
AFX

Client:

LumCAT: ELZP42LAJD4SN

Luminaire: LED Lamp

Report No:

Ballast type:

Test No:

Voltage(V): 119.980

LampCAT:

Current(A): 0.204

Lamp flux(lm): 2396.6

Power (W): 24.180

Number of Lamps: 1

PF: 0.986

Length(mm): 1040

Width(mm): 15

Phm Type: C

Height(mm): 10

Photometric Results

Lumens(lm): 2396.62, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 99.12

Central intensity(cd): 652.102, Maximum intensity(cd): 654.794

Angle of maximum intensity: C=75.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=108.8

[C90/270]Total=134.3

Field angle(10%Imax): [C0/180]Total=158.6

[C90/270]Total=238.1

Maximum s/h(1/2): C0_180=1.23 C90_270=1.34

Maximum s/h(1/4): C0_180=1.35 C90_270=1.49

Up flux rate of lamp(%): 10.47%

Down flux rate of lamp(%): 89.53%

Up flux rate of LUM(%): 10.47%

Down flux rate of LUM(%): 89.53%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 62.721%

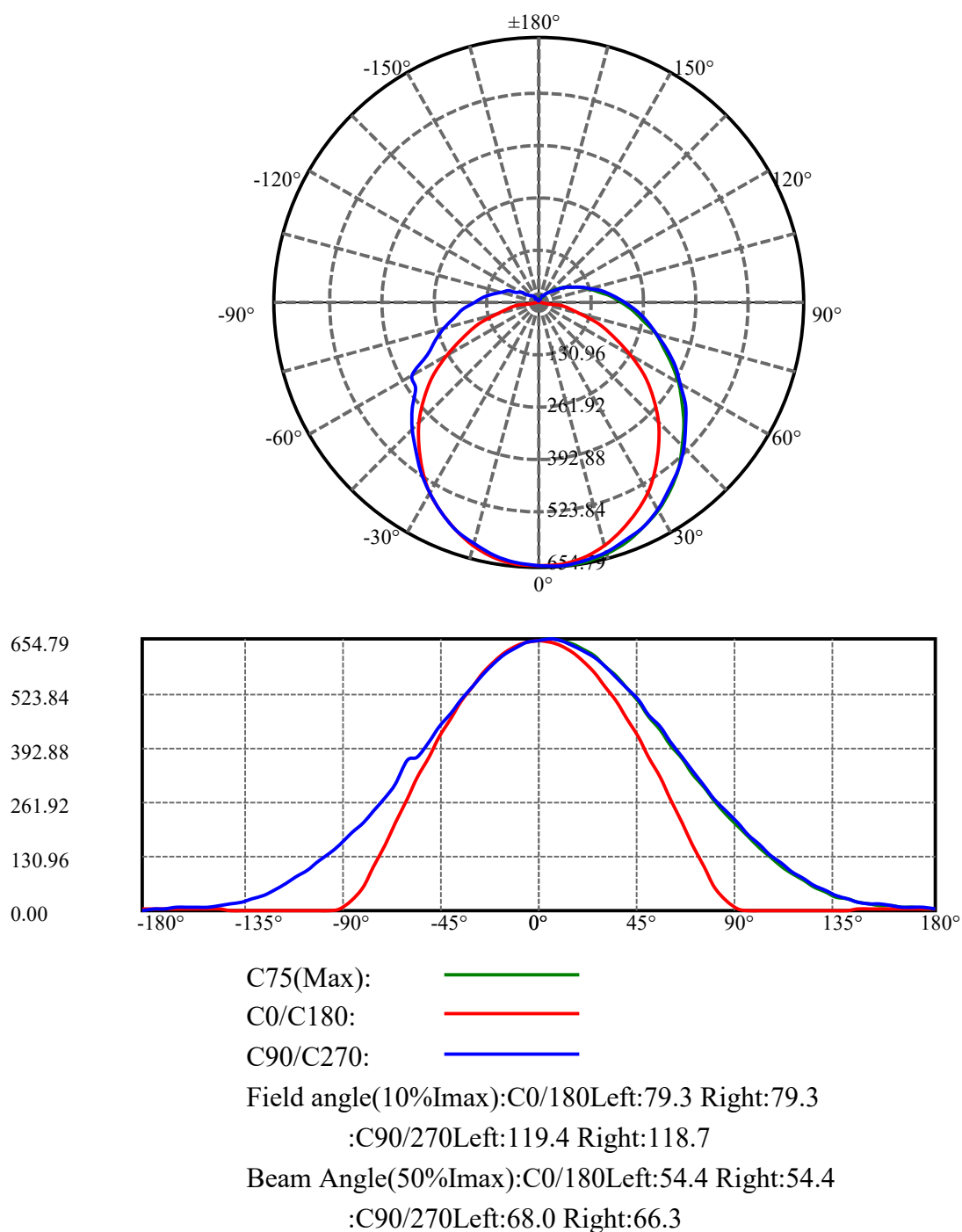
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	652.102	0.000	0	0.00%	0.00%
5.0	649.036	15.555	15.555	0.65%	0.65%
10.0	640.477	46.130	61.685	1.92%	2.57%
15.0	625.785	75.114	136.798	3.13%	5.71%
20.0	606.486	101.556	238.355	4.24%	9.95%
25.0	581.781	124.627	362.982	5.20%	15.15%
30.0	553.142	143.625	506.608	5.99%	21.14%
35.0	520.652	158.124	664.731	6.60%	27.74%
40.0	485.204	167.820	832.551	7.00%	34.74%
45.0	446.063	172.432	1004.983	7.19%	41.93%
50.0	405.350	172.040	1177.023	7.18%	49.11%
55.0	363.996	167.281	1344.305	6.98%	56.09%
60.0	323.353	158.879	1503.183	6.63%	62.72%
65.0	280.474	146.791	1649.975	6.12%	68.85%
70.0	239.834	131.745	1781.72	5.50%	74.34%
75.0	201.477	115.351	1897.072	4.81%	79.16%
80.0	167.085	98.617	1995.689	4.11%	83.27%
85.0	136.054	82.370	2078.059	3.44%	86.71%
90.0	111.158	67.688	2145.747	2.82%	89.53%
95.0	90.973	55.345	2201.092	2.31%	91.84%
100.0	74.639	45.001	2246.093	1.88%	93.72%
105.0	60.738	36.223	2282.316	1.51%	95.23%
110.0	49.007	28.686	2311.001	1.20%	96.43%
115.0	39.257	22.349	2333.35	0.93%	97.36%
120.0	31.375	17.171	2350.521	0.72%	98.08%
125.0	24.615	12.942	2363.463	0.54%	98.62%
130.0	18.938	9.470	2372.933	0.40%	99.01%
135.0	14.755	6.808	2379.741	0.28%	99.30%
140.0	11.768	4.911	2384.652	0.20%	99.50%
145.0	9.863	3.609	2388.261	0.15%	99.65%
150.0	8.407	2.690	2390.951	0.11%	99.76%
155.0	7.586	2.024	2392.975	0.08%	99.85%
160.0	6.577	1.485	2394.461	0.06%	99.91%
165.0	6.017	1.038	2395.498	0.04%	99.95%
170.0	5.233	0.667	2396.166	0.03%	99.98%
175.0	4.934	0.364	2396.529	0.02%	100.00%
180.0	2.318	0.087	2396.616	0.00%	100.00%

