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Nata

Client:

LumCAT: 1-0928-M

Luminaire: 92.70.127.00

Report No: nt0100

Test No: NATA07

LampCAT: LUMINUS CLM-9-AA40

Lamp flux(lm): 1234.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 220.5000

Current(A): 0.1000

Power (W): 12.1300

PF: 0.5460

Ballast type: AC

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 938.13, Efficiency(%): 76.02% , Luminous Efficacy(lm/W): 77.34

Central intensity(cd): 2676.707, Maximum intensity(cd): 2676.707

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=54.2

[C90/270]Total=54.2

Maximum s/h(1/2): C0_180=0.59 C90_270=0.59

Maximum s/h(1/4): C0_180=0.56 C90_270=0.56

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 76.02%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.605%

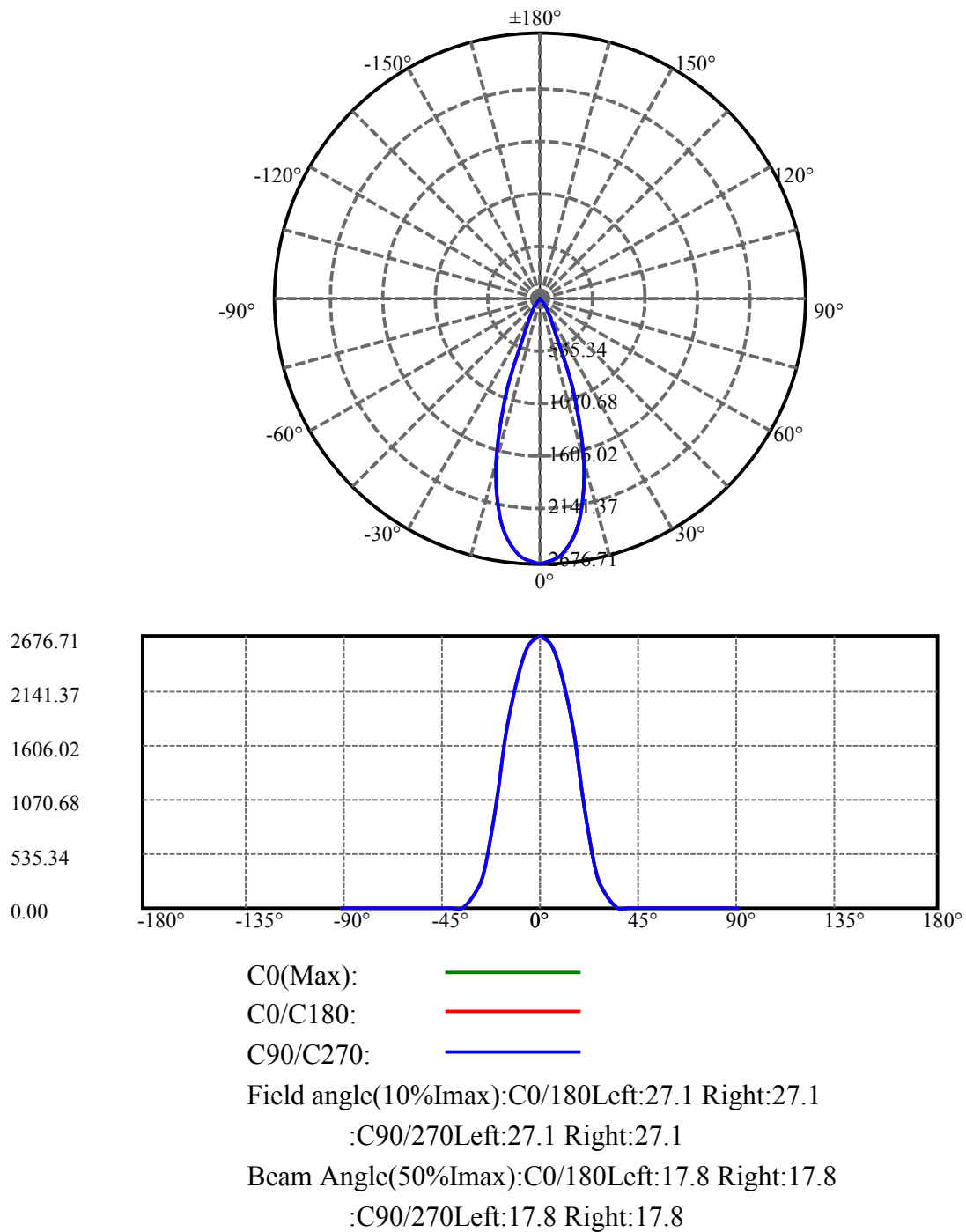
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2676.707	0.000	0	.000%	.000%
5.0	2576.070	62.795	62.795	5.089%	6.694%
10.0	2285.527	173.915	236.71	14.094%	25.232%
15.0	1734.853	238.486	475.196	19.326%	50.653%
20.0	1017.869	226.863	702.059	18.384%	74.836%
25.0	368.750	145.431	847.49	11.785%	90.338%
30.0	127.830	62.843	910.332	5.093%	97.037%
35.0	6.003	19.708	930.04	1.597%	99.137%
40.0	2.807	1.470	931.51	.119%	99.294%
45.0	2.024	0.895	932.405	.072%	99.389%
50.0	1.642	0.741	933.146	.060%	99.468%
55.0	1.410	0.663	933.809	.054%	99.539%
60.0	1.264	0.618	934.427	.050%	99.605%
65.0	1.206	0.601	935.028	.049%	99.669%
70.0	1.160	0.599	935.627	.049%	99.733%
75.0	1.143	0.602	936.229	.049%	99.797%
80.0	1.131	0.608	936.837	.049%	99.862%
85.0	1.154	0.621	937.458	.050%	99.928%
90.0	1.311	0.675	938.133	.055%	100.000%

