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Nata

Client:

LumCAT: 1658-S

Luminaire: 92.70.124.00

Report No:

Voltage(V): 33.2400

Test No: GC2019082902

Current(A): 0.2970

LampCAT: XICATO XOB LES 9.8MM

Power (W): 9.8700

Lamp flux(lm): 902.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 47

Width(mm): 47

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 787.14, Efficiency(%): 87.27% , Luminous Efficacy(lm/W): 79.75

Central intensity(cd): 1771.172, Maximum intensity(cd): 1771.172

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.6

[C90/270]Total=35.6

Field angle(10%Imax): [C0/180]Total=66.6

[C90/270]Total=66.6

Maximum s/h(1/2): C0_180=0.57 C90_270=0.57

Maximum s/h(1/4): C0_180=0.61 C90_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 87.27%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.273%

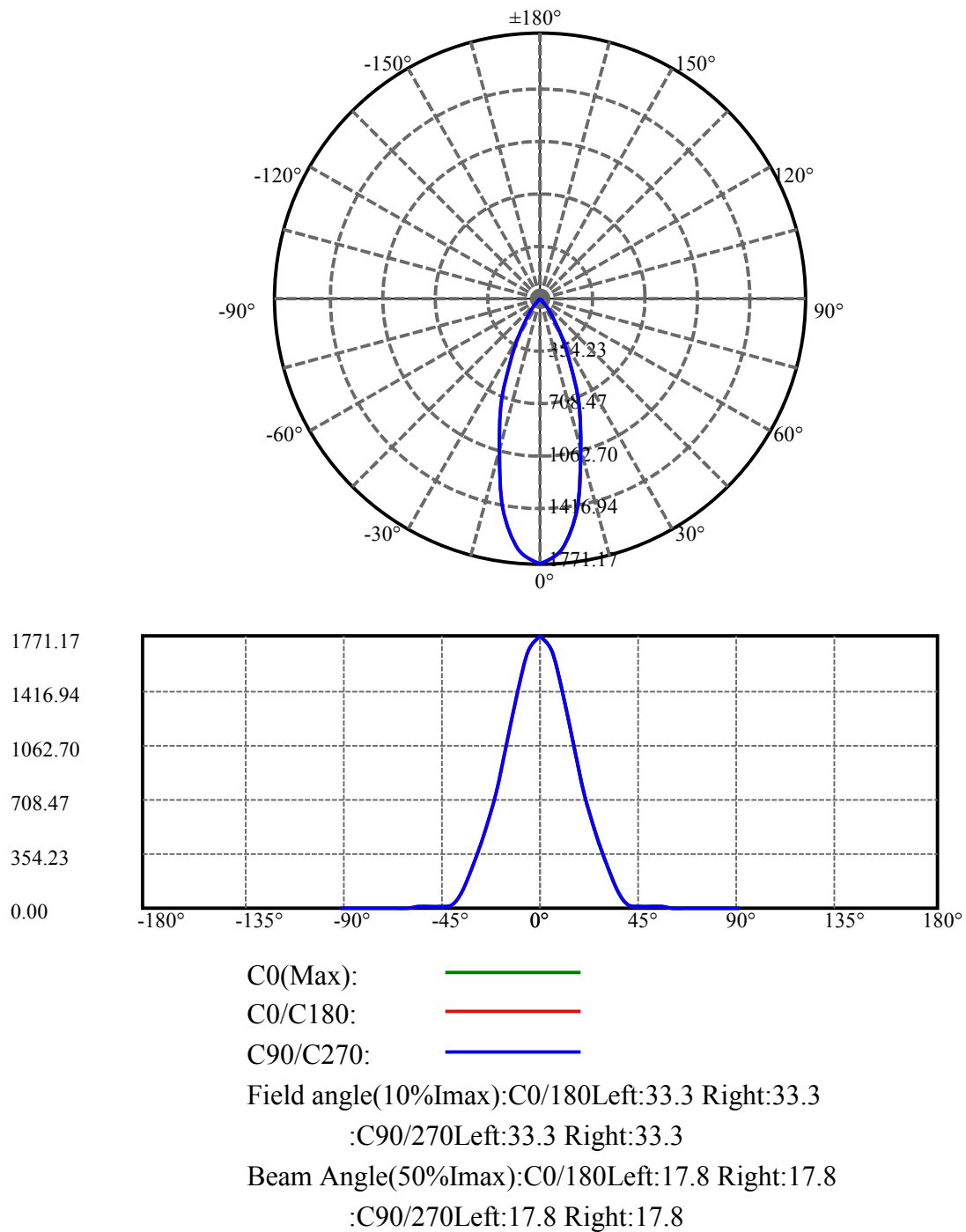
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1771.172	0.000	0	.000%	.000%
5.0	1672.664	41.170	41.17	4.564%	5.230%
10.0	1417.078	110.530	151.7	12.254%	19.272%
15.0	1058.871	146.872	298.572	16.283%	37.931%
20.0	744.848	148.652	447.223	16.480%	56.817%
25.0	487.083	129.207	576.43	14.324%	73.231%
30.0	301.388	99.782	676.212	11.062%	85.908%
35.0	111.410	60.787	736.999	6.739%	93.631%
40.0	21.544	22.182	759.181	2.459%	96.449%
45.0	8.880	5.633	764.815	.625%	97.164%
50.0	7.038	3.217	768.031	.357%	97.573%
55.0	6.075	2.851	770.883	.316%	97.935%
60.0	5.428	2.659	773.542	.295%	98.273%
65.0	4.915	2.514	776.056	.279%	98.592%
70.0	4.528	2.391	778.447	.265%	98.896%
75.0	4.233	2.290	780.737	.254%	99.187%
80.0	4.043	2.214	782.951	.245%	99.468%
85.0	3.825	2.138	785.089	.237%	99.740%
90.0	3.649	2.046	787.136	.227%	100.000%

