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Nata

Client: NT

LumCAT: 11-0161-S5

Luminaire: 69-0031

Report No: 20260803-B012

Ballast type: DC

Test No: 20260803-C012

Voltage(V): 22.110

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1126.0

Power (W): 10.037

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1022.70, Efficiency(%): 90.83% , Luminous Efficacy(lm/W): 101.89

Central intensity(cd): 621.765, Maximum intensity(cd): 703.951

Angle of maximum intensity: C=0.0 γ =25.0

Beam Angle(50%Imax): [C0/180]Total=77.8

[C90/270]Total=77.2

Field angle(10%Imax): [C0/180]Total=92.7

[C90/270]Total=94.4

Maximum s/h(1/2): C0_180=1.44 C90_270=1.34

Maximum s/h(1/4): C0_180=1.22 C90_270=1.15

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.65%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.874%

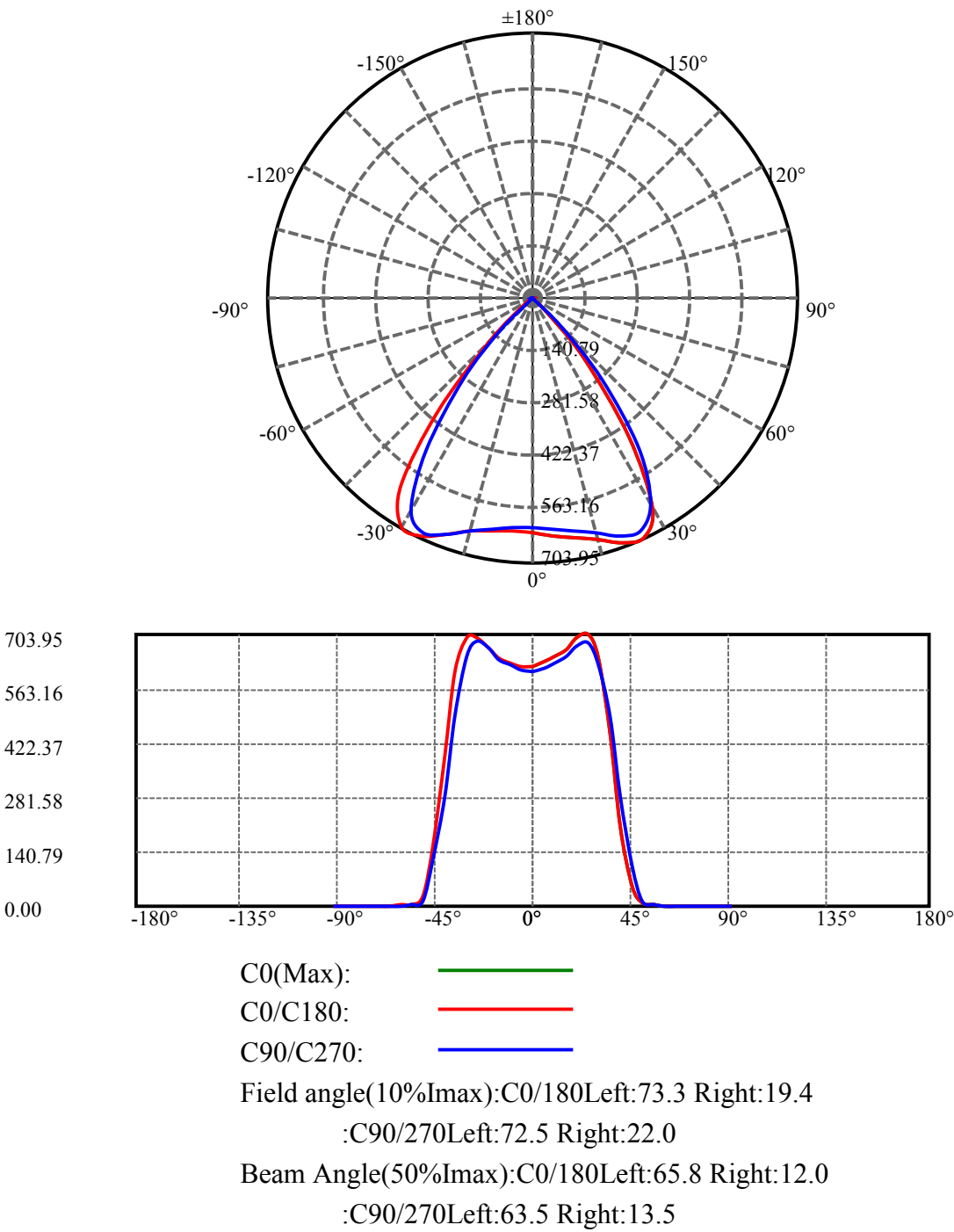
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	618.390	0.000	0	0.00%	0.00%
5.0	623.802	14.850	14.85	1.32%	1.45%
10.0	636.181	45.074	59.924	4.00%	5.86%
15.0	653.236	76.487	136.411	6.79%	13.34%
20.0	674.258	109.404	245.815	9.72%	24.04%
25.0	684.362	142.494	388.309	12.65%	37.97%
30.0	646.655	168.441	556.751	14.96%	54.44%
35.0	523.662	172.337	729.088	15.31%	71.29%
40.0	334.868	143.239	872.327	12.72%	85.30%
45.0	157.208	91.112	963.439	8.09%	94.21%
50.0	46.118	41.085	1004.524	3.65%	98.22%
55.0	9.575	12.110	1016.634	1.08%	99.41%
60.0	2.322	2.750	1019.384	0.24%	99.68%
65.0	1.312	0.883	1020.267	0.08%	99.76%
70.0	1.053	0.599	1020.866	0.05%	99.82%
75.0	0.920	0.516	1021.382	0.05%	99.87%
80.0	0.815	0.464	1021.846	0.04%	99.92%
85.0	0.767	0.430	1022.276	0.04%	99.96%
90.0	0.772	0.421	1022.697	0.04%	100.00%