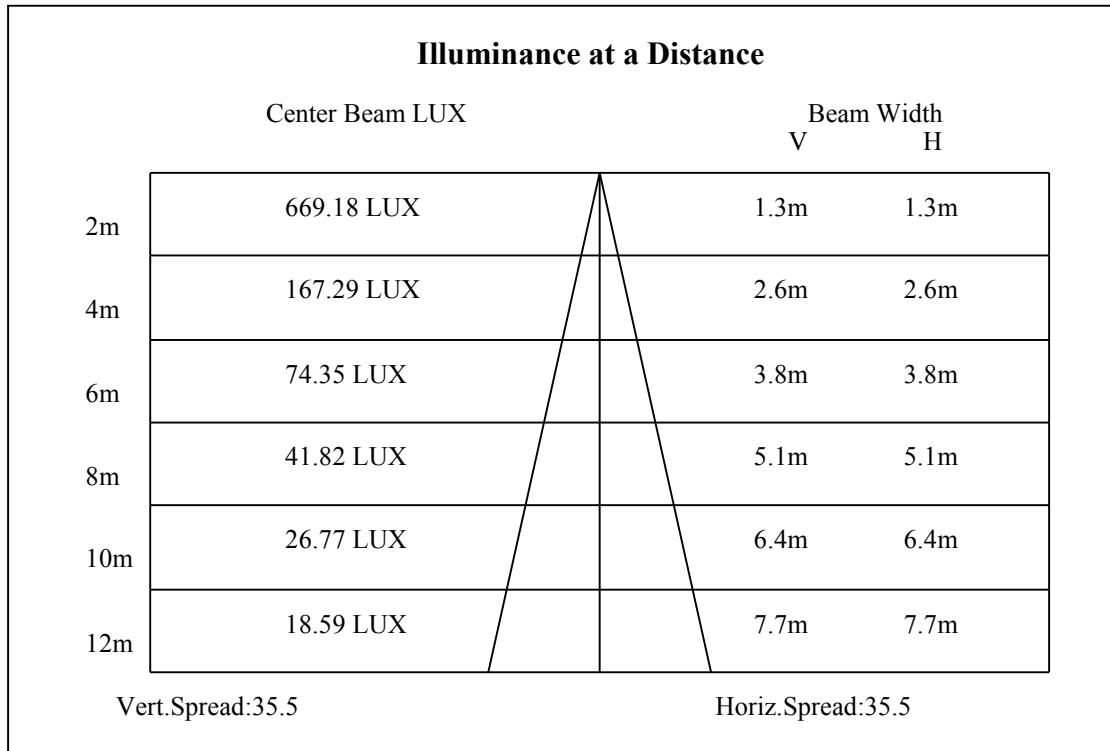
ZONAL LUMEN SUMMARY

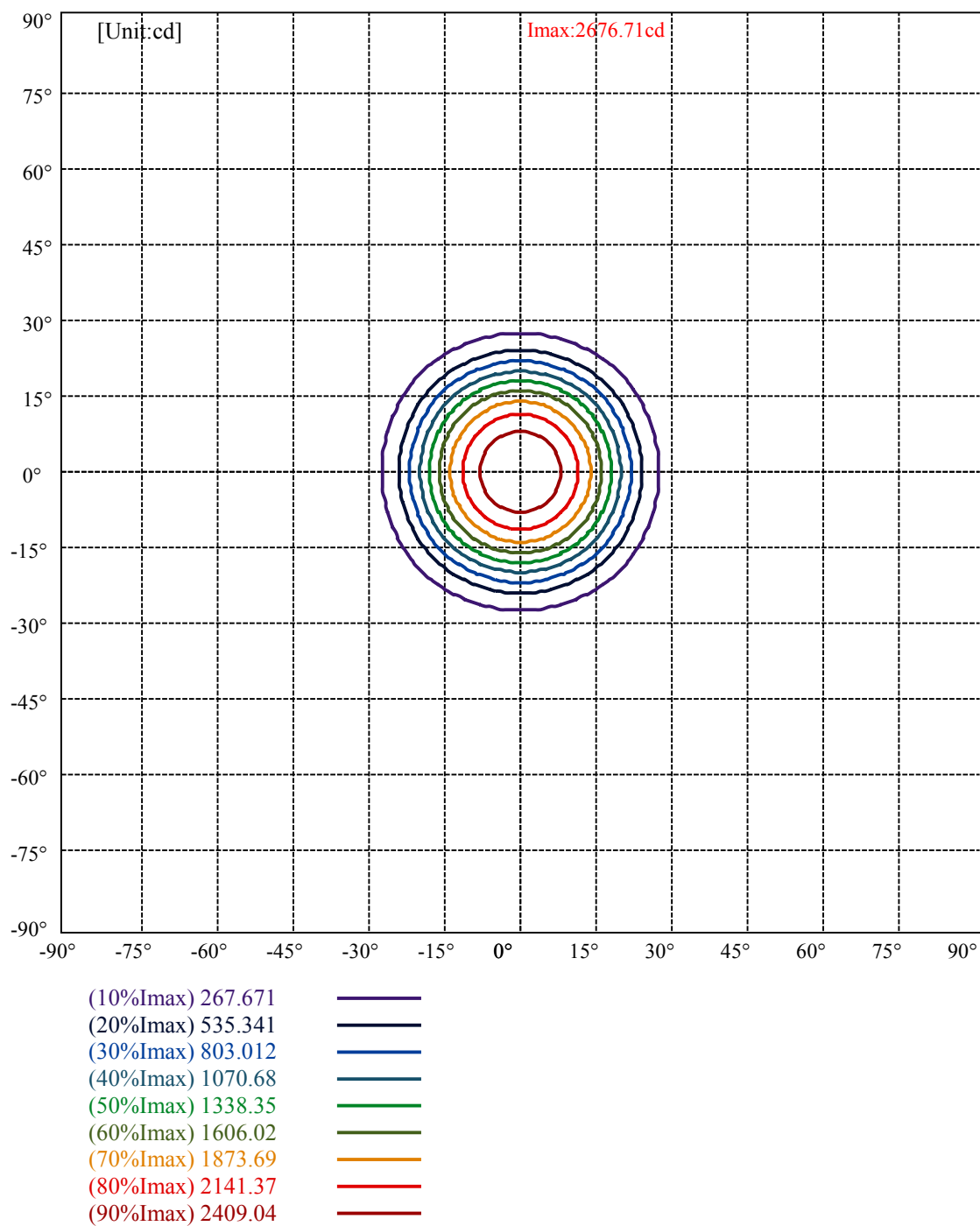
Zone	Lumens	%Lamp	%Fixt
0-30	910.33	73.77%	97.04%
0-40	931.51	75.49%	99.29%
0-60	934.43	75.72%	99.60%
0-90	937.46	75.97%	99.93%
0-120	937.46	75.97%	99.93%
0-180	938.13	76.02%	100.00%
60-90	3.65	0.30%	0.39%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.67	750.51	60.82%	80.00%