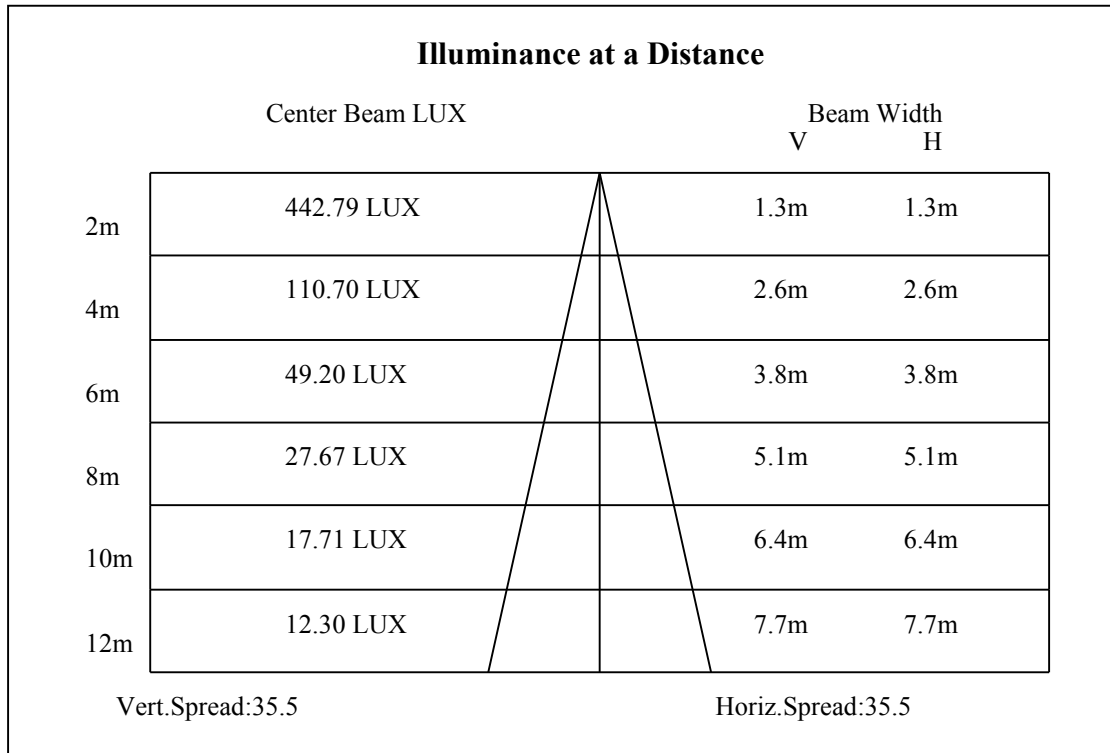
ZONAL LUMEN SUMMARY

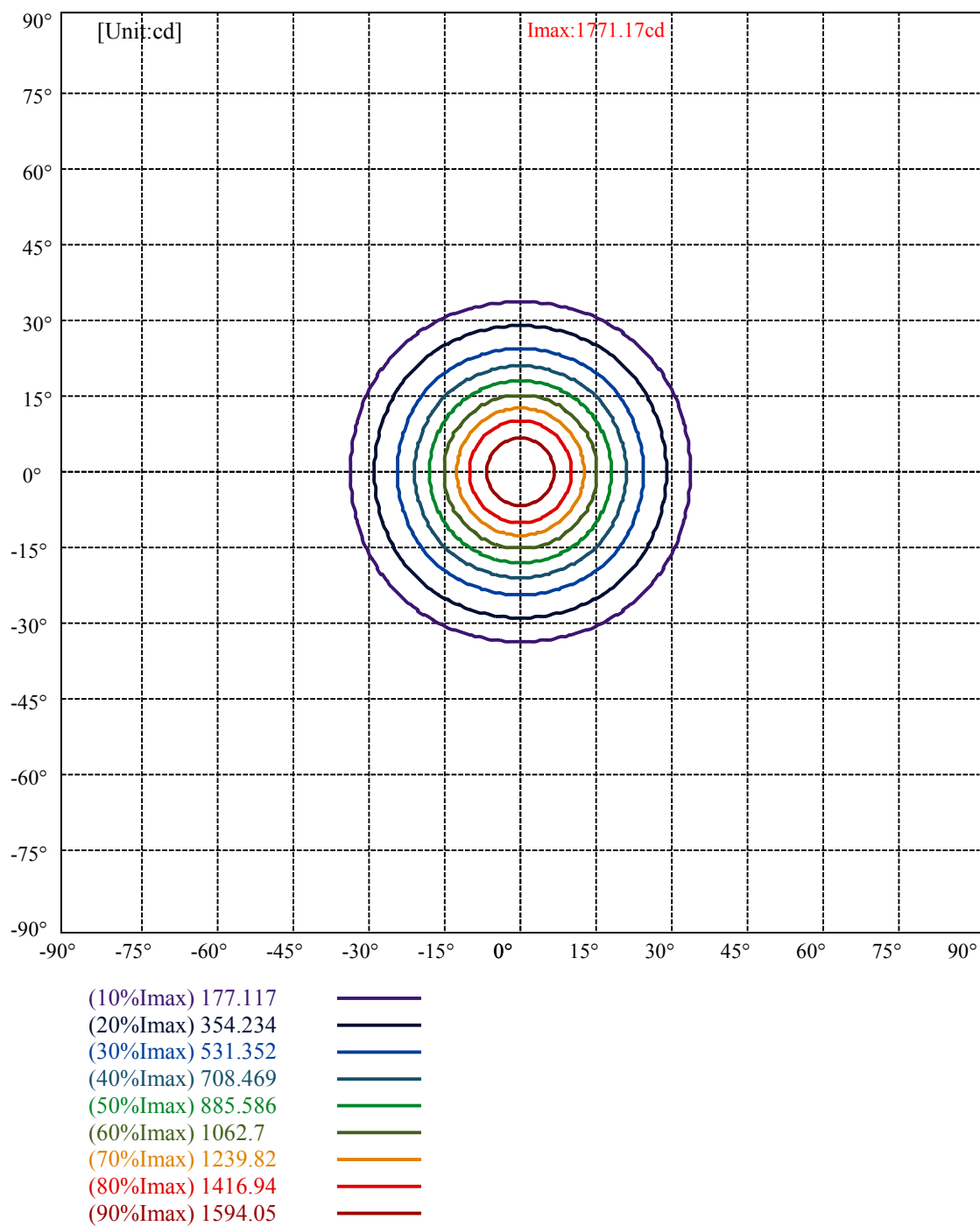
Zone	Lumens	%Lamp	%Fixt
0-30	676.21	74.97%	85.91%
0-40	759.18	84.17%	96.45%
0-60	773.54	85.76%	98.27%
0-90	785.09	87.04%	99.74%
0-120	785.09	87.04%	99.74%
0-180	787.14	87.27%	100.00%
60-90	14.21	1.58%	1.80%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.67	629.71	69.81%	80.00%