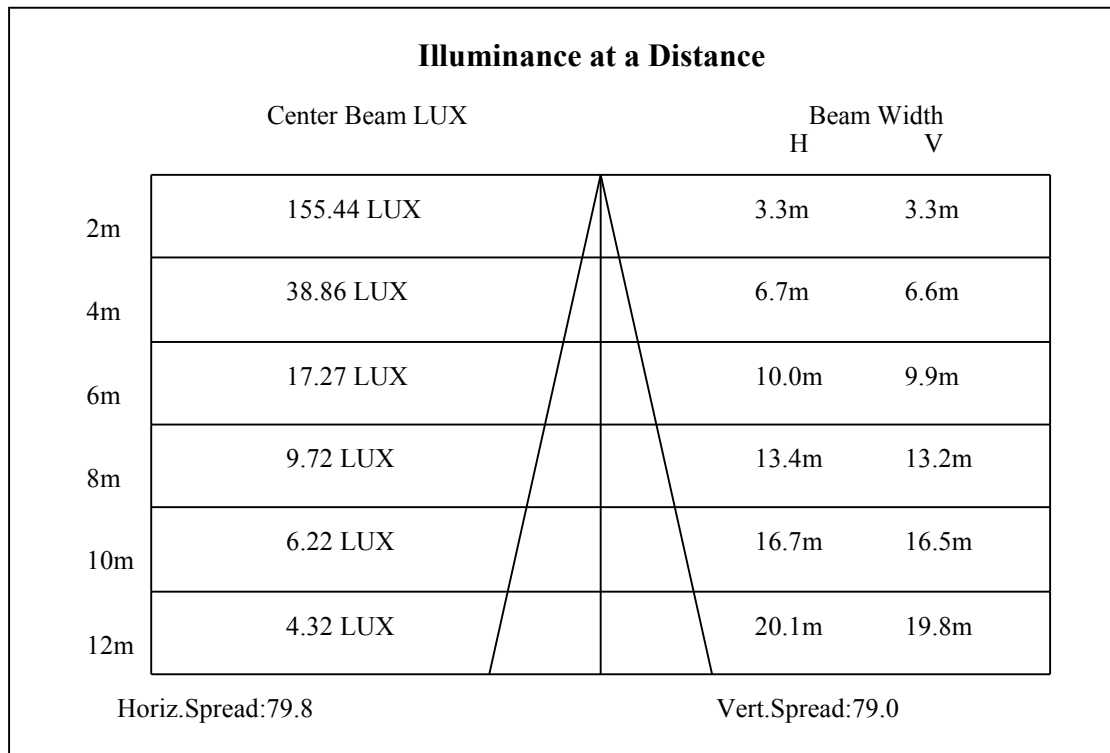
ZONAL LUMEN SUMMARY

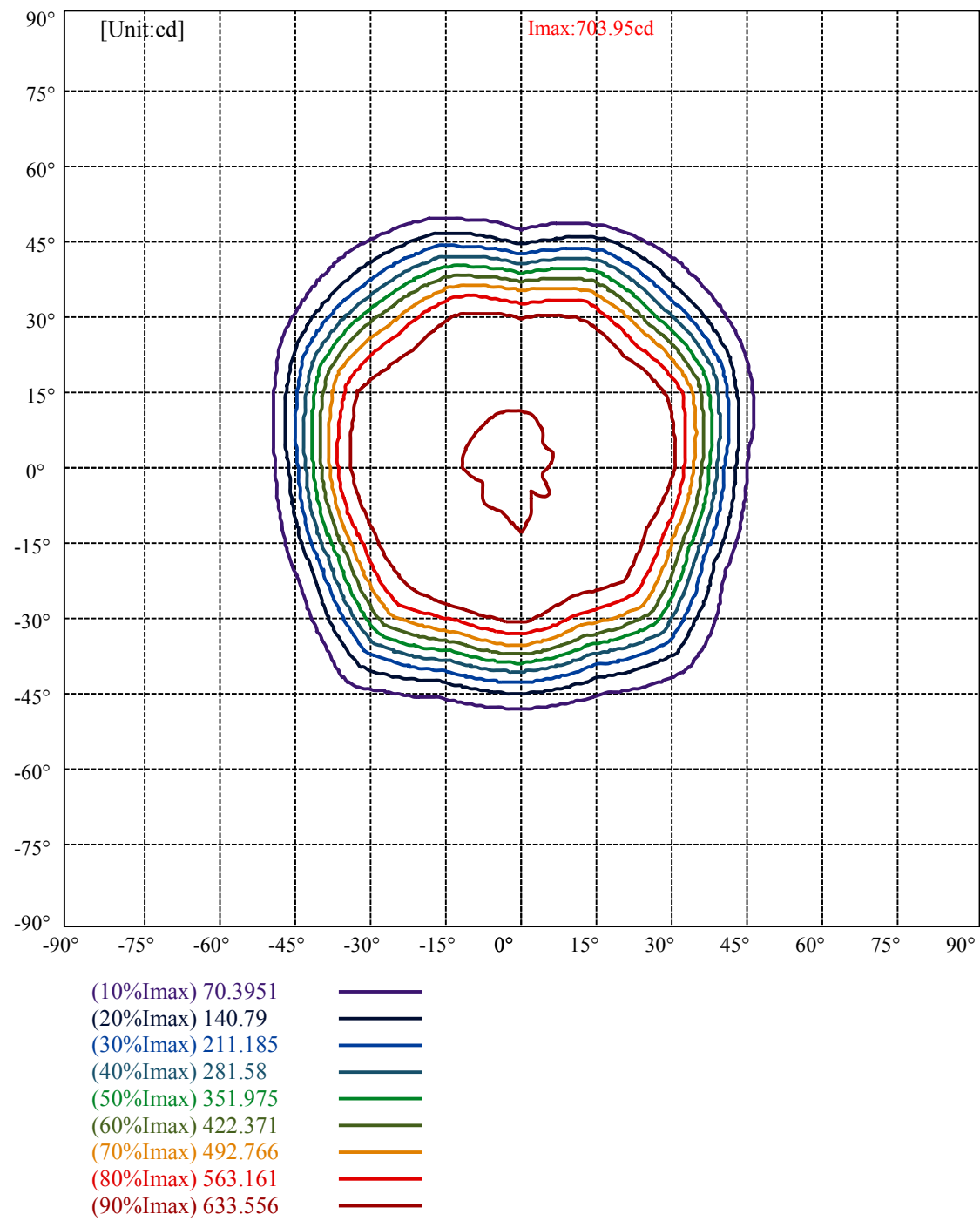
Zone	Lumens	%Lamp	%Fixt
0-30	556.75	49.44%	54.44%
0-40	872.33	77.47%	85.30%
0-60	1019.38	90.53%	99.68%
0-90	1022.28	90.79%	99.96%
0-120	1022.28	90.79%	99.96%
0-180	1022.70	90.83%	100.00%
60-90	2.89	0.26%	0.28%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-38.11	818.16	72.66%	80.00%

