
Nata

LumCAT: 1497-E	
Luminaire: 92.70.064.00	
Report No: NT2016041205	Voltage(V): 37.7000
Test No: GC2016041205	Current(A): 0.3500
LampCAT: CLU026	Power (W): 13.1950
Lamp flux(lm): 1550.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 44	Width(mm):44
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1368.52
Efficiency(%): 88.29%
Lumens(lm)/Power(W): 103.72
Central intensity(cd): 1553.003
Maximum intensity(cd): 1553.003
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=58.1
[C90/270]Total=58.1
Field angle(10%Imax): [C0/180]Total=85.1
[C90/270]Total=85.1
Maximum s/h(1/2): C0_180=0.89 C90_270=0.89
Maximum s/h(1/4): C0_180=0.88 C90_270=0.88
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.29%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.363%

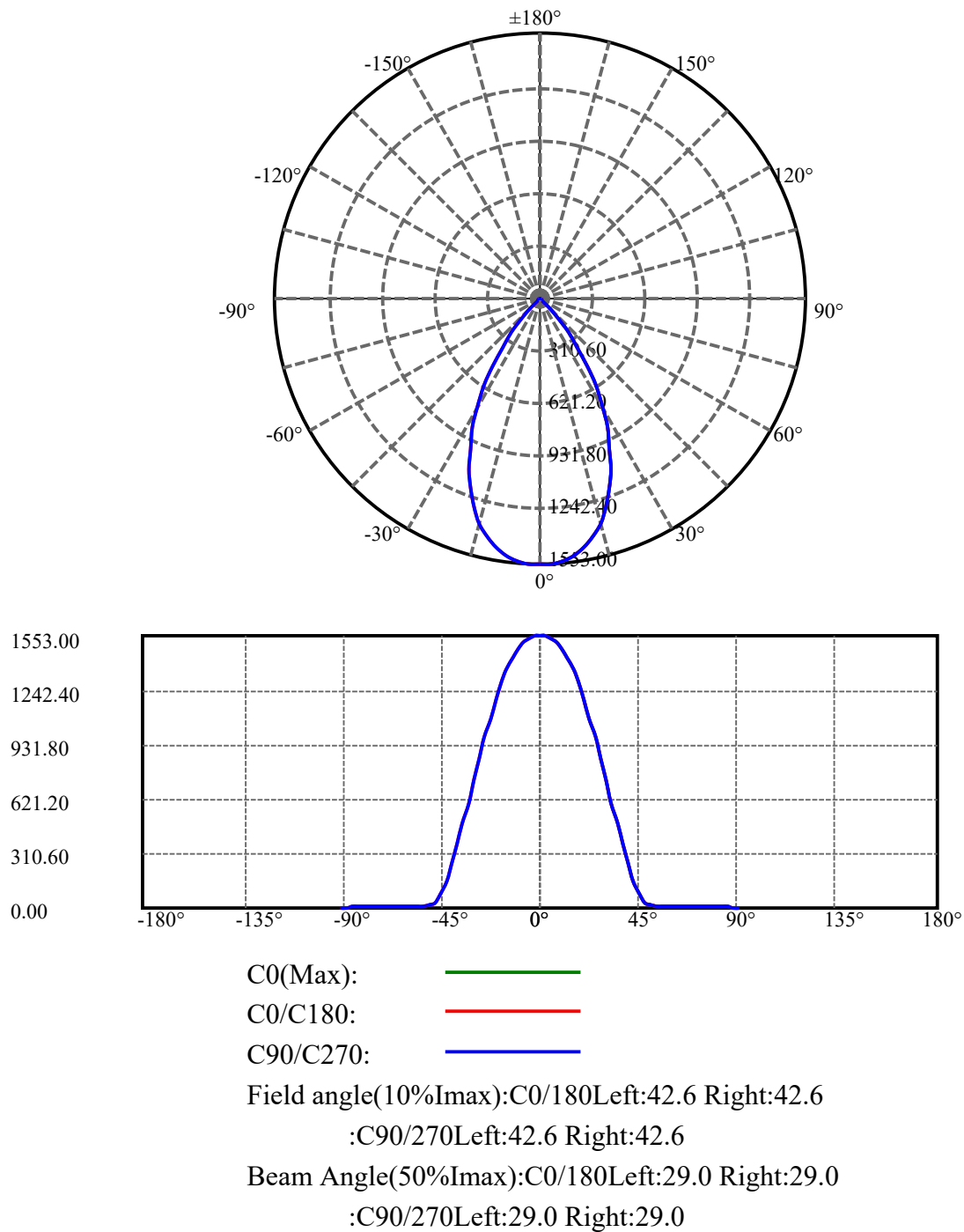
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1553.003	0.000	0	.000%	.000%
2.5	1549.700	9.277	9.277	.599%	.678%
5.0	1538.276	27.683	36.96	1.786%	2.701%
7.5	1514.670	45.556	82.516	2.939%	6.030%
10.0	1478.746	62.416	144.932	4.027%	10.590%
12.5	1429.815	77.776	222.708	5.018%	16.274%
15.0	1362.715	90.977	313.686	5.870%	22.922%
17.5	1278.891	101.320	415.005	6.537%	30.325%
20.0	1182.907	108.464	523.469	6.998%	38.251%
22.5	1081.452	112.489	635.959	7.257%	46.471%
25.0	971.229	113.315	749.273	7.311%	54.751%
27.5	852.190	110.541	859.815	7.132%	62.828%
30.0	728.809	104.232	964.047	6.725%	70.444%
32.5	599.998	94.487	1058.534	6.096%	77.349%
35.0	478.832	82.153	1140.687	5.300%	83.352%
37.5	364.232	68.330	1209.016	4.408%	88.345%
40.0	258.359	53.414	1262.431	3.446%	92.248%
42.5	157.083	37.545	1299.976	2.422%	94.991%
45.0	79.907	22.463	1322.439	1.449%	96.633%
47.5	31.768	11.057	1333.496	.713%	97.441%
50.0	14.872	4.806	1338.302	.310%	97.792%
52.5	9.821	2.640	1340.942	.170%	97.985%
55.0	7.804	1.948	1342.89	.126%	98.127%
57.5	6.855	1.671	1344.561	.108%	98.249%
60.0	6.393	1.552	1346.113	.100%	98.363%
62.5	6.146	1.507	1347.62	.097%	98.473%
65.0	6.036	1.497	1349.117	.097%	98.582%
67.5	6.235	1.539	1350.657	.099%	98.695%
70.0	7.061	1.699	1352.355	.110%	98.819%
72.5	8.114	1.970	1354.325	.127%	98.963%
75.0	8.830	2.230	1356.555	.144%	99.126%
77.5	8.960	2.369	1358.923	.153%	99.299%
80.0	8.926	2.405	1361.328	.155%	99.474%
82.5	8.252	2.327	1363.655	.150%	99.644%
85.0	6.469	2.006	1365.661	.129%	99.791%
87.5	4.817	1.544	1367.204	.100%	99.904%
90.0	4.790	1.317	1368.521	.085%	100.000%