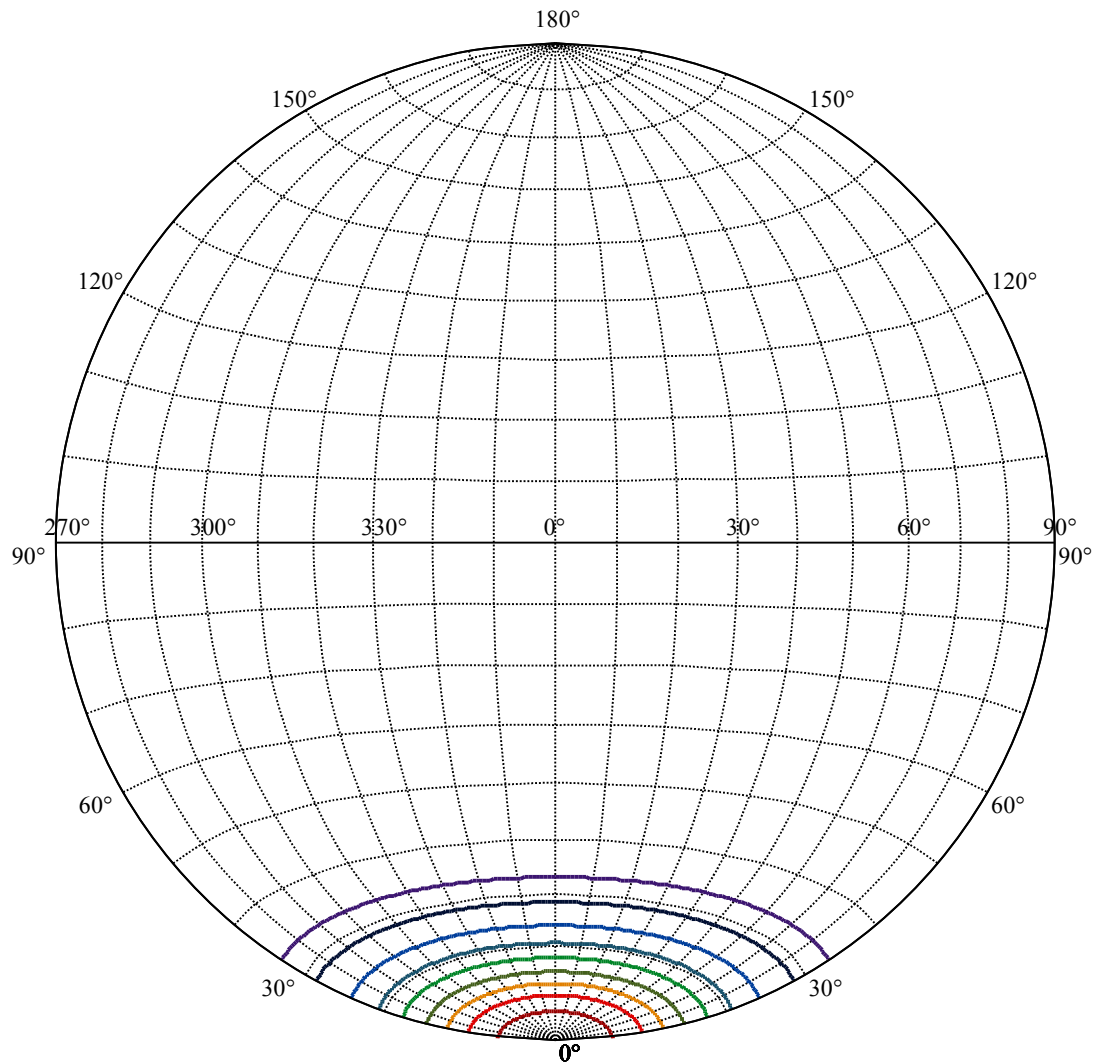
ZONAL LUMEN SUMMARY

0-10	151.70
10-20	295.52
20-30	228.99
30-40	82.97
40-50	8.85
50-60	5.51
60-70	4.91