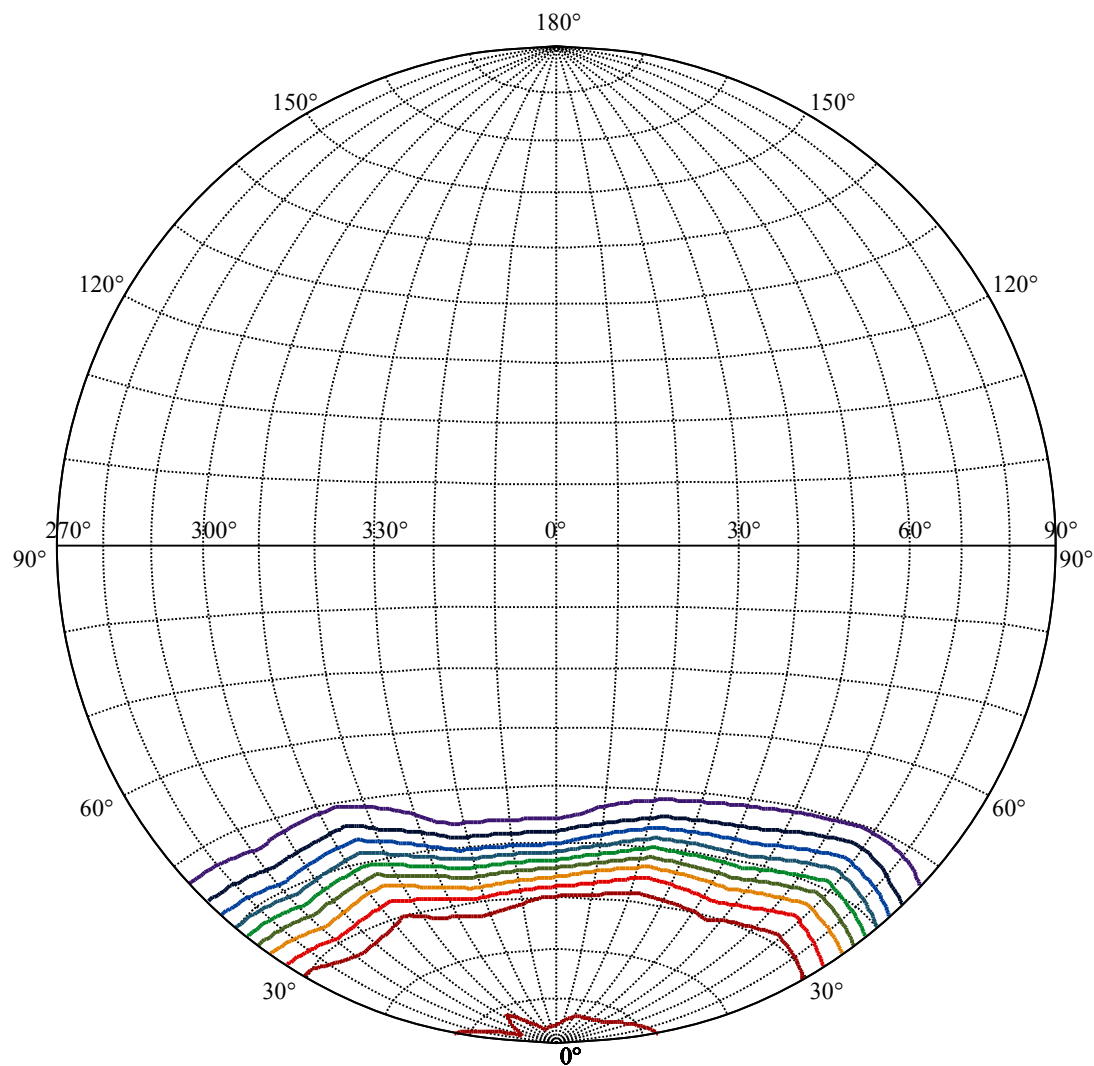
ZONAL LUMEN SUMMARY

0-10	59.92
10-20	185.89
20-30	310.94
30-40	315.58
40-50	132.20
50-60	14.86
60-70	1.48
70-80	0.98
80-90	0.43
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