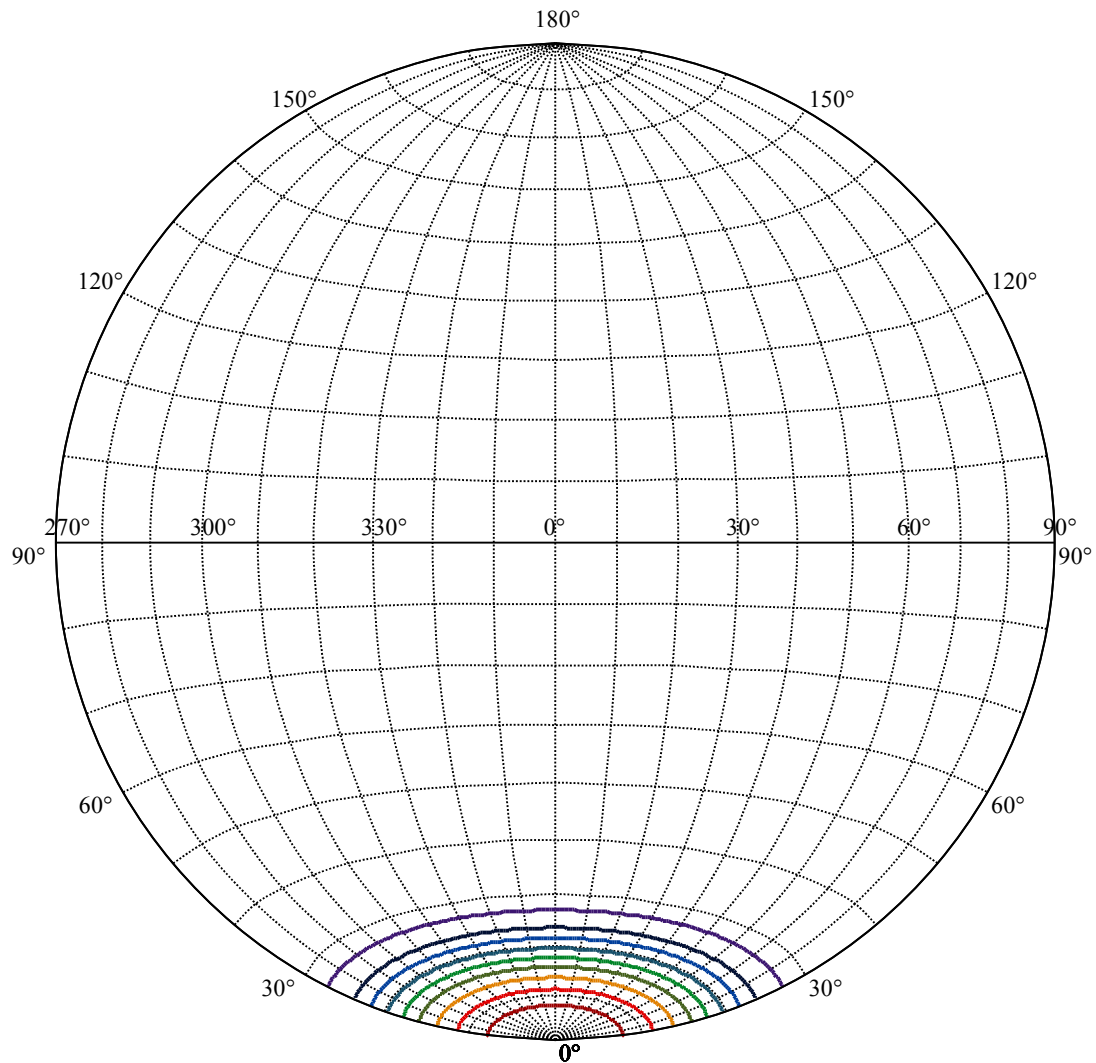
ZONAL LUMEN SUMMARY

0-10	236.71
10-20	465.35
20-30	208.27
30-40	21.18
40-50	1.64
50-60	1.28
60-70	1.20