70-80	4.50
80-90	2.14
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









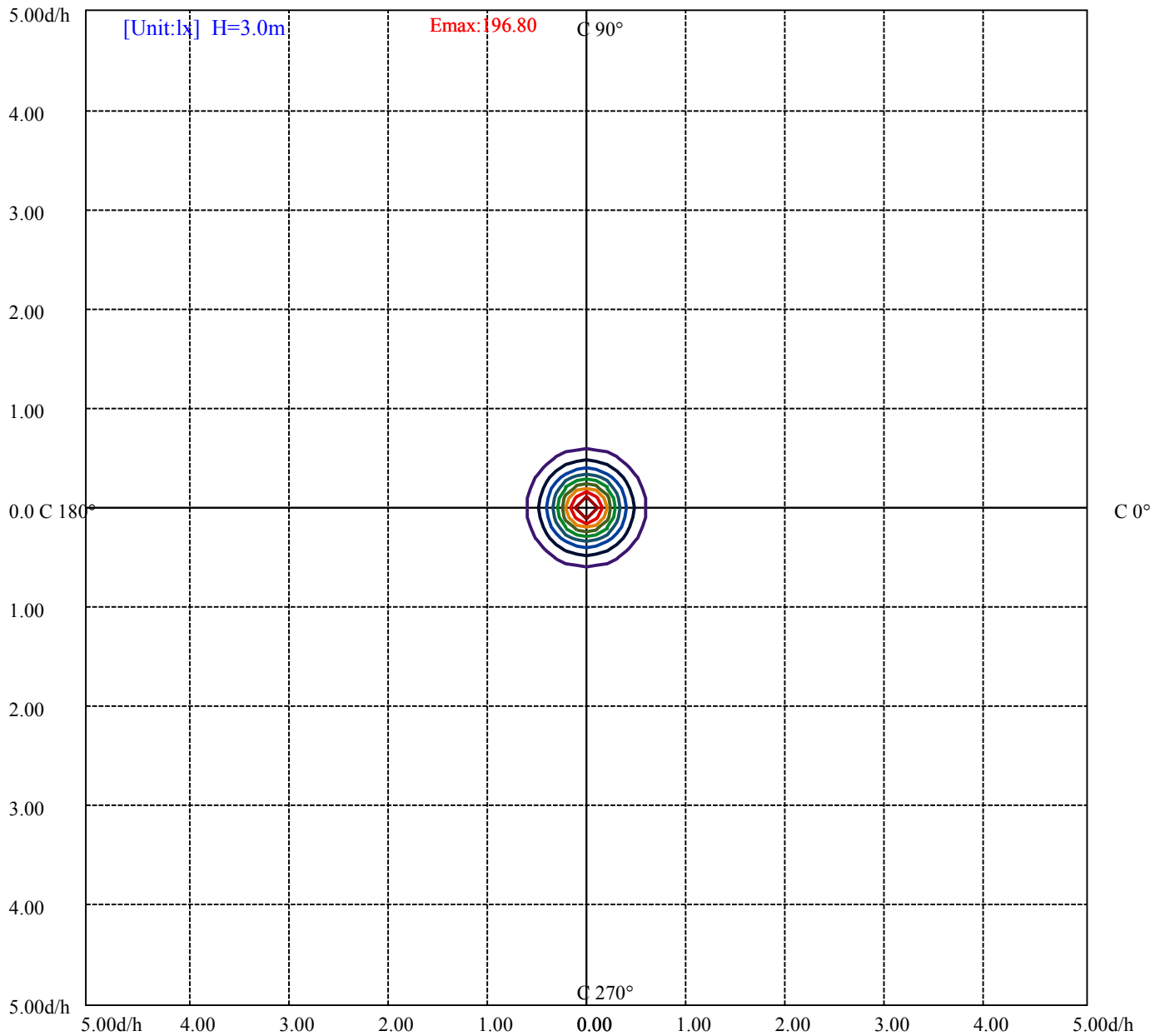
House

[Unit:cd]