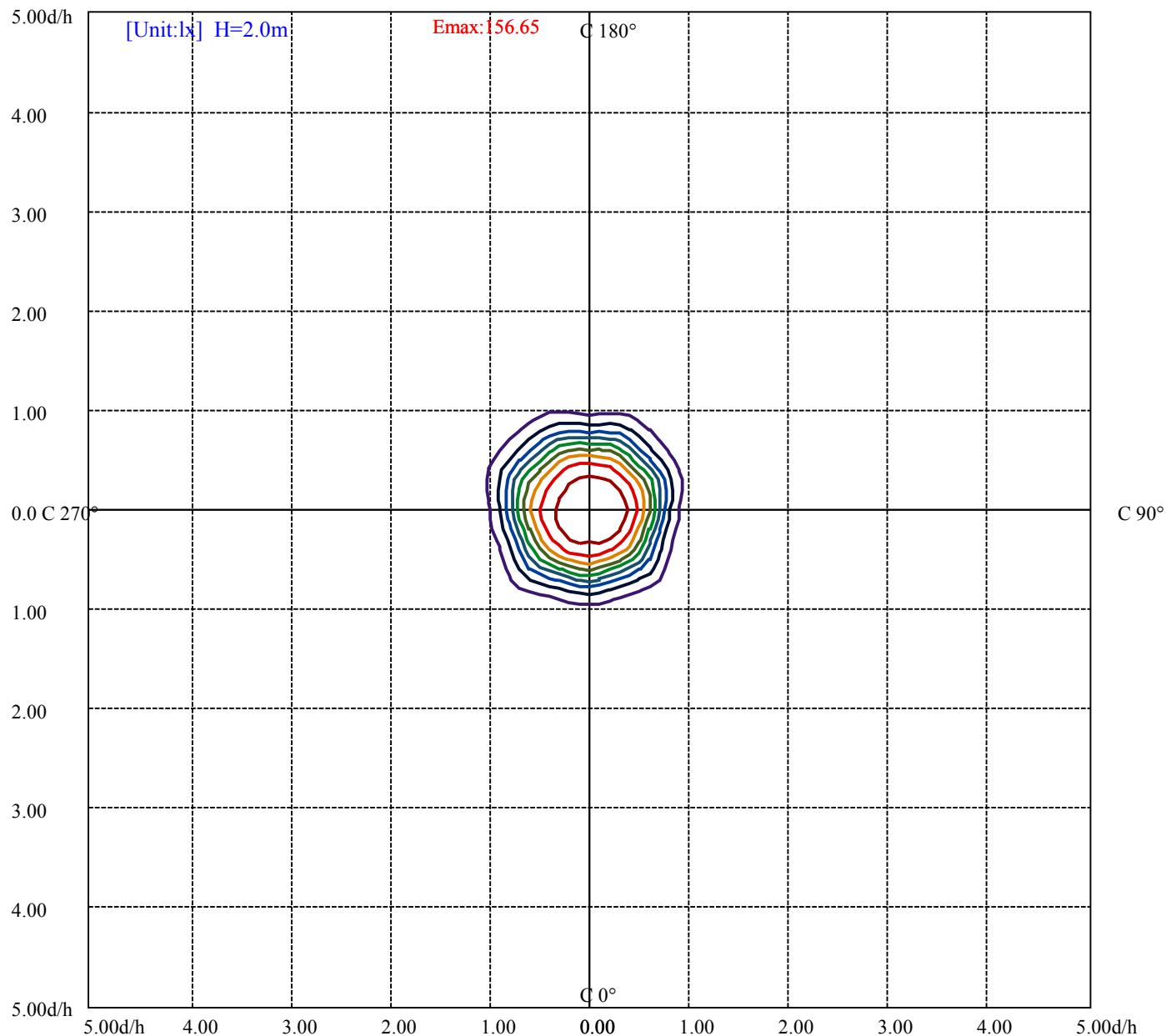


House

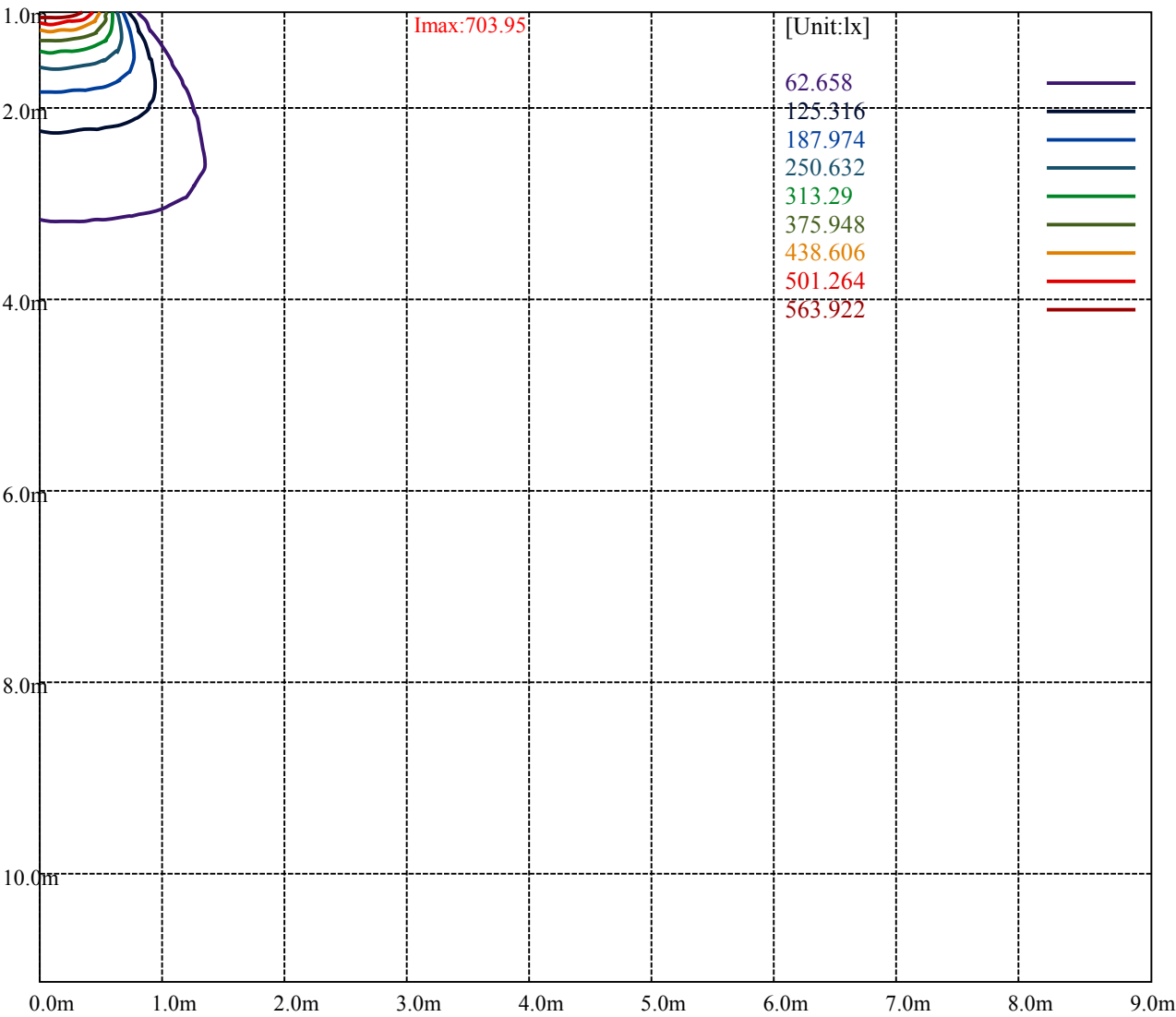
[Unit:cd]

Road

Imax:703.95	
(10%Imax) 70.2512	
(20%Imax) 140.502	
(30%Imax) 210.754	
(40%Imax) 281.005	
(50%Imax) 351.256	
(60%Imax) 421.507	
(70%Imax) 491.758	
(80%Imax) 562.01	
(90%Imax) 632.261	



(10%Emax)	15.6645	
(20%Emax)	31.329	