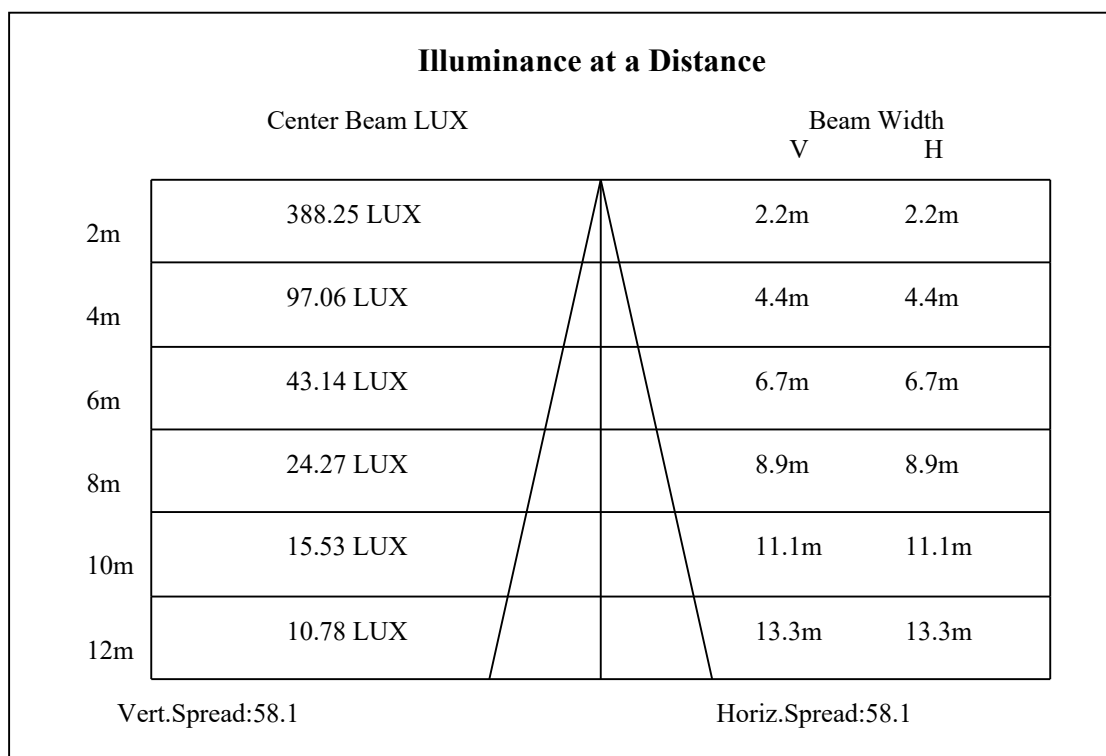
ZONAL LUMEN SUMMARY

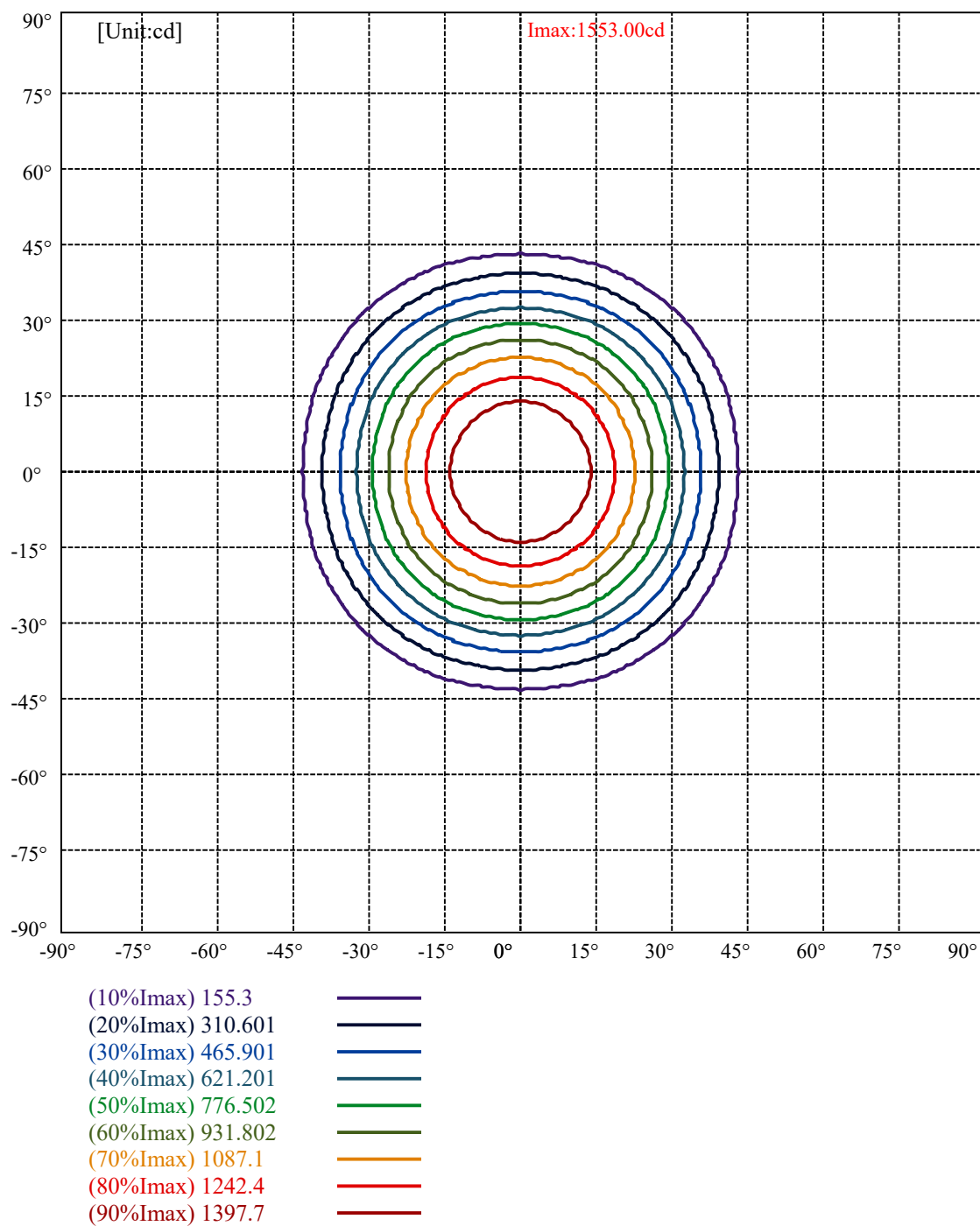
Zone	Lumens	%Lamp	%Fixt
0-30	964.05	62.20%	70.44%
0-40	1262.43	81.45%	92.25%
0-60	1346.11	86.85%	98.36%
0-90	1367.20	88.21%	99.90%
0-120	1367.20	88.21%	99.90%
0-180	1368.52	88.29%	100.00%
60-90	22.64	1.46%	1.65%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-33.60	1094.82	70.63%	80.00%

