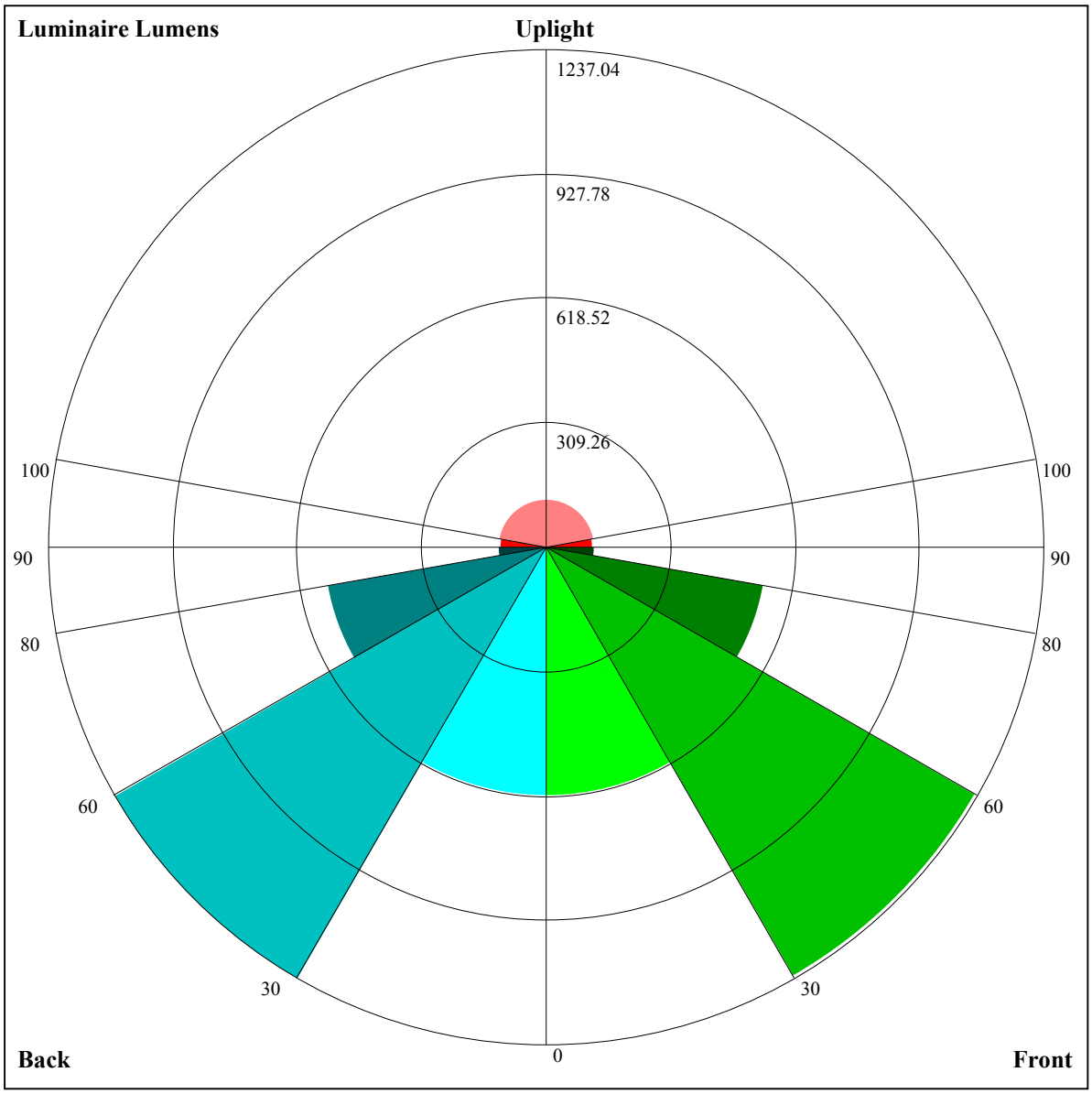
Glare Table

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 Limitting Curve



LCS Graph



Luminaire Lumens:
FL=619.01,FM=1229.32,FH=547.79,FVH=121.86
BL=620.5,BM=1237.04,BH=553.38,BVH=121.38
UL=113.81,UH=121.45