(30%Emax)	46.9935	
(40%Emax)	62.658	
(50%Emax)	78.3225	
(60%Emax)	93.987	
(70%Emax)	109.6515	
(80%Emax)	125.316	
(90%Emax)	140.9805	



Luminance Table

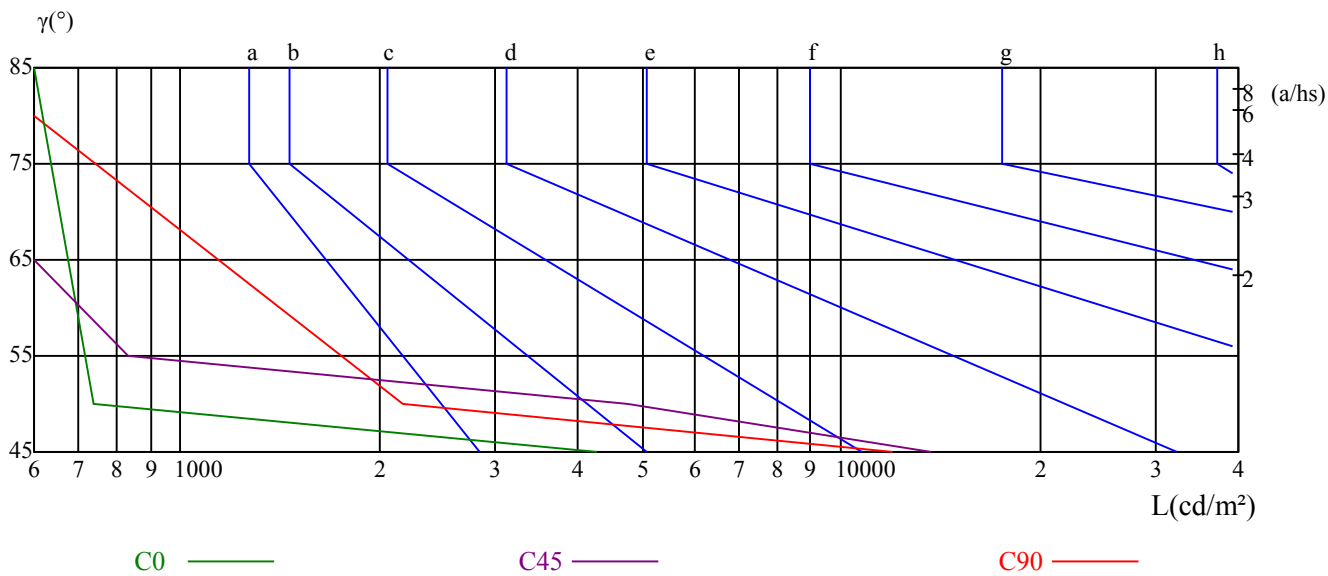
γ	45	50	55	60	65	70	75	80	85
C0	4275	737	0	0	0	0	0	0	116
C45	13701	4761	835	0	134	126	0	119	139
C90	11970	2167	0	0	0	0	0	310	0