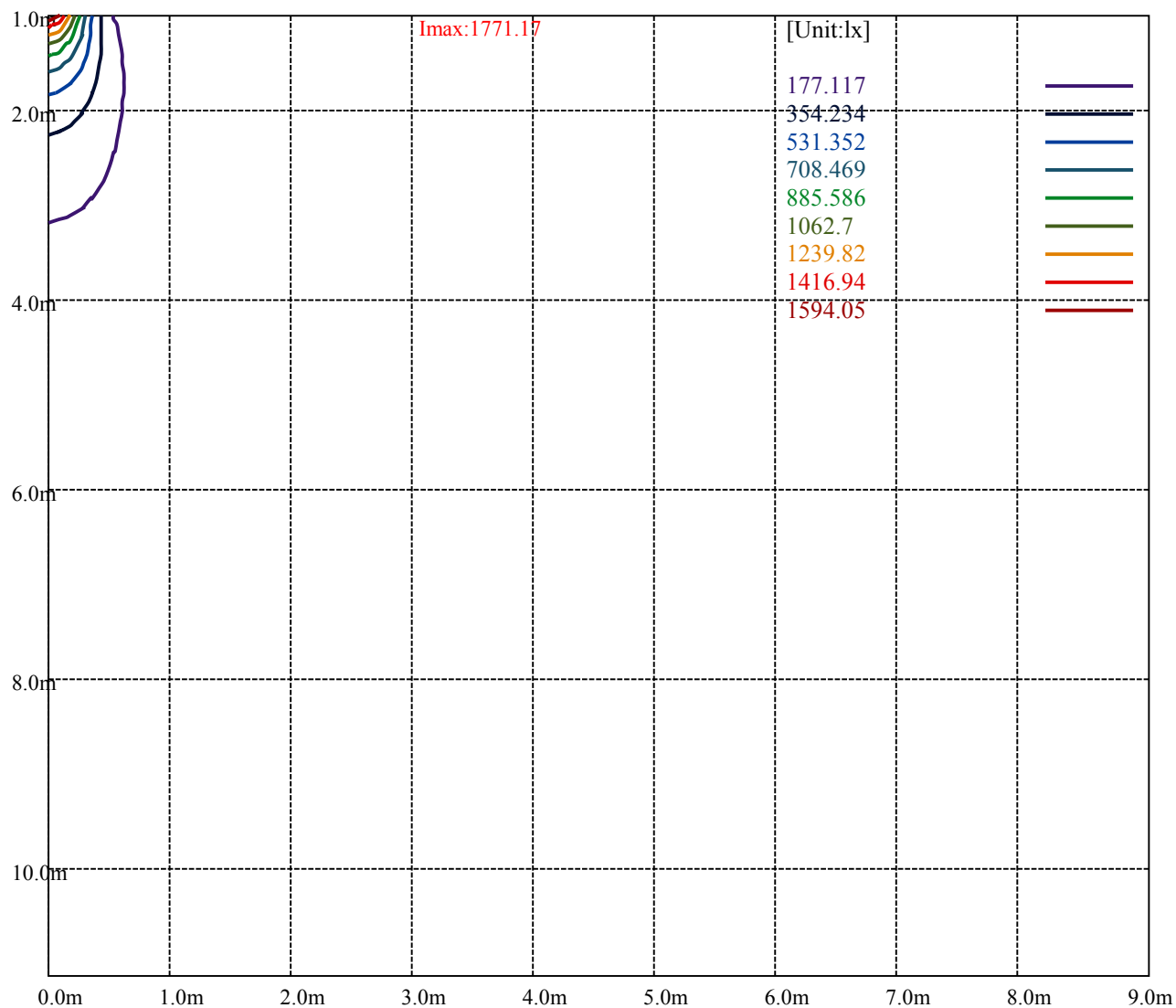
Road

Imax:1771.17

(10%Imax)	177.117	—
(20%Imax)	354.234	—
(30%Imax)	531.352	—
(40%Imax)	708.469	—
(50%Imax)	885.586	—
(60%Imax)	1062.7	—
(70%Imax)	1239.82	—
(80%Imax)	1416.94	—
(90%Imax)	1594.05	—



(10%Emax)	19.67967	—
(20%Emax)	39.35933	—
(30%Emax)	59.039	—
(40%Emax)	78.71867	—
(50%Emax)	98.39834	—
(60%Emax)	118.0778	—
(70%Emax)	137.7578	—
(80%Emax)	157.4378	—
(90%Emax)	177.1167	—