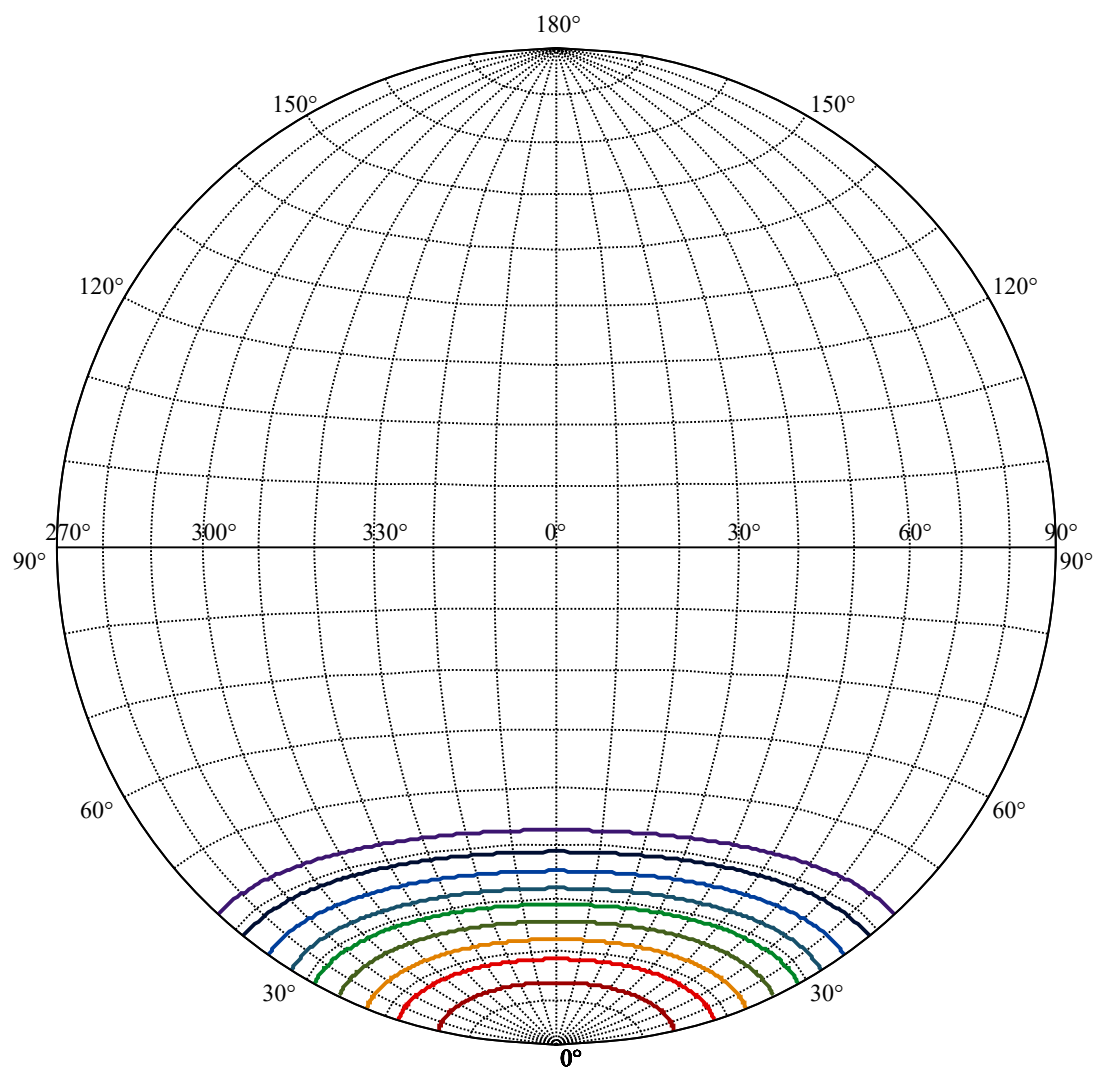
ZONAL LUMEN SUMMARY

0-10	144.93
10-20	378.54
20-30	440.58
30-40	298.38
40-50	75.87
50-60	7.81
60-70	6.24
70-80	8.97
80-90	5.88
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00