BUG Rating:B2-U3-G2

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	1561.24	1572.42	1567.04	1554.62	1557.10	1558.76	1553.79	1535.98	1538.46
45.0	1601.83	1589.82	1605.14	1586.50	1589.40	1598.93	1609.69	1588.16	1593.96
90.0	1536.81	1527.28	1541.36	1535.15	1554.20	1554.62	1563.73	1562.48	1569.52
135.0	1561.66	1567.45	1547.16	1556.27	1564.14	1570.77	1567.04	1558.76	1553.79
180.0	1561.24	1587.33	1558.76	1569.94	1572.01	1555.44	1561.24	1555.03	1558.34
225.0	1601.83	1596.03	1586.50	1575.32	1584.02	1587.33	1573.25	1570.77	1565.80
270.0	1536.81	1533.91	1525.21	1528.11	1515.69	1517.34	1498.71	1505.34	1497.05
315.0	1561.66	1566.21	1553.37	1552.13	1560.41	1555.03	1536.81	1547.58	1528.53
360.0	1561.24	1572.42	1567.04	1554.62	1557.10	1558.76	1553.79	1535.98	1538.46

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1532.67	1518.59	1532.67	1519.00	1499.54	1487.94	1484.21	1475.52	1468.89
45.0	1597.27	1602.24	1585.67	1581.53	1582.78	1579.88	1563.73	1568.28	1560.41
90.0	1558.76	1568.70	1568.28	1563.31	1559.59	1568.28	1575.74	1574.08	1564.14
135.0	1561.66	1553.79	1544.26	1539.71	1536.81	1535.15	1531.42	1517.34	1523.97
180.0	1550.47	1535.98	1531.42	1529.77	1515.27	1514.86	1504.09	1483.80	1456.05
225.0	1567.45	1562.07	1556.27	1547.58	1533.08	1533.50	1509.48	1520.24	1506.16
270.0	1502.02	1483.80	1495.81	1490.43	1485.46	1480.07	1476.35	1475.52	1458.54
315.0	1521.90	1514.45	1512.38	1494.15	1487.53	1487.94	1479.25	1475.93	1475.52
360.0	1532.67	1518.59	1532.67	1519.00	1499.54	1487.94	1484.21	1475.52	1468.89

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1449.84	1441.56	1419.61	1408.02	1386.48	1377.79	1370.33	1352.11	1337.62
45.0	1549.65	1540.54	1522.31	1529.77	1519.42	1509.06	1489.18	1486.70	1479.66
90.0	1579.05	1563.31	1568.28	1543.85	1531.84	1530.18	1528.53	1510.72	1503.68
135.0	1509.48	1503.26	1493.74	1482.97	1475.10	1462.27	1454.40	1458.54	1430.38
180.0	1461.44	1456.88	1440.73	1424.58	1406.36	1397.66	1383.17	1364.95	1354.59
225.0	1502.44	1499.54	1492.50	1483.39	1470.96	1467.24	1455.64	1436.59	1438.25
270.0	1457.30	1441.15	1460.61	1453.98	1439.90	1442.80	1438.66	1428.72	1427.48
315.0	1461.85	1461.02	1446.12	1441.56	1433.69	1422.51	1403.46	1406.77	1395.18
360.0	1449.84	1441.56	1419.61	1408.02	1386.48	1377.79	1370.33	1352.11	1337.62

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1319.39	1312.35	1295.38	1265.56	1252.31	1232.43	1221.66	1183.15	1155.40
45.0	1452.33	1439.49	1431.62	1402.63	1398.08	1383.58	1385.24	1359.98	1340.10
90.0	1502.02	1489.60	1466.41	1464.75	1453.57	1430.79	1425.41	1396.42	1392.28
135.0	1427.07	1411.33	1388.97	1371.16	1362.46	1356.67	1340.51	1321.05	1312.77
180.0	1338.86	1307.80	1295.79	1279.22	1264.73	1255.62	1244.44	1210.48	1202.61
225.0	1417.54	1408.02	1402.63	1390.62	1392.69	1361.22	1351.28	1340.10	1320.22
270.0	1427.07	1402.22	1397.25	1393.94	1372.82	1353.77	1353.77	1338.03	1328.09
315.0	1383.58	1366.19	1343.00	1337.62	1322.71	1308.63	1298.27	1289.16	1280.47
360.0	1319.39	1312.35	1295.38	1265.56	1252.31	1232.43	1221.66	1183.15	1155.40