70-80	1.21
80-90	0.62
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









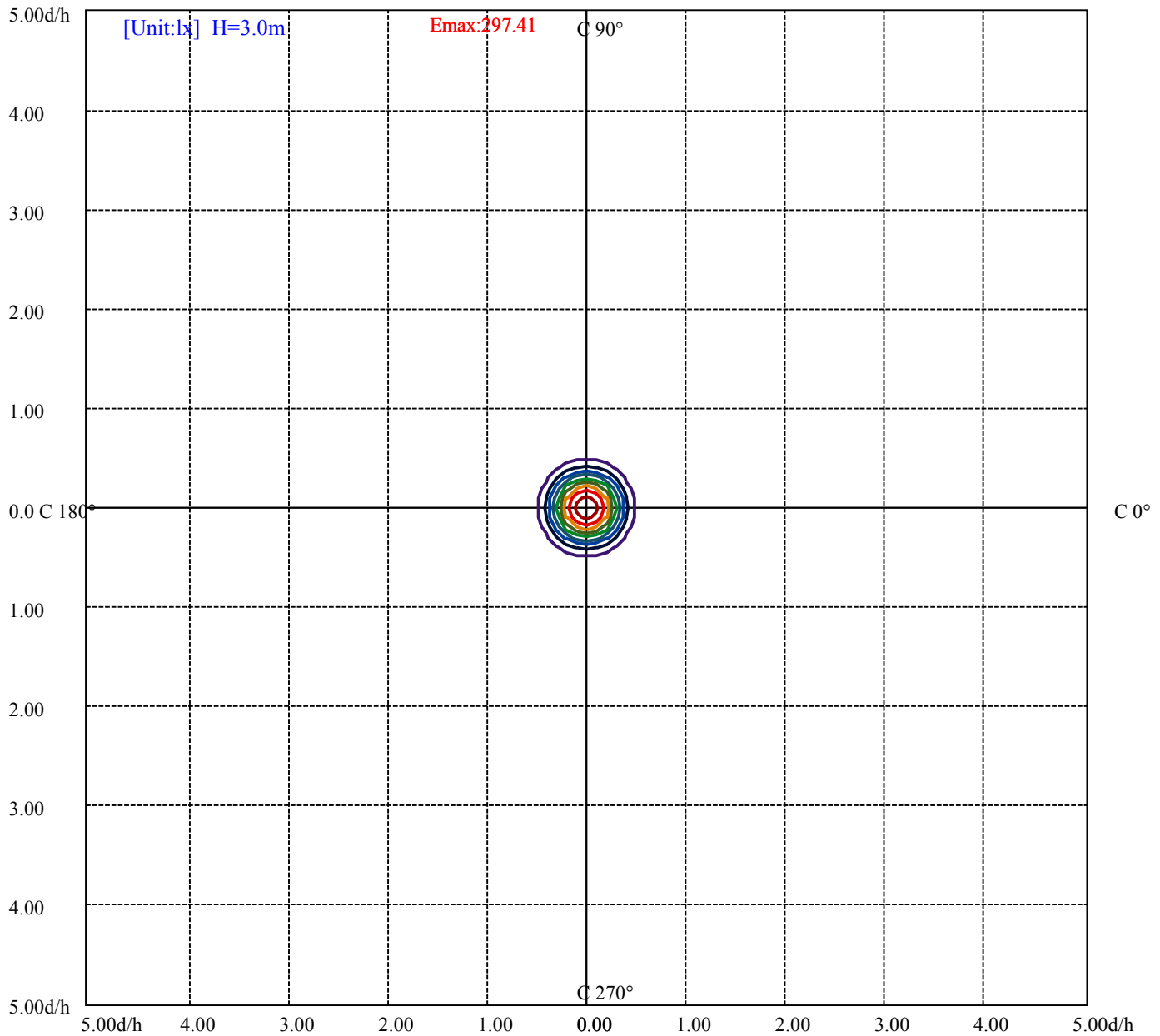
House

[Unit:cd]