House

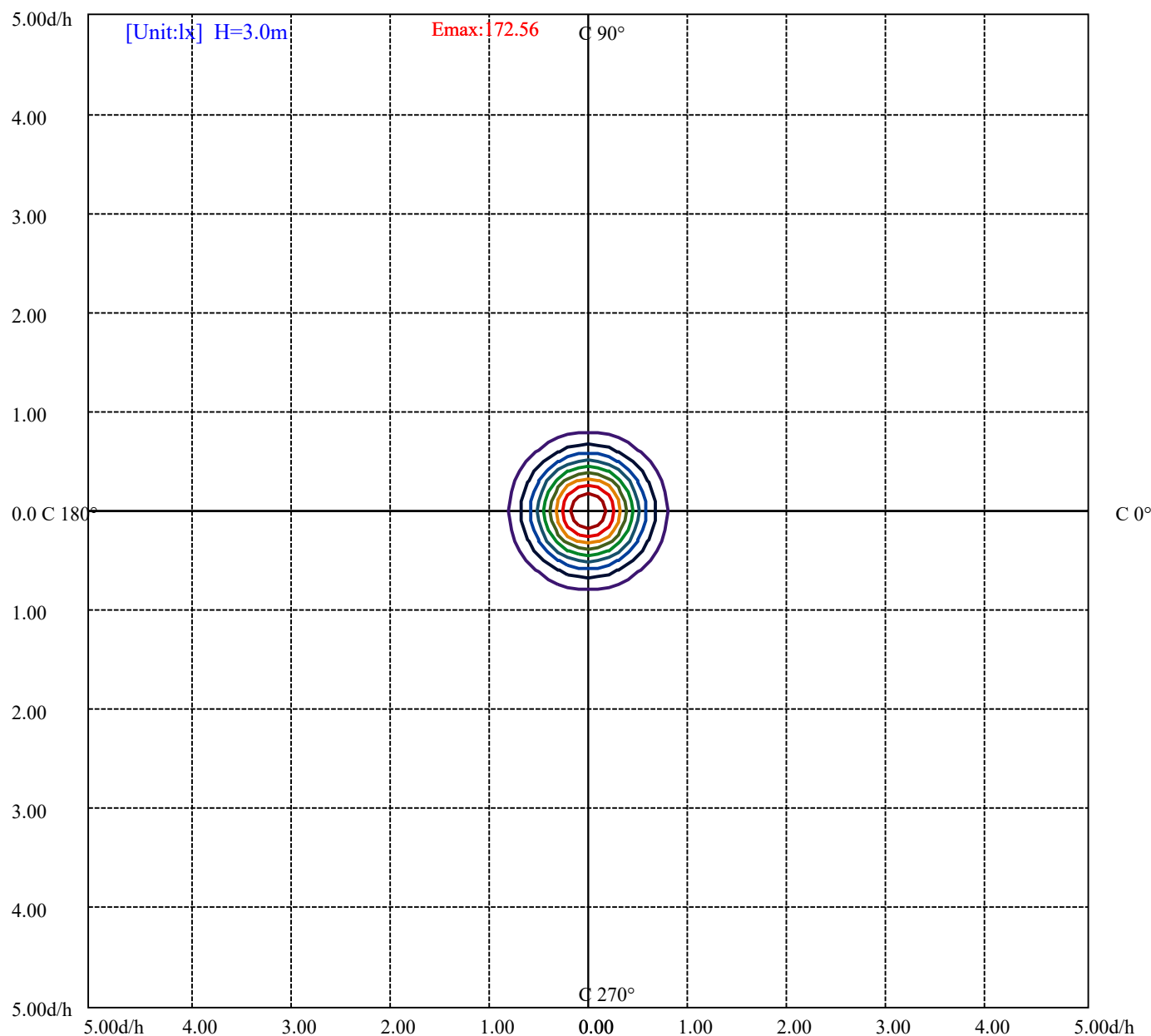
[Unit:cd]