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	1154.57	1139.67	1111.50	1089.14	1050.21	1034.48	1014.60	998.86	975.67
45.0	1326.02	1305.73	1286.68	1274.25	1245.68	1229.53	1210.48	1189.77	1160.79
90.0	1362.88	1347.14	1342.17	1311.53	1297.03	1266.39	1253.96	1221.66	1208.41
135.0	1294.96	1284.19	1264.73	1230.36	1221.25	1195.16	1187.29	1176.11	1145.88
180.0	1179.83	1156.23	1141.32	1109.02	1085.00	1053.94	1048.56	1022.88	1006.32
225.0	1311.11	1294.13	1265.97	1268.46	1224.15	1210.89	1201.78	1169.90	1147.95
270.0	1307.38	1302.42	1298.27	1283.78	1258.10	1253.13	1227.87	1225.80	1209.65
315.0	1264.32	1248.99	1241.95	1227.46	1200.54	1185.63	1157.89	1156.23	1130.14
360.0	1154.57	1139.67	1111.50	1089.14	1050.21	1034.48	1014.60	998.86	975.67

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	937.16	922.66	892.02	864.27	855.99	821.62	801.33	782.28	761.99
45.0	1152.50	1128.90	1104.46	1062.22	1044.42	1021.64	1000.52	977.74	945.03
90.0	1185.63	1140.08	1132.62	1105.71	1087.49	1053.53	1026.61	1012.94	979.81
135.0	1128.48	1102.81	1077.96	1051.87	1045.25	1011.70	975.67	960.35	941.71
180.0	968.22	945.03	929.70	898.23	874.21	855.58	835.70	809.61	775.65
225.0	1136.35	1123.51	1090.38	1071.33	1050.21	1024.95	1005.90	992.24	961.59
270.0	1195.16	1159.13	1146.29	1119.79	1094.94	1071.33	1048.56	1027.02	1008.39
315.0	1120.62	1098.67	1072.99	1058.08	1031.58	1019.57	996.79	970.29	945.44
360.0	937.16	922.66	892.02	864.27	855.99	821.62	801.33	782.28	761.99

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	740.45	713.53	685.79	665.08	628.64	613.32	584.33	559.07	542.09
45.0	917.28	893.26	869.24	848.95	822.03	792.22	763.64	748.73	722.64
90.0	962.42	933.02	916.04	892.02	872.14	854.75	831.56	800.50	780.62
135.0	901.54	875.45	863.45	839.84	817.89	796.77	768.61	742.11	709.39
180.0	750.39	725.54	706.08	687.03	646.86	614.97	602.55	574.39	556.58
225.0	948.75	923.08	905.27	875.04	857.23	841.50	808.78	777.72	754.53
270.0	981.47	963.66	921.42	906.10	876.70	863.03	829.49	819.55	800.50
315.0	926.39	911.90	881.25	849.37	827.00	811.68	781.86	772.34	747.08
360.0	740.45	713.53	685.79	665.08	628.64	613.32	584.33	559.07	542.09

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	499.02	492.39	458.85	449.74	412.05	387.20	369.81	355.73	320.94
45.0	692.41	676.26	655.97	634.02	605.86	584.33	560.31	539.19	523.45
90.0	772.75	752.05	735.90	700.28	702.77	687.44	645.20	622.01	599.24
135.0	695.31	669.64	648.52	628.64	606.69	592.61	578.11	544.99	523.45
180.0	529.66	514.75	471.69	463.40	427.79	413.71	378.51	360.29	330.06
225.0	732.58	713.95	682.06	649.76	650.17	619.11	605.03	576.87	550.78
270.0	779.38	752.05	716.02	707.74	678.33	661.35	634.44	616.21	598.82
315.0	719.33	687.86	671.29	648.52	622.01	603.38	584.74	562.79	533.80
360.0	499.02	492.39	458.85	449.74	412.05	387.20	369.81	355.73	320.94