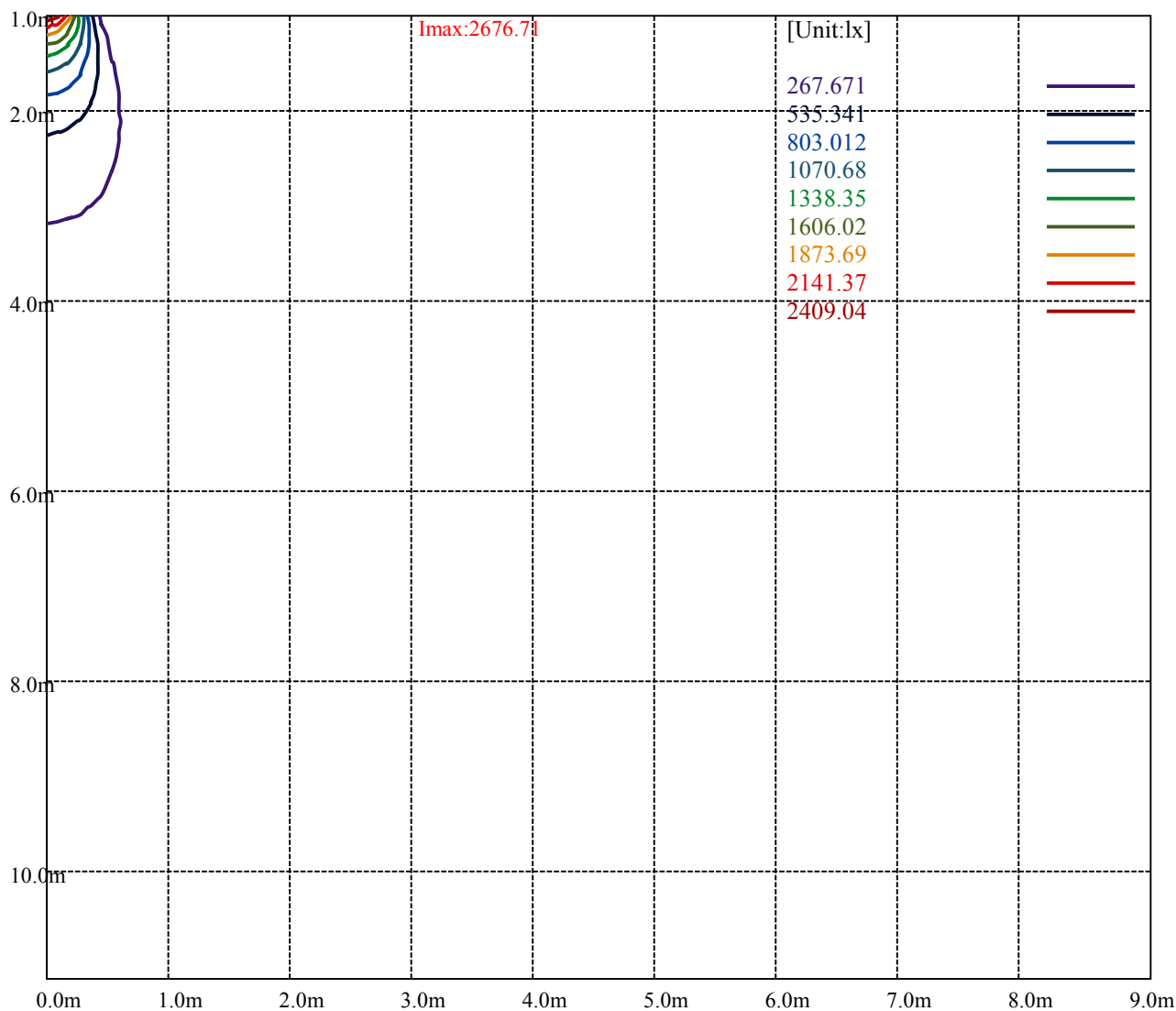
Road

Imax:2676.71

(10%Imax)	267.671	—
(20%Imax)	535.341	—
(30%Imax)	803.012	—
(40%Imax)	1070.68	—
(50%Imax)	1338.35	—
(60%Imax)	1606.02	—
(70%Imax)	1873.69	—
(80%Imax)	2141.37	—
(90%Imax)	2409.04	—



(10%Emax) 29.74111	—
(20%Emax) 59.48233	—
(30%Emax) 89.22344	—
(40%Emax) 118.9644	—
(50%Emax) 148.7056	—
(60%Emax) 178.4467	—
(70%Emax) 208.1878	—
(80%Emax) 237.9289	—
(90%Emax) 267.67	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