Road

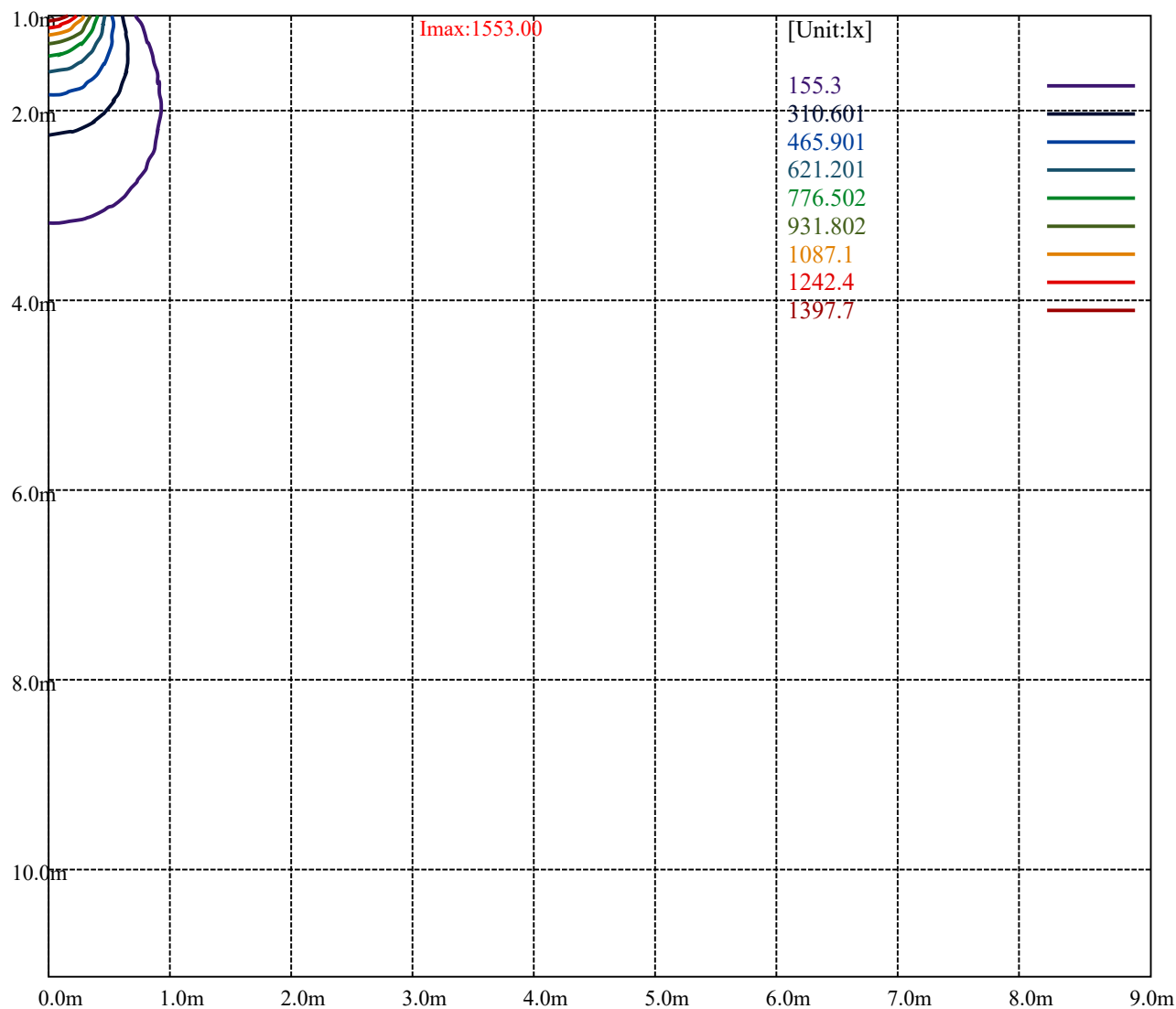
Imax:1553.00

(10%Imax) 155.3
(20%Imax) 310.601
(30%Imax) 465.901
(40%Imax) 621.201
(50%Imax) 776.502
(60%Imax) 931.802
(70%Imax) 1087.1
(80%Imax) 1242.4
(90%Imax) 1397.7





(10%E _{max}) 17.25556	—
(20%E _{max}) 34.51122	—
(30%E _{max}) 51.76678	—
(40%E _{max}) 69.02233	—
(50%E _{max}) 86.278	—