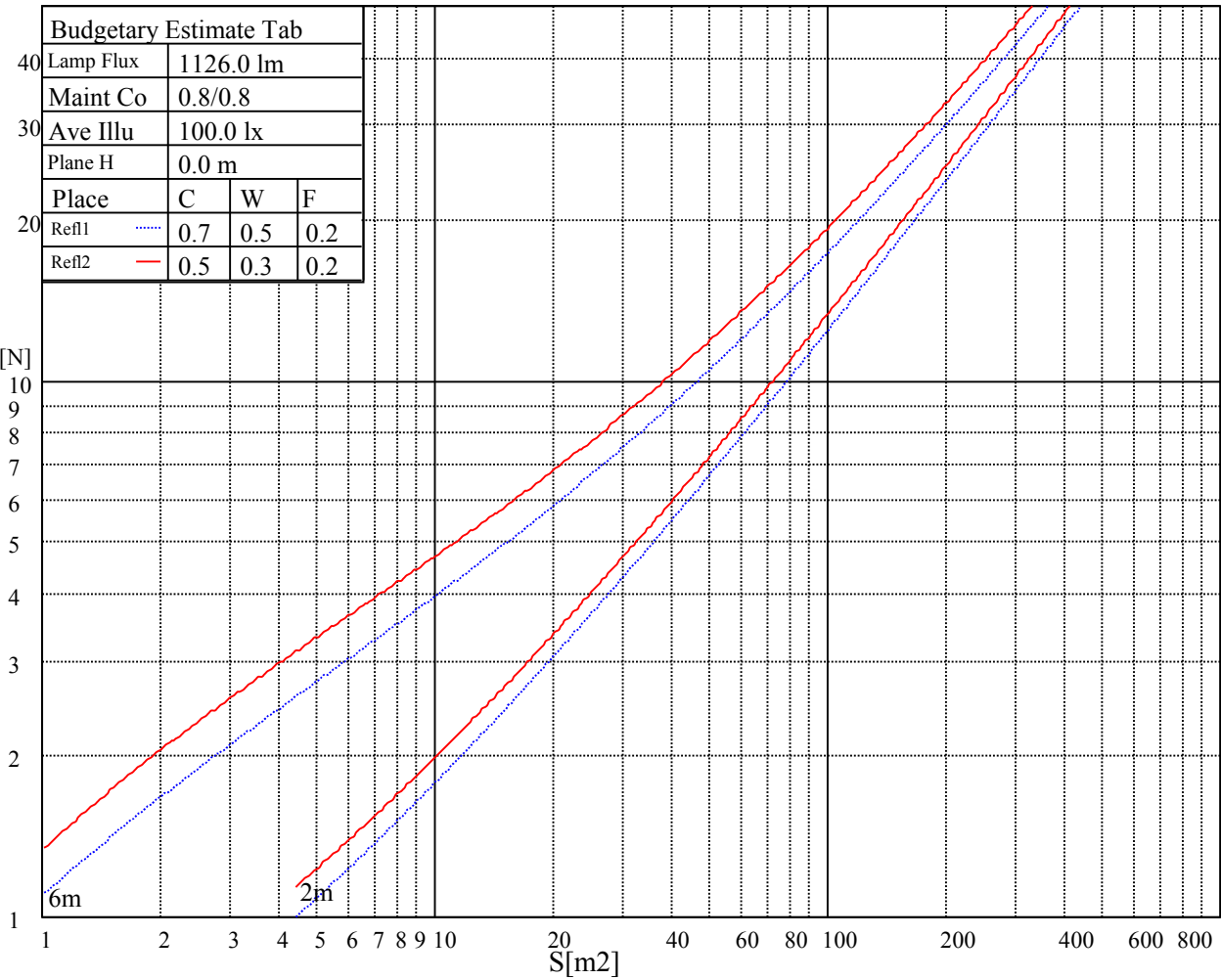
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	63	0	161	168	390	390	607