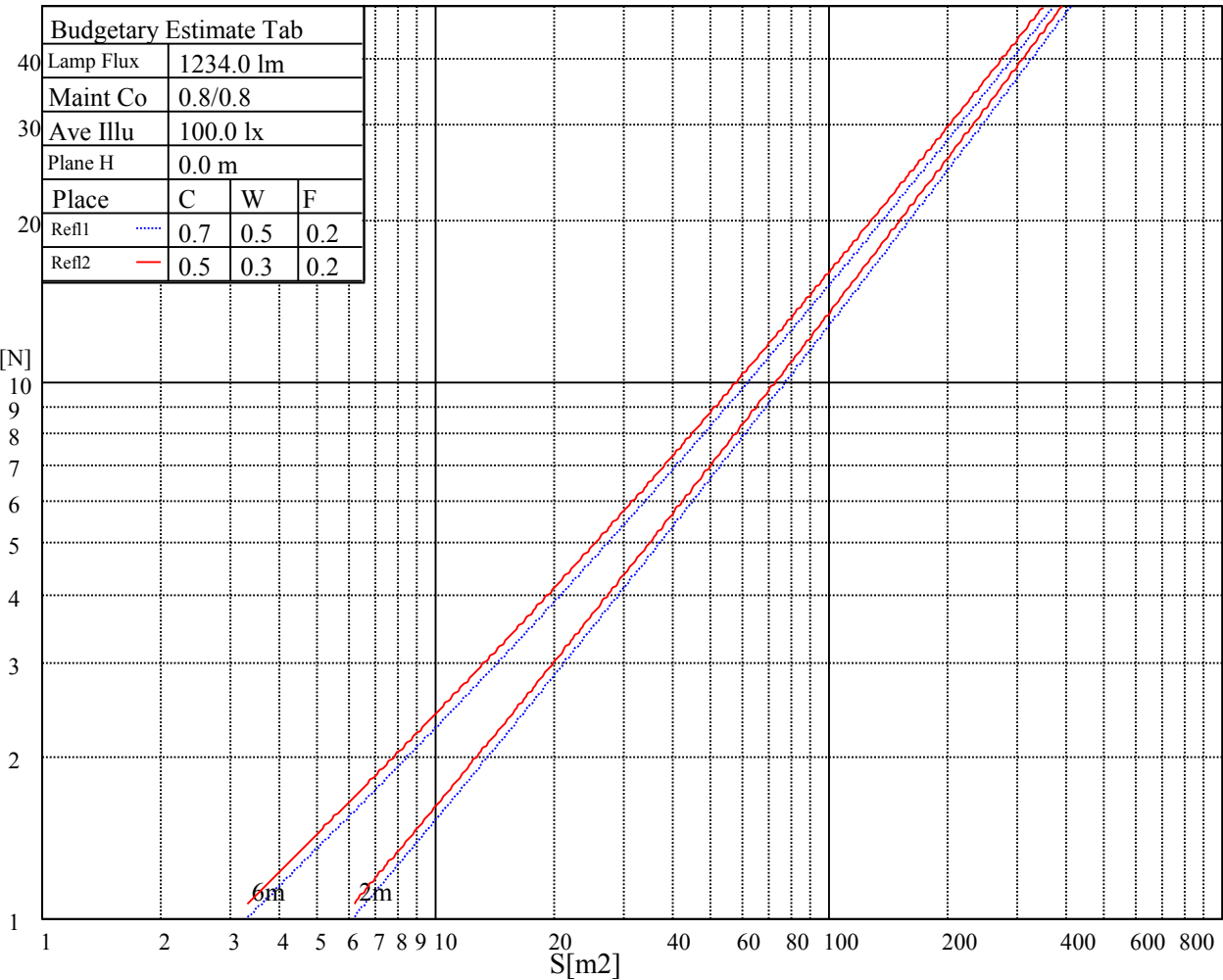
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