(60%E _{max}) 103.5336	—
(70%E _{max}) 120.7889	—
(80%E _{max}) 138.0444	—
(90%E _{max}) 155.3	—



Luminance Table

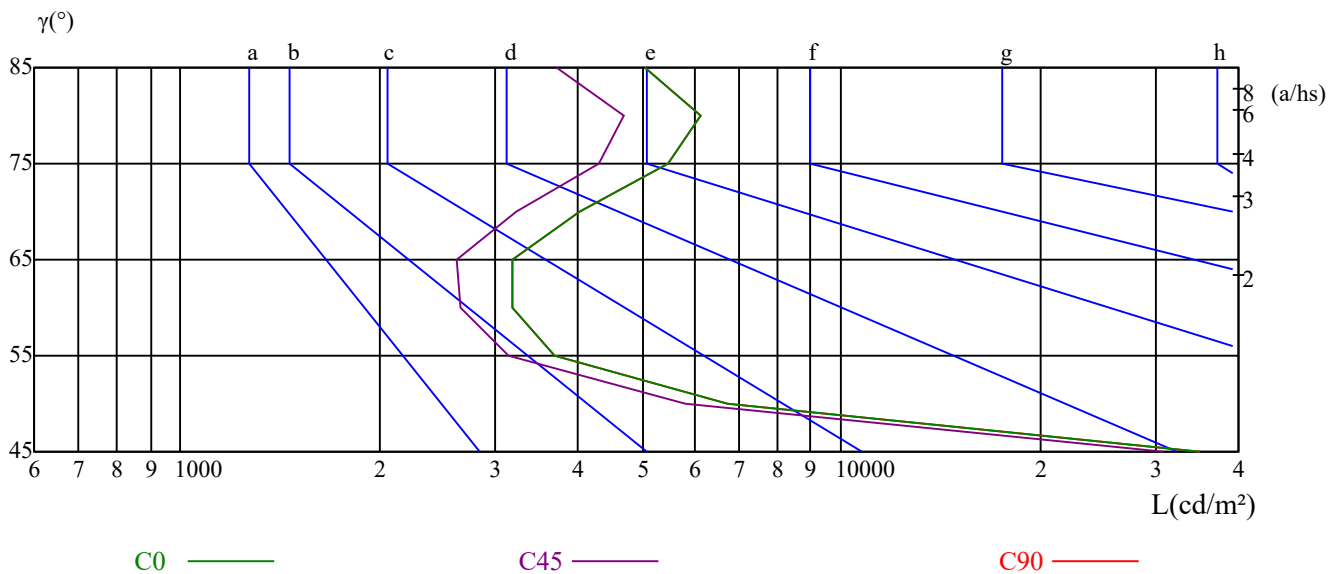
γ	45	50	55	60	65	70	75	80	85
C0	35095	6742	3685	3174	3185	4009	5471	6136	5037
C45	30731	5818	3131	2653	2614	3223	4295	4686	3718
C90	35095	6742	3685	3174	3185	4009	5471	6136	5037