Luminance Table

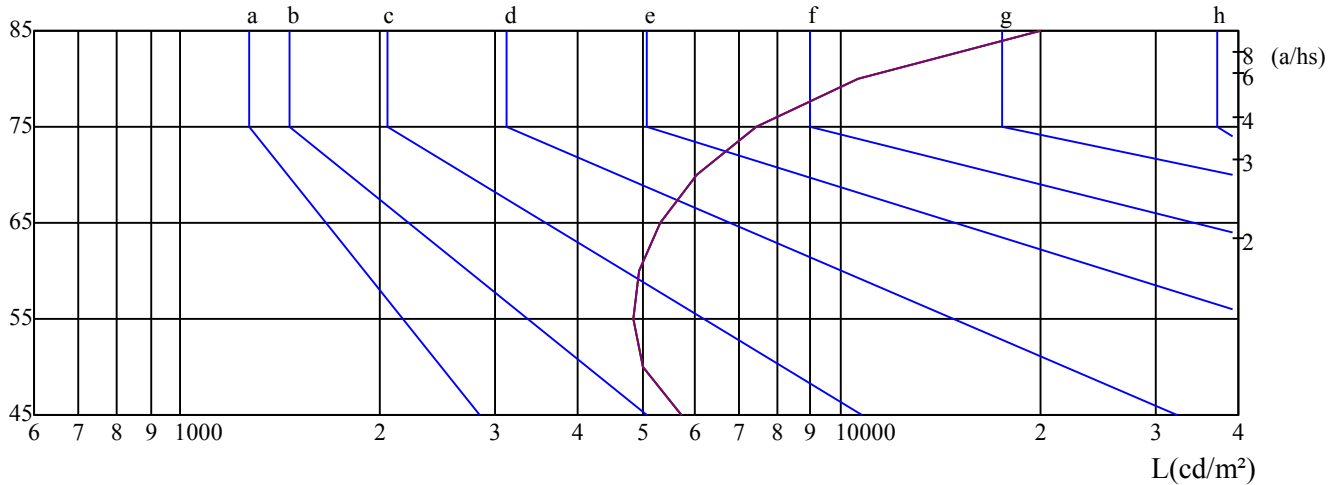
γ	45	50	55	60	65	70	75	80	85
C0	5734	4999	4836	4957	5310	6045	7467	10630	20038
C45	5734	4999	4836	4957	5310	6045	7467	10630	20038
C90	5734	4999	4836	4957	5310	6045	7467	10630	20038

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5310	5310	5310	7467	7467	7467	20038	20038	20038

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

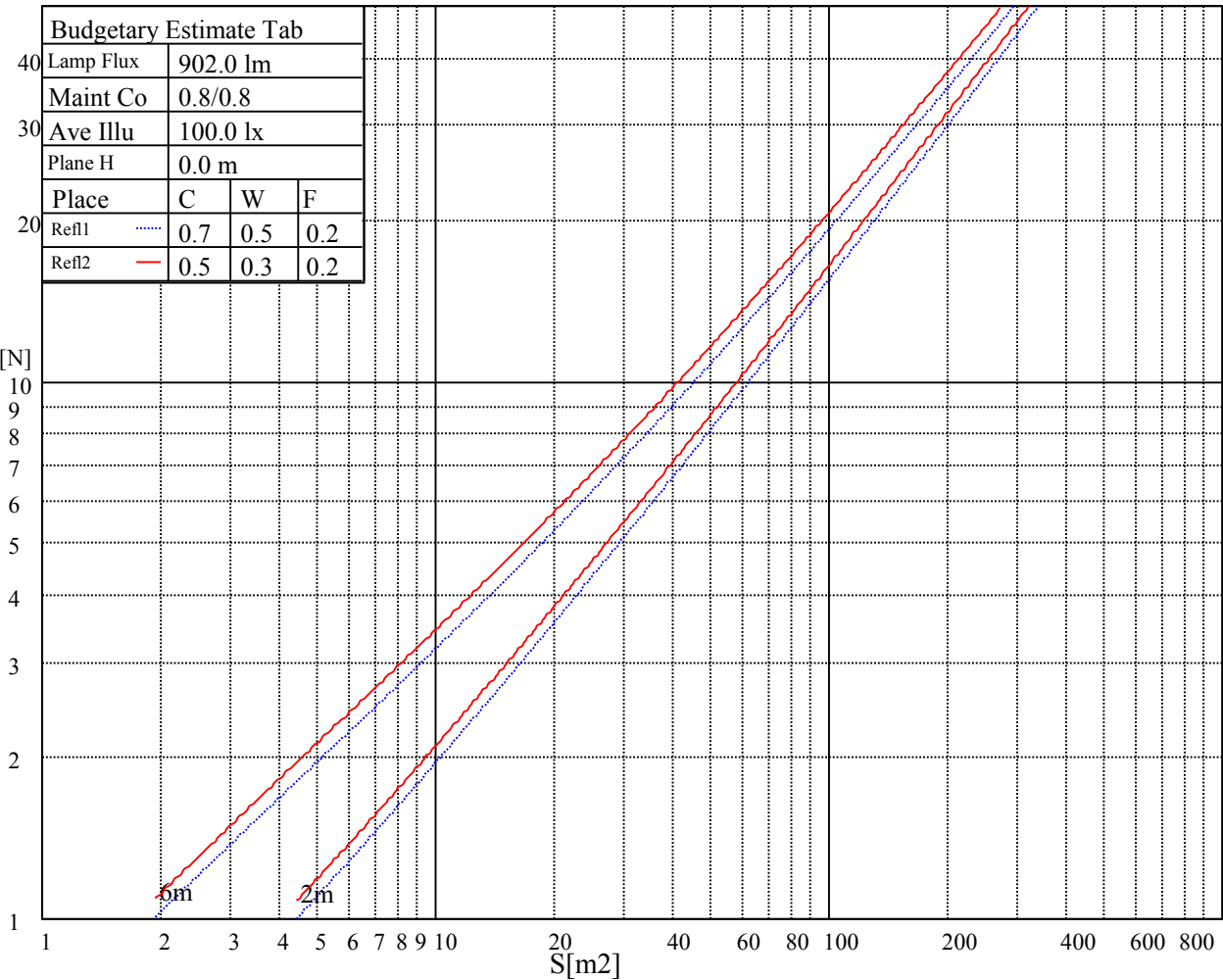
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