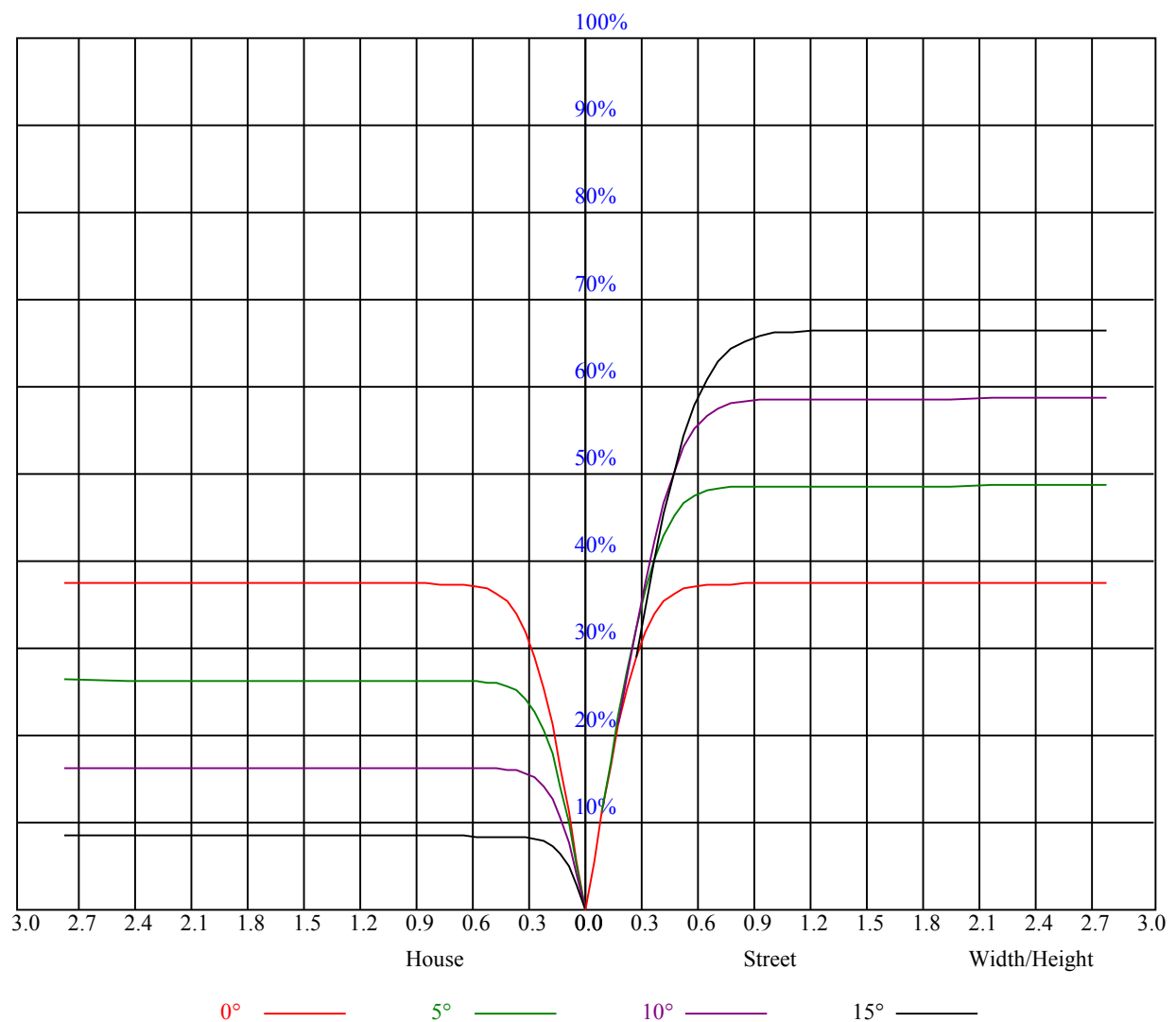
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