Glare Table

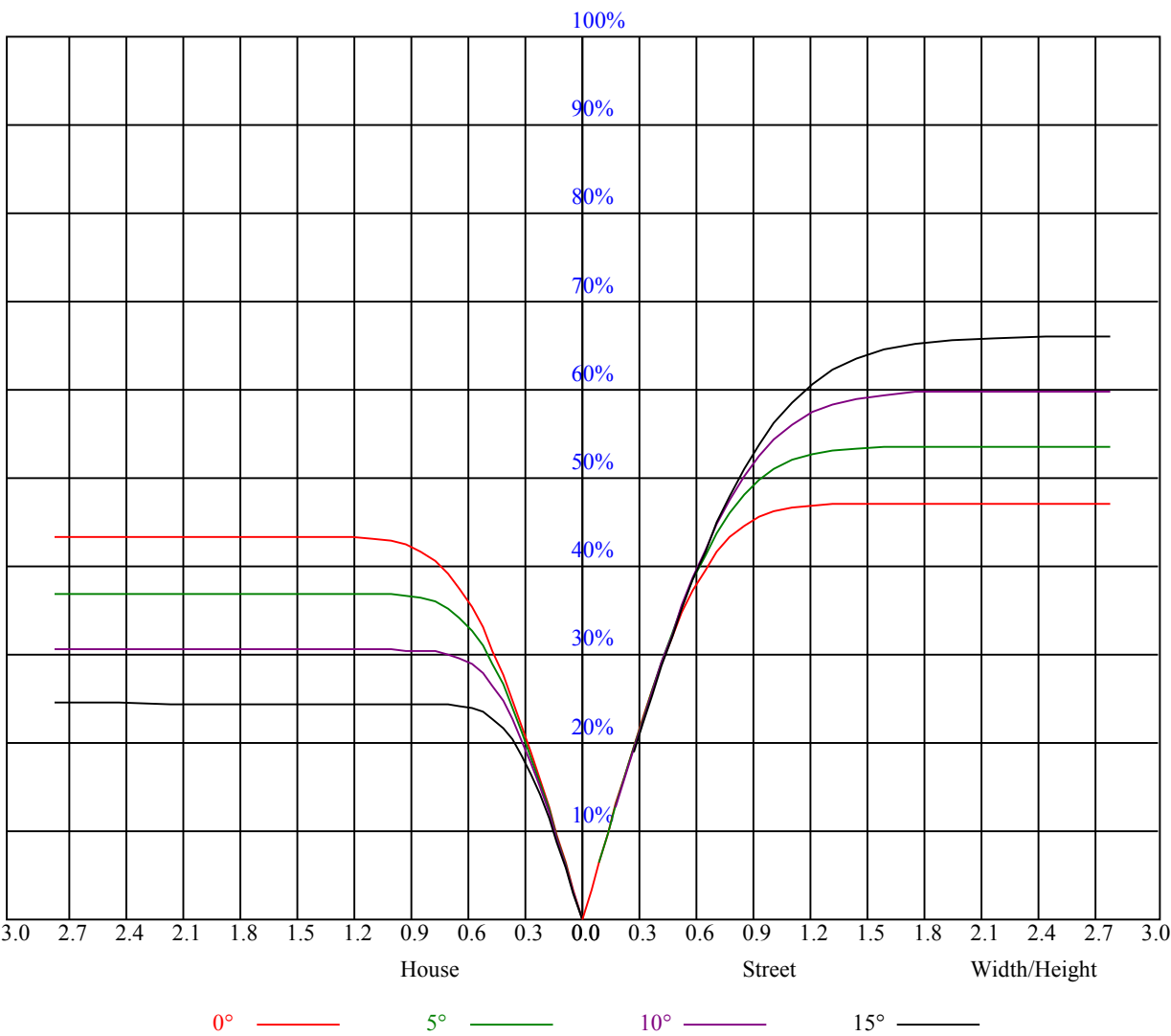
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