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	295.68	277.46	255.51	226.52	213.27	204.16	173.10	158.19	138.73
45.0	497.78	477.90	471.69	445.18	422.40	408.74	370.23	365.26	344.96
90.0	583.08	544.57	524.28	492.39	460.92	451.81	400.87	387.20	363.60
135.0	509.78	477.07	449.32	443.94	412.47	390.93	374.37	359.04	330.06
180.0	321.36	287.82	269.59	241.43	221.56	192.98	172.69	157.78	146.19
225.0	537.53	502.74	494.88	470.86	443.94	432.76	398.39	377.68	354.07
270.0	586.81	566.11	558.65	526.76	509.37	485.35	455.95	418.68	400.87
315.0	512.68	499.85	479.55	445.60	419.09	407.50	383.89	374.37	356.15
360.0	295.68	277.46	255.51	226.52	213.27	204.16	173.10	158.19	138.73

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	114.71	100.63	72.89	65.85	55.91	33.13	41.41	26.50	25.26
45.0	308.52	296.10	282.43	252.61	236.05	210.37	208.72	191.32	180.14
90.0	342.48	306.86	291.54	274.56	261.73	241.02	234.39	206.65	207.48
135.0	313.90	281.60	267.94	241.43	235.22	225.28	202.51	175.59	181.80
180.0	120.92	106.02	85.72	55.08	53.42	39.76	26.92	31.47	28.16
225.0	338.75	318.46	291.13	276.22	250.13	238.12	217.83	213.27	186.77
270.0	365.26	348.28	318.05	292.37	289.47	261.31	237.71	228.60	214.10
315.0	317.63	315.15	284.92	268.77	260.48	253.44	207.89	193.81	177.24
360.0	114.71	100.63	72.89	65.85	55.91	33.13	41.41	26.50	25.26

Intensity data(cd)

C/γ(°)	90.0	91.0	92.0	93.0	94.0	95.0	96.0	97.0	98.0
0.0	13.25	7.45	9.52	13.67	10.77	18.64	12.01	15.32	5.38
45.0	171.86	170.62	151.98	140.80	125.89	121.34	103.53	103.94	98.15
90.0	193.40	184.70	187.60	169.38	161.09	153.64	142.04	130.86	124.24
135.0	163.16	159.85	147.01	136.66	129.21	113.88	114.71	111.81	103.94
180.0	19.46	28.99	17.81	16.15	22.78	1.66	12.01	13.25	19.46
225.0	166.06	161.09	159.85	145.36	123.82	127.55	112.23	108.91	96.90
270.0	202.09	183.87	185.11	169.38	167.31	147.01	141.63	133.76	133.76
315.0	158.19	166.48	150.74	138.73	127.55	122.17	120.10	106.84	107.26
360.0	13.25	7.45	9.52	13.67	10.77	18.64	12.01	15.32	5.38

C/γ(°)	99.0	100.0	101.0	102.0	103.0	104.0	105.0	106.0	107.0
0.0	13.25	0.00	12.84	0.00	1.24	7.45	0.41	2.48	7.45
45.0	81.17	96.08	70.40	74.13	74.13	63.77	73.71	55.08	49.69
90.0	118.44	114.30	120.92	111.40	101.46	96.49	84.48	98.56	85.31
135.0	93.18	90.28	75.37	75.78	80.34	70.40	66.67	62.95	52.59
180.0	1.24	11.18	5.38	2.07	2.90	4.14	9.52	0.00	0.00
225.0	94.42	97.73	78.68	84.07	76.61	68.33	68.74	64.60	67.50
270.0	129.62	116.37	120.51	116.37	100.63	105.60	97.73	89.04	81.17
315.0	98.56	92.35	82.00	80.75	82.00	75.37	82.00	79.93	57.15
360.0	13.25	0.00	12.84	0.00	1.24	7.45	0.41	2.48	7.45