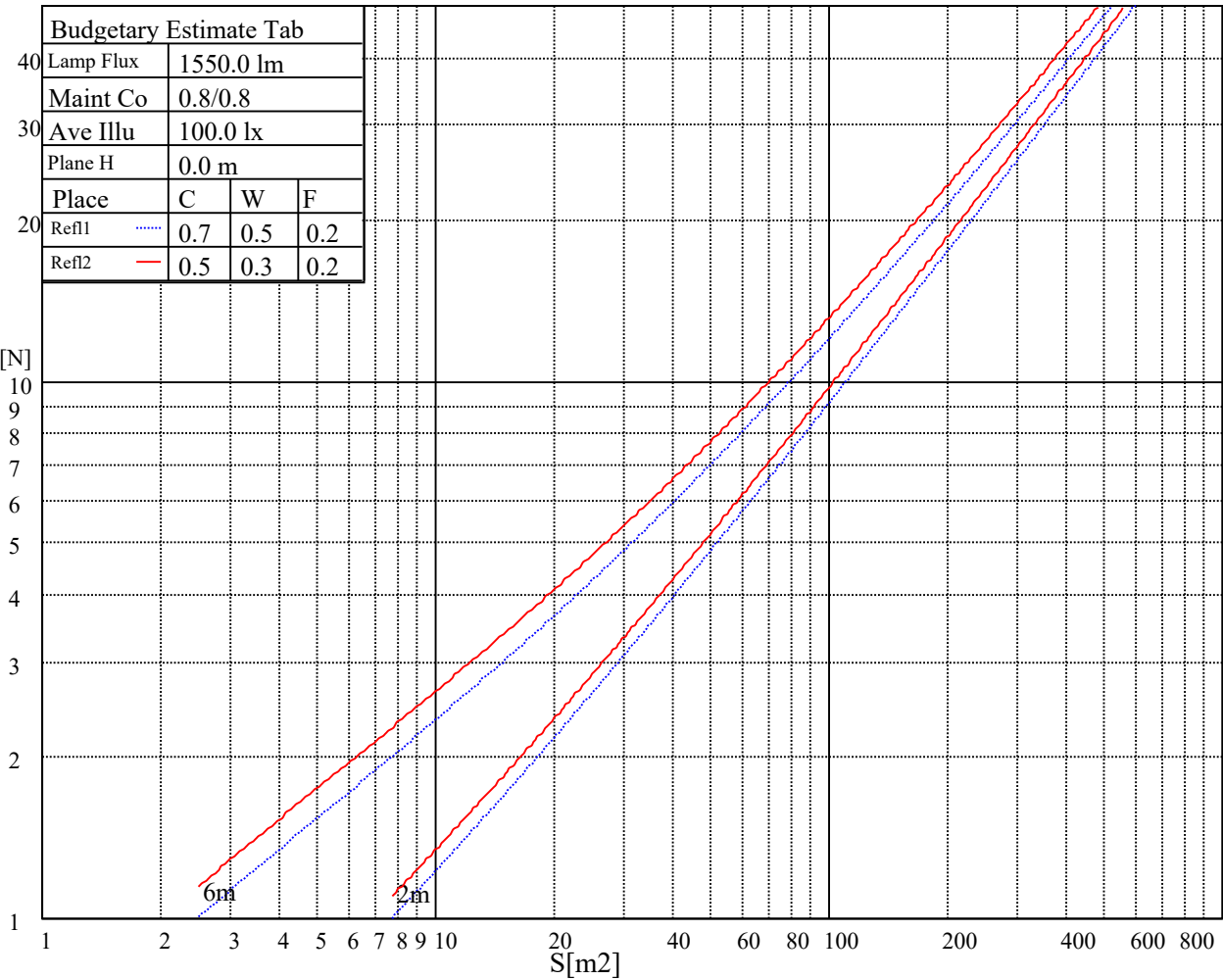
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6749	6749	6749	16123	16123	16123	35078	35078	35078