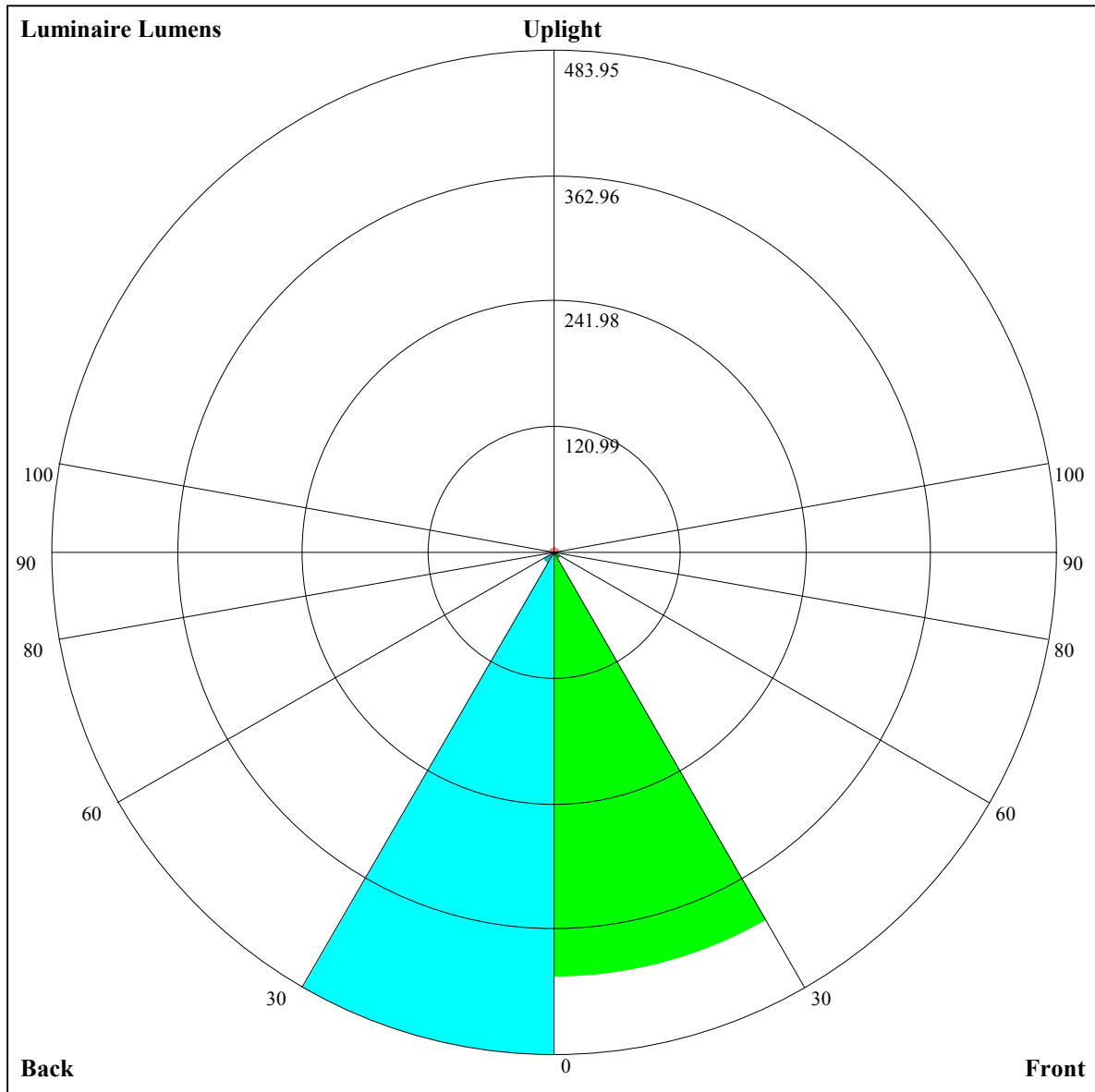
Luminance Limiting Curve





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	0.91	0.91	0.91	0.88	0.88	0.88	0.84	0.84	0.84	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.86	0.84	0.83	0.84	0.83	0.81	0.81	0.80	0.79	0.78	0.77	0.76	0.76	0.75	0.74	0.73
2	0.81	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.74	0.75	0.74	0.73	0.73	0.72	0.71	0.70
3	0.78	0.75	0.72	0.77	0.74	0.72	0.75	0.72	0.71	0.73	0.71	0.70	0.71	0.70	0.69	0.68
4	0.74	0.71	0.69	0.73	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.67	0.69	0.67	0.66	0.65
5	0.71	0.68	0.65	0.71	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
6	0.68	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.61	0.60
7	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.63	0.61	0.59	0.58
8	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.61	0.59	0.57	0.56
9	0.61	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.56	0.59	0.57	0.55	0.55
10	0.59	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.58	0.56	0.54	0.58	0.55	0.54	0.53





Luminaire Lumens:

FL=408.82,FM=7.48,FH=1.2,FVH=0.67

BL=483.95,BM=13.11,BH=1.21,BVH=0.62

UL=1.43,UH=6.81

BUG Rating:B1-U1-G0

Intensity data(cd)

Appendix Page: 15 Total:15

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2666.38	2476.59	2084.95	1473.82	665.98	89.28	11.23	3.53	2.46
45.0	2673.81	2641.32	2447.36	1996.78	1402.82	575.91	281.71	8.82	3.29
90.0	2699.79	2631.58	2360.12	1924.39	751.59	423.62	31.28	5.85	3.11
135.0	2666.85	2691.90	2547.13	2156.87	1639.48	849.69	333.22	11.04	3.62
180.0	2666.38	2671.95	2446.89	2112.33	1386.11	627.88	328.12	7.93	3.11
225.0	2673.81	2490.98	2149.91	1569.41	768.58	101.44	10.49	3.53	2.23
270.0	2699.79	2583.32	2228.33	1755.95	984.26	232.99	18.70	4.13	2.51
315.0	2666.85	2420.91	2019.52	889.27	544.13	49.19	7.89	3.20	2.13
360.0	2666.38	2476.59	2084.95	1473.82	665.98	89.28	11.23	3.53	2.46
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1.86	1.53	1.35	1.25	1.21	1.21	1.21	1.16	1.21
45.0	2.32	1.86	1.48	1.35	1.25	1.16	1.16	1.16	1.16
90.0	2.09	1.67	1.39	1.25	1.25	1.21	1.16	1.16	1.16
135.0	2.41	1.90	1.53	1.35	1.25	1.21	1.21	1.16	1.11
180.0	2.18	1.67	1.48	1.30	1.21	1.21	1.11	1.11	1.16
225.0	1.81	1.53	1.35	1.21	1.16	1.11	1.11	1.07	1.11
270.0	1.86	1.53	1.39	1.21	1.16	1.11	1.11	1.11	1.16
315.0	1.67	1.44	1.30	1.21	1.16	1.07	1.07	1.11	1.16
360.0	1.86	1.53	1.35	1.25	1.21	1.21	1.21	1.16	1.21
C/ γ (°)	90.0								
0.0	2.32								
45.0	1.25								
90.0	1.16								
135.0	1.11								
180.0	1.21								
225.0	1.16								
270.0	1.11								
315.0	1.16								
360.0	2.32								