C/γ(°)	108.0	109.0	110.0	111.0	112.0	113.0	114.0	115.0	116.0
0.0	0.00	0.00	0.00	0.00	8.70	1.24	4.97	14.91	0.00
45.0	53.84	51.77	54.25	48.87	37.27	26.50	41.00	22.36	29.40
90.0	82.00	71.23	69.57	76.20	59.63	58.39	62.12	54.25	45.55
135.0	60.88	51.35	48.45	49.28	47.21	41.00	40.17	37.69	33.96
180.0	8.70	0.00	0.00	0.00	0.41	2.48	0.00	0.00	0.00
225.0	63.77	57.15	50.11	57.15	49.69	43.90	50.11	39.34	48.87
270.0	87.38	82.00	80.34	72.47	74.13	65.43	65.43	73.71	55.49
315.0	78.27	46.38	52.59	63.36	45.97	31.47	37.27	30.23	32.72
360.0	0.00	0.00	0.00	0.00	8.70	1.24	4.97	14.91	0.00

C/γ(°)	117.0	118.0	119.0	120.0	121.0	122.0	123.0	124.0	125.0
0.0	0.00	0.00	0.83	0.00	2.48	1.66	7.04	0.00	0.00
45.0	35.20	30.23	27.75	24.43	3.31	12.42	1.66	12.84	13.67
90.0	50.52	43.90	48.87	45.97	46.80	35.20	41.00	38.10	19.05
135.0	28.57	12.84	24.85	17.39	15.32	21.53	9.11	3.31	8.28
180.0	3.31	0.00	0.00	0.00	3.73	4.56	0.00	0.00	0.00
225.0	41.00	34.37	12.01	22.36	23.19	12.84	12.01	14.91	16.15
270.0	63.77	57.98	46.80	51.77	38.51	50.52	38.93	60.05	36.86
315.0	40.58	26.50	26.92	36.03	17.39	13.25	20.29	26.50	11.60
360.0	0.00	0.00	0.83	0.00	2.48	1.66	7.04	0.00	0.00

C/γ(°)	126.0	127.0	128.0	129.0	130.0	131.0	132.0	133.0	134.0
0.0	6.63	0.00	0.00	18.22	8.28	0.00	1.24	1.24	3.73
45.0	17.81	0.00	2.48	3.73	6.21	2.90	2.07	11.18	0.00
90.0	28.16	36.03	27.33	27.75	28.57	30.23	23.60	15.74	0.41
135.0	3.73	6.63	1.24	11.60	4.97	10.77	0.00	16.15	16.98
180.0	0.00	0.00	0.00	5.80	0.00	0.00	1.66	0.00	0.00
225.0	9.11	23.60	11.18	4.97	0.83	0.00	1.66	0.00	3.73
270.0	39.76	27.33	33.54	22.36	27.33	20.71	29.40	22.78	19.46
315.0	2.90	11.18	4.56	7.45	7.45	3.73	6.63	0.83	0.00
360.0	6.63	0.00	0.00	18.22	8.28	0.00	1.24	1.24	3.73

Intensity data(cd)

C/γ(°)	135.0	136.0	137.0	138.0	139.0	140.0	141.0	142.0	143.0
0.0	3.31	8.28	3.31	0.00	0.00	12.84	0.00	0.00	0.00
45.0	0.41	5.38	0.00	6.21	0.00	19.46	11.60	2.07	1.24
90.0	1.66	14.49	18.22	11.60	7.87	0.00	2.90	0.00	6.63
135.0	4.14	0.00	0.00	0.00	0.00	0.00	1.66	2.07	0.00
180.0	0.00	3.73	0.00	0.00	2.07	7.45	2.90	2.07	0.00
225.0	0.83	5.80	0.00	8.28	1.24	8.28	0.41	8.70	0.00
270.0	23.19	20.29	16.15	24.43	10.35	6.63	14.08	11.18	4.97
315.0	4.56	0.00	4.56	0.00	2.48	0.41	7.04	0.00	0.00
360.0	3.31	8.28	3.31	0.00	0.00	12.84	0.00	0.00	0.00