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





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.95	0.93	0.96	0.93	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.82
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.84	0.81	0.79	0.81	0.79	0.78	0.76
3	0.84	0.80	0.76	0.83	0.79	0.76	0.81	0.77	0.75	0.79	0.76	0.73	0.77	0.74	0.72	0.71
4	0.79	0.74	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.67	0.66
5	0.74	0.69	0.65	0.73	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.63	0.62
6	0.69	0.64	0.60	0.69	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.61	0.59	0.57
7	0.65	0.60	0.56	0.65	0.60	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.54
8	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.50
9	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.47
10	0.55	0.50	0.46	0.54	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.52	0.49	0.46	0.45

Intensity data(cd)

C/ γ (°)	0.0	2.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
0.0	1547.64	1543.23	1528.92	1500.84	1460.10	1401.19	1323.56	1227.21	1133.06
45.0	1559.20	1554.24	1537.17	1503.59	1455.14	1396.23	1313.10	1215.65	1114.34
90.0	1555.89	1550.39	1530.02	1496.98	1451.84	1387.42	1296.58	1209.59	1094.14
135.0	1549.29	1546.53	1536.07	1513.50	1479.92	1431.47	1364.30	1282.81	1185.36
180.0	1547.64	1544.33	1538.28	1522.31	1496.43	1456.24	1406.14	1330.71	1239.32
225.0	1559.20	1556.44	1548.74	1533.87	1507.99	1472.21	1422.11	1354.39	1266.30
270.0	1555.89	1554.24	1549.29	1532.22	1503.59	1466.15	1412.75	1337.32	1254.18
315.0	1549.29	1548.19	1537.73	1514.05	1474.96	1427.61	1363.20	1273.45	1176.56
360.0	1547.64	1543.23	1528.92	1500.84	1460.10	1401.19	1323.56	1227.21	1133.06

C/ γ (°)	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5
0.0	1032.31	917.24	780.70	659.58	526.89	410.72	303.36	197.93	100.53
45.0	1006.98	890.26	764.73	639.76	507.62	387.05	278.03	172.33	75.10
90.0	996.47	884.59	758.46	628.36	504.81	388.64	274.07	176.73	84.95
135.0	1084.61	979.45	866.04	734.45	610.58	479.54	362.27	278.03	159.72
180.0	1140.77	1031.26	919.72	796.06	668.83	547.92	431.59	317.62	216.59
225.0	1164.99	1054.22	943.45	830.36	694.59	578.81	458.51	345.04	240.21
270.0	1155.08	1051.03	943.12	821.99	695.36	576.99	454.22	336.39	232.34
315.0	1070.41	961.78	841.32	719.92	591.31	460.99	351.81	242.80	147.22
360.0	1032.31	917.24	780.70	659.58	526.89	410.72	303.36	197.93	100.53

C/ γ (°)	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0
0.0	37.00	13.87	8.92	7.71	7.21	6.88	6.66	6.61	6.83
45.0	25.71	10.96	8.48	7.65	7.21	6.88	6.83	6.77	6.66
90.0	29.07	13.38	8.15	7.05	6.55	6.22	6.06	5.89	5.89
135.0	70.31	25.44	12.61	8.42	7.10	6.55	6.28	6.06	5.89
180.0	126.91	49.77	21.36	12.06	8.31	6.94	6.28	5.95	5.78
225.0	153.55	65.24	25.16	14.59	9.91	7.54	6.50	5.95	5.67
270.0	133.35	53.07	22.57	12.55	8.86	7.10	6.28	5.84	5.56
315.0	63.37	22.41	11.73	8.53	7.27	6.72	6.28	6.11	6.00
360.0	37.00	13.87	8.92	7.71	7.21	6.88	6.66	6.61	6.83

C/ γ (°)	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5
0.0	8.81	11.89	14.26	14.76	13.71	12.44	10.57	6.77	4.79
45.0	6.88	9.47	13.38	16.19	17.34	17.51	15.58	8.64	4.84
90.0	5.84	5.84	6.33	6.88	6.55	6.61	6.44	5.51	4.79
135.0	5.78	5.67	5.73	6.06	6.11	5.78	5.51	5.23	4.90
180.0	5.62	5.51	5.45	5.51	5.78	6.11	5.62	5.29	4.79
225.0	5.51	5.45	5.45	5.40	5.40	5.34	5.34	5.23	4.84
270.0	5.40	5.34	5.29	5.29	5.34	5.23	5.18	5.12	4.79
315.0	6.06	7.32	9.03	10.57	11.45	12.39	11.78	9.97	4.79
360.0	8.81	11.89	14.26	14.76	13.71	12.44	10.57	6.77	4.79

C/ γ (°)	90.0
0.0	4.73
45.0	4.84
90.0	4.79
135.0	4.79
180.0	4.73
225.0	4.84
270.0	4.79
315.0	4.79
360.0	4.73