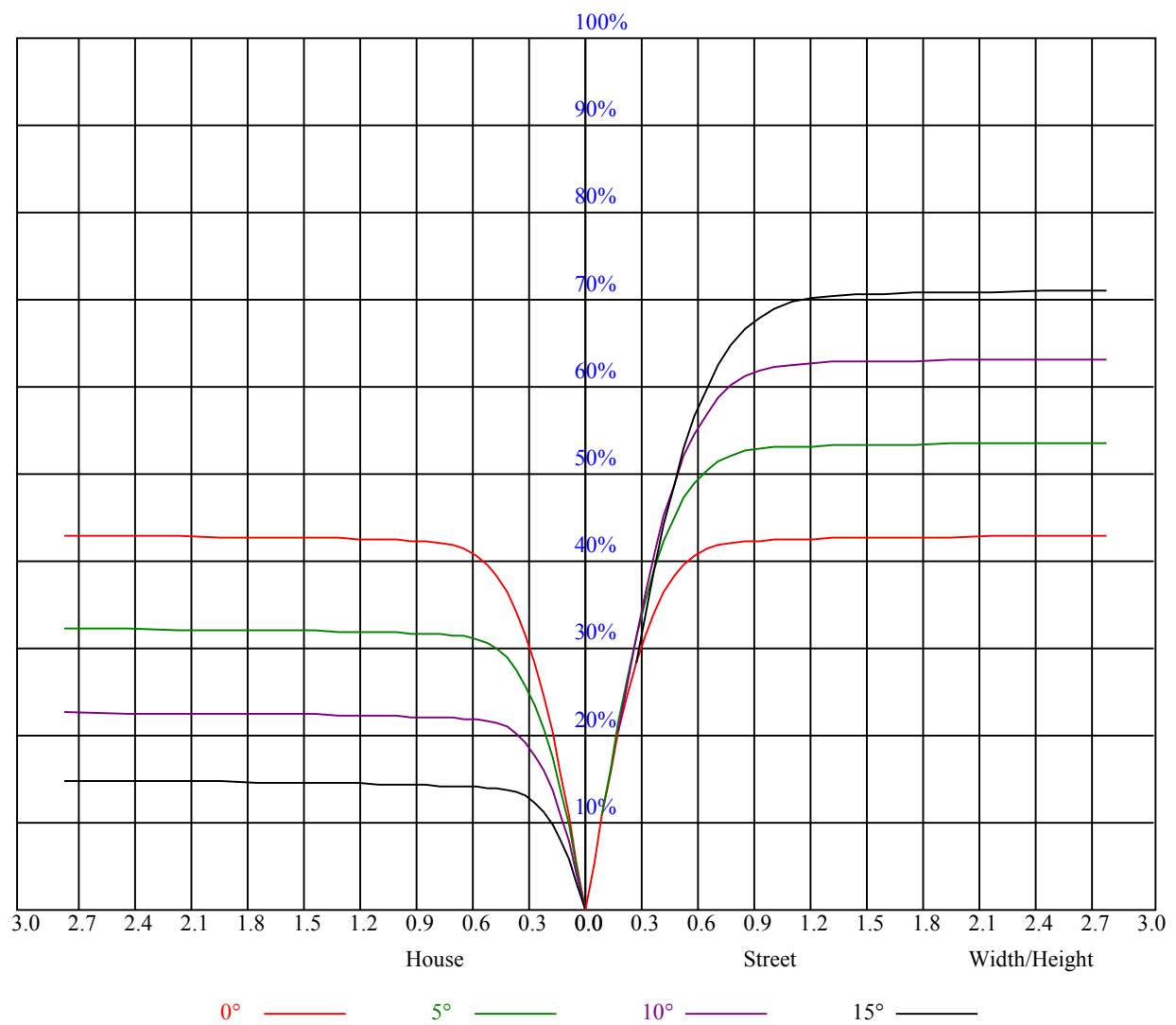
C0 ———

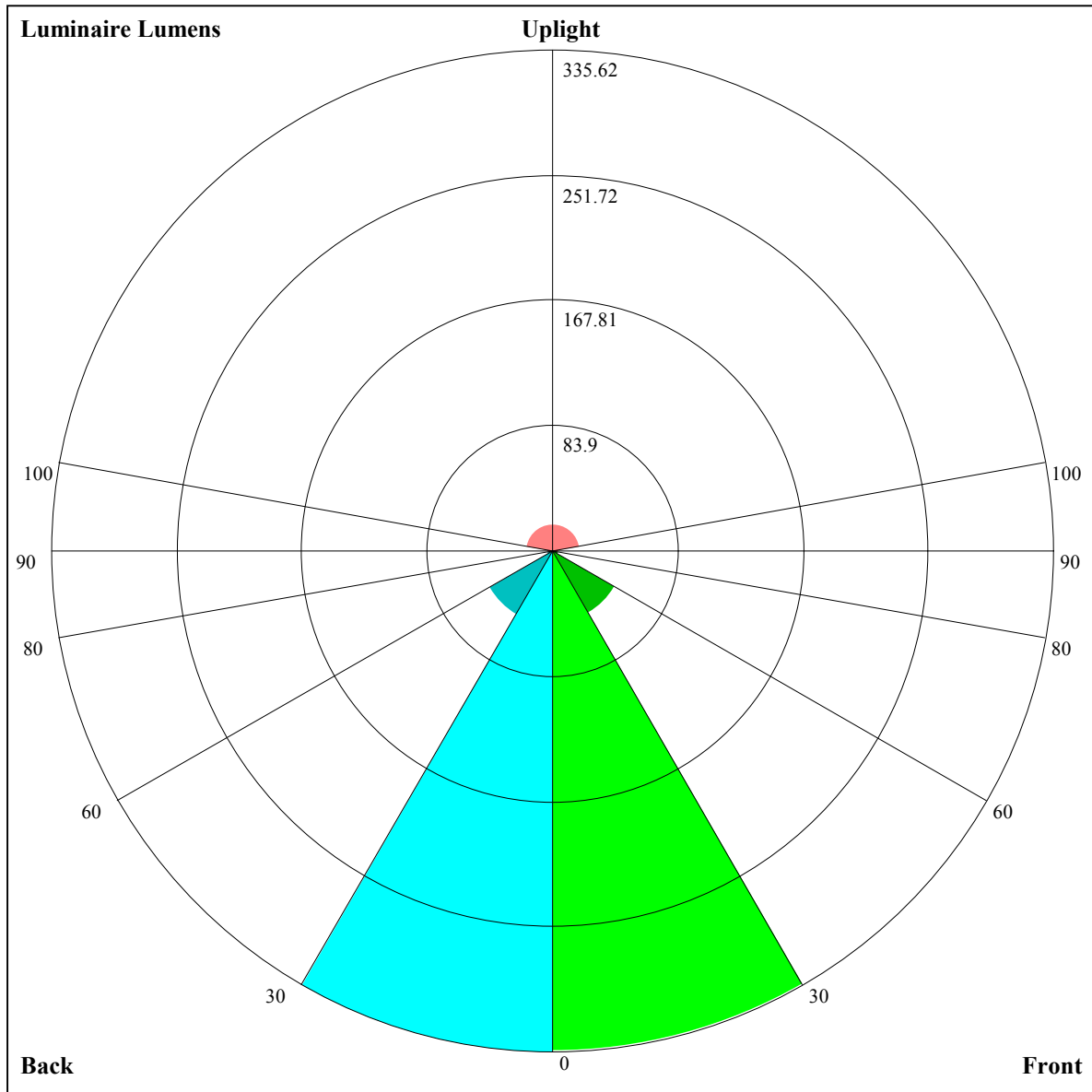
C45 ———

C90 ———



RHOC	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	1.04	1.04	1.04	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	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	0.88	0.85	0.90	0.87	0.85	0.87	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.79	0.78
3	0.86	0.82	0.79	0.85	0.82	0.79	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
4	0.82	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.70
5	0.78	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
6	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.70	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.61
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.56	0.55
10	0.62	0.58	0.55	0.62	0.57	0.55	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53





Luminaire Lumens:

FL=335.36,FM=47.5,FH=4.67,FVH=2.09

BL=335.62,BM=49.34,BH=4.7,BVH=2.09

UL=3.98,UH=18.95

BUG Rating:B1-U2-G0

Nata 1658-S

Appendix Page: 15 Total:15

Intensity data(cd)									
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	1770.19	1692.56	1417.50	1059.19	754.88	492.19	295.31	109.74	16.20
45.0	1765.13	1742.63	1519.31	1204.88	827.44	532.69	352.13	148.22	30.32