C/γ(°)	144.0	145.0	146.0	147.0	148.0	149.0	150.0	151.0	152.0
0.0	0.00	5.38	8.28	0.00	6.21	0.00	0.00	0.00	0.00
45.0	2.90	4.56	0.00	0.00	4.56	0.00	1.66	7.45	0.00
90.0	0.00	6.21	0.00	4.56	0.00	16.56	4.14	9.94	6.63
135.0	0.00	0.00	9.52	8.70	7.04	9.94	0.41	6.63	13.25
180.0	1.66	4.56	0.00	6.21	0.00	0.00	0.83	0.00	0.00
225.0	7.87	1.66	7.45	8.28	0.00	0.00	0.00	4.14	0.00
270.0	15.32	0.00	0.00	0.00	19.05	3.73	0.00	0.41	8.28
315.0	4.97	6.63	19.88	0.00	4.56	2.48	5.38	1.66	0.83
360.0	0.00	5.38	8.28	0.00	6.21	0.00	0.00	0.00	0.00

C/γ(°)	153.0	154.0	155.0	156.0	157.0	158.0	159.0	160.0	161.0
0.0	1.66	0.00	0.00	3.31	4.56	12.84	2.48	5.38	0.00
45.0	0.83	0.00	8.28	15.32	0.00	0.00	1.24	0.00	6.63
90.0	0.00	1.24	3.73	0.00	10.77	0.00	0.41	7.87	0.00
135.0	5.38	0.00	3.31	0.00	0.00	8.70	0.00	0.00	0.00
180.0	3.73	5.80	0.00	0.00	0.00	0.00	2.07	0.00	2.48
225.0	10.35	3.31	2.07	10.35	4.56	0.00	4.56	8.28	0.00
270.0	6.21	10.35	2.48	0.00	11.18	0.00	0.00	2.90	12.84
315.0	0.00	2.48	8.28	4.97	0.00	4.56	2.07	5.38	0.00
360.0	1.66	0.00	0.00	3.31	4.56	12.84	2.48	5.38	0.00

C/γ(°)	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0	170.0
0.0	7.04	11.60	0.00	1.66	1.66	8.28	0.00	14.91	0.00
45.0	0.41	4.97	3.31	0.00	0.00	9.52	0.00	0.83	5.38
90.0	7.87	0.00	0.00	0.00	3.73	8.70	14.91	0.00	9.94
135.0	14.49	0.00	0.00	12.84	0.00	5.38	0.41	0.00	0.83
180.0	4.97	0.00	2.48	0.00	4.56	0.00	0.00	0.00	1.24
225.0	0.00	0.00	0.00	4.14	0.00	12.84	0.41	2.07	7.45
270.0	0.00	11.18	5.80	0.00	2.90	0.00	7.45	0.00	0.00
315.0	3.73	1.66	0.00	0.83	0.00	0.00	6.21	3.73	0.00
360.0	7.04	11.60	0.00	1.66	1.66	8.28	0.00	14.91	0.00

C/γ(°)	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	4.14	0.00	0.00	2.07	10.35	0.00	0.00	3.73	12.84
45.0	0.00	2.90	1.24	5.38	8.28	0.00	5.38	7.45	3.31
90.0	0.00	0.00	0.00	11.60	6.63	0.41	0.00	0.00	0.00
135.0	0.00	2.48	9.94	0.00	0.00	14.08	0.00	19.05	1.24
180.0	0.00	4.56	0.00	4.14	1.66	0.83	9.11	3.31	0.00
225.0	0.00	10.35	0.00	1.24	2.07	0.00	12.42	0.00	0.00
270.0	2.90	1.24	0.00	0.00	7.87	0.00	0.00	0.83	5.38
315.0	0.00	0.00	2.48	1.66	12.01	4.14	0.00	8.28	0.00
360.0	4.14	0.00	0.00	2.07	10.35	0.00	0.00	3.73	12.84

Intensity data(cd)

C/γ(°)	180.0
0.0	0.00
45.0	0.00
90.0	0.83
135.0	7.04
180.0	0.00
225.0	0.00
270.0	0.83
315.0	7.04
360.0	0.00