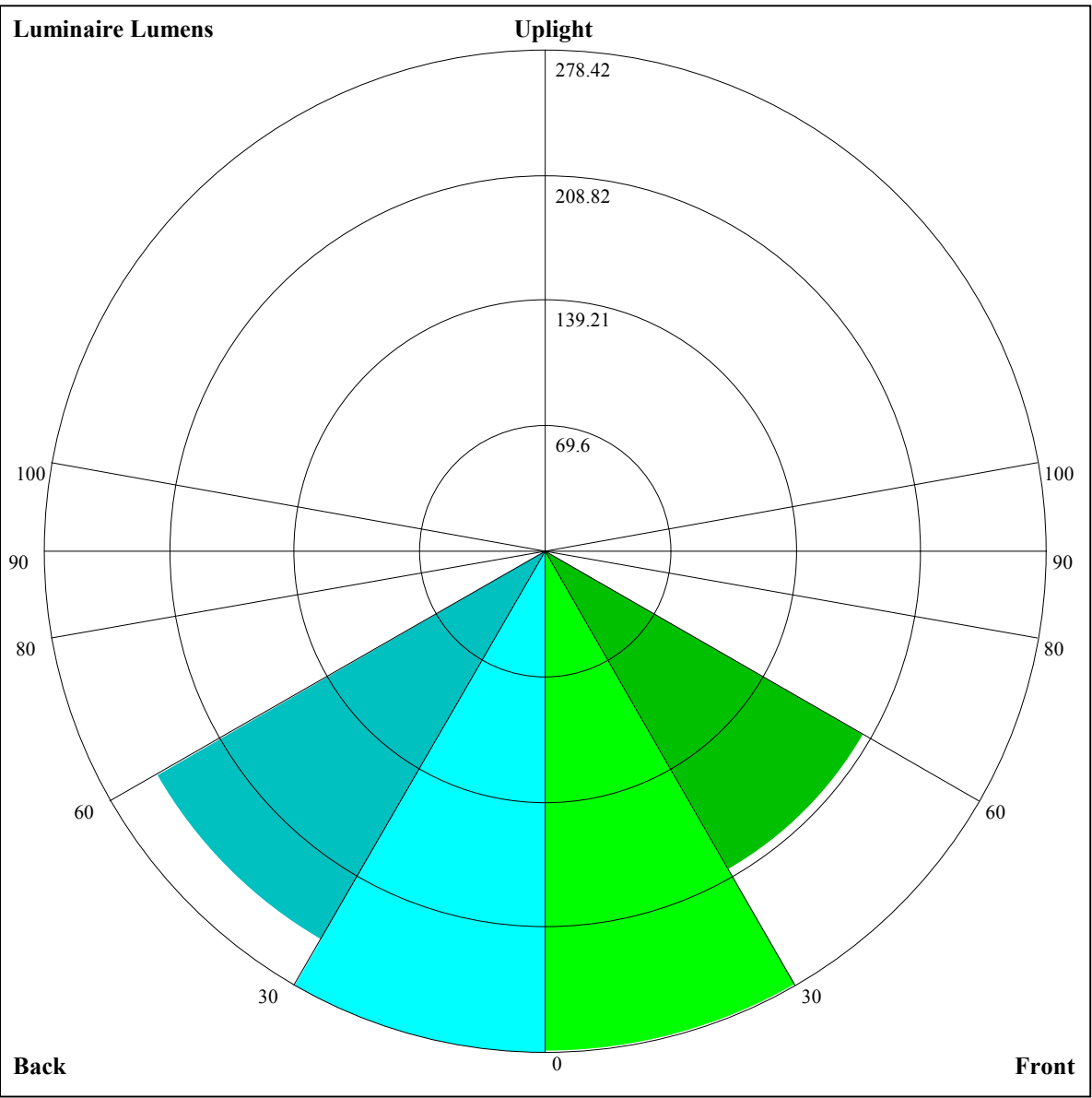
Luminance Limiting Curve





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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.08	1.08	1.08	1.05	1.05	1.05	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.91
1	1.00	0.97	0.95	0.98	0.96	0.94	0.94	0.92	0.91	0.91	0.89	0.88	0.88	0.86	0.85	0.84
2	0.92	0.88	0.84	0.90	0.87	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.77
3	0.85	0.80	0.76	0.83	0.79	0.75	0.81	0.77	0.74	0.79	0.75	0.73	0.76	0.74	0.71	0.70
4	0.78	0.72	0.68	0.77	0.72	0.68	0.75	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.65	0.64
5	0.72	0.66	0.62	0.71	0.66	0.61	0.69	0.65	0.61	0.68	0.64	0.60	0.66	0.63	0.60	0.58
6	0.67	0.60	0.56	0.66	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.53
7	0.62	0.56	0.51	0.61	0.55	0.51	0.60	0.55	0.51	0.59	0.54	0.51	0.58	0.53	0.50	0.49
8	0.57	0.51	0.47	0.57	0.51	0.47	0.56	0.50	0.47	0.55	0.50	0.47	0.54	0.50	0.46	0.45
9	0.53	0.47	0.43	0.53	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.41
10	0.50	0.44	0.40	0.49	0.44	0.40	0.49	0.43	0.40	0.48	0.43	0.40	0.47	0.43	0.40	0.38





Luminaire Lumens:

FL=277.91,FM=204.02,FH=1.14,FVH=0.43

BL=278.42,BM=249.34,BH=1.31,BVH=0.43

UL=0,UH=0

BUG Rating:B1-U0-G0

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	621.77	632.68	645.63	665.69	693.12	703.95	640.72	447.58	206.86
22.5	619.82	628.20	641.23	656.38	679.41	692.61	672.97	556.00	350.49
45.0	620.24	630.48	644.45	661.21	676.87	675.60	626.34	501.49	314.69
67.5	614.82	621.34	634.80	648.26	669.67	685.75	662.05	559.81	390.61
90.0	608.65	616.18	628.88	647.24	674.07	682.03	624.47	488.80	283.54
112.5	620.75	619.56	628.45	643.86	669.25	692.19	675.68	589.26	417.95
135.0	616.09	617.28	629.81	646.56	662.48	673.23	649.27	564.29	417.28
157.5	624.98	620.50	629.21	643.18	658.08	678.47	685.41	636.07	495.82
180.0	621.77	620.41	629.04	642.50	668.49	697.10	696.93	606.45	390.19
202.5	619.82	624.81	639.37	658.84	678.56	695.91	665.78	540.68	329.00
225.0	620.24	620.41	632.85	649.70	666.46	683.30	663.66	580.38	429.89
247.5	614.82	621.09	635.65	659.68	685.41	690.15	631.84	473.65	282.87
270.0	608.65	612.20	624.98	640.22	668.74	685.50	645.89	493.11	283.54
292.5	620.75	634.29	645.63	662.56	677.29	667.81	586.05	426.08	236.15
315.0	616.09	625.49	638.78	652.15	669.33	671.62	633.02	512.92	339.83
337.5	624.98	635.90	650.12	673.73	690.92	674.58	586.39	402.04	189.17
360.0	621.77	632.68	645.63	665.69	693.12	703.95	640.72	447.58	206.86

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	51.80	8.13	3.64	1.35	1.10	0.85	0.76	0.68	0.76
22.5	150.91	32.92	5.76	2.37	1.18	1.02	0.85	0.76	0.76
45.0	150.66	53.49	9.99	1.95	1.18	1.02	0.93	0.76	0.76
67.5	211.60	61.79	7.62	2.71	1.52	1.18	1.02	0.85	0.85
90.0	104.70	12.70	4.06	1.86	1.35	1.02	0.93	0.85	0.76
112.5	237.08	92.68	12.53	3.55	1.69	1.27	1.02	0.93	0.85
135.0	240.72	104.02	29.03	3.22	1.44	1.18	1.02	0.85	0.85
157.5	287.61	105.63	18.11	4.23	1.78	1.18	1.02	0.85	0.76
180.0	158.19	24.21	6.26	2.54	1.27	1.02	0.85	0.76	0.68
202.5	133.31	26.32	4.82	1.78	1.10	1.02	0.85	0.76	0.68
225.0	241.65	103.51	28.52	3.39	1.44	1.10	0.93	0.85	0.76
247.5	113.84	17.94	3.89	1.61	1.18	1.02	0.93	0.85	0.76
270.0	121.04	12.78	3.64	1.78	1.27	1.02	0.93	0.85	0.76
292.5	96.07	13.54	3.05	1.52	1.18	1.02	0.93	0.85	0.76
315.0	168.26	61.70	9.65	2.03	1.27	1.02	0.93	0.85	0.76
337.5	47.91	6.52	2.62	1.27	1.02	0.93	0.85	0.76	0.76
360.0	51.80	8.13	3.64	1.35	1.10	0.85	0.76	0.68	0.76

C/ γ (°)	90.0
0.0	0.76
22.5	0.76
45.0	0.76
67.5	0.76
90.0	0.76
112.5	0.85
135.0	0.76
157.5	0.76
180.0	0.68
202.5	0.76
225.0	0.76
247.5	0.76
270.0	0.76
292.5	0.85
315.0	0.85
337.5	0.76
360.0	0.76