90.0	1782.00	1728.56	1513.13	1107.51	809.83	549.06	349.26	152.61	25.93
135.0	1767.38	1749.38	1535.63	1205.44	856.69	582.19	377.44	170.33	38.42
180.0	1770.19	1666.13	1396.13	1016.44	735.69	480.26	298.58	116.94	19.07
225.0	1765.13	1592.44	1309.50	938.59	646.31	400.44	217.69	56.14	15.92
270.0	1782.00	1617.19	1351.13	988.88	681.75	448.31	290.81	77.85	14.57
315.0	1767.38	1592.44	1294.31	950.06	646.20	411.53	229.89	59.46	11.93
360.0	1770.19	1692.56	1417.50	1059.19	754.88	492.19	295.31	109.74	16.20
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	7.82	6.41	5.68	5.29	4.89	4.50	4.22	4.11	3.77
45.0	10.91	8.04	6.98	6.13	5.40	4.84	4.50	4.22	3.99
90.0	9.45	7.31	6.19	5.46	4.95	4.56	4.28	4.05	3.94
135.0	10.18	7.48	6.30	5.46	4.84	4.50	4.16	3.94	3.83
180.0	8.89	7.26	6.02	5.40	4.89	4.50	4.16	4.05	3.83
225.0	9.28	7.65	6.81	6.02	5.23	4.73	4.39	4.16	3.77
270.0	7.54	6.19	5.40	4.95	4.61	4.33	4.11	3.94	3.71
315.0	6.98	5.96	5.23	4.73	4.50	4.28	4.05	3.88	3.77
360.0	7.82	6.41	5.68	5.29	4.89	4.50	4.22	4.11	3.77
C/γ(°)	90.0								
0.0	3.60								
45.0	3.66								
90.0	3.71								
135.0	3.77								
180.0	3.66								
225.0	3.66								
270.0	3.60								
315.0	3.54								
360.0	3.60								