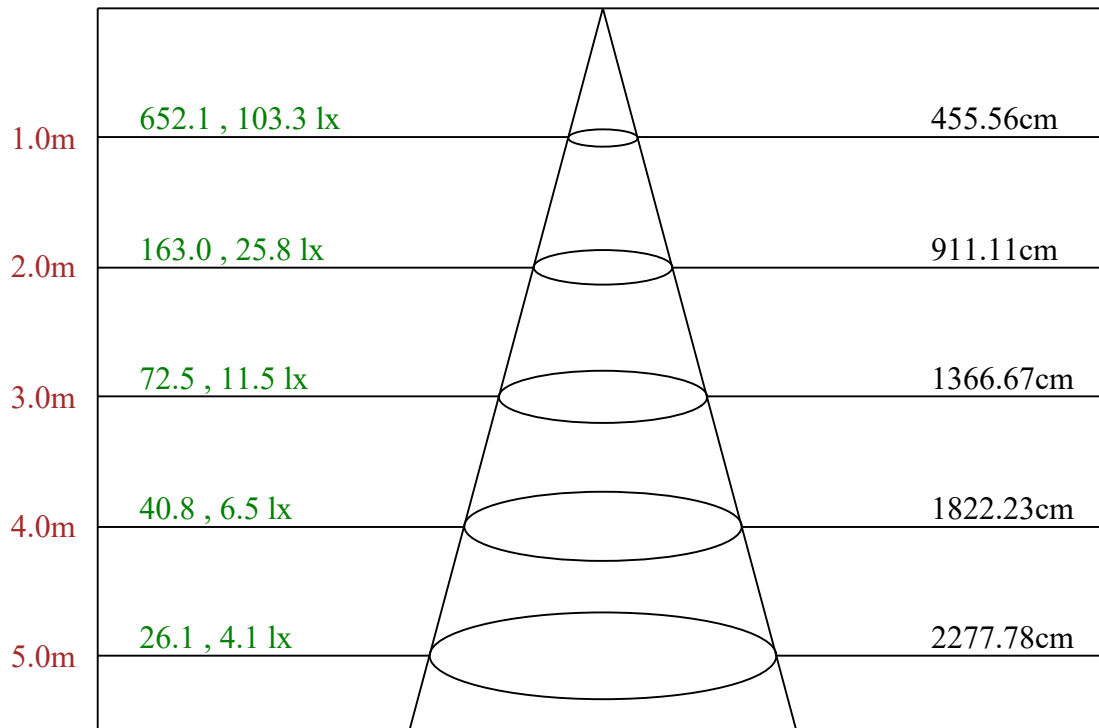
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	506.61	21.14%	21.14%
0-40	832.55	34.74%	34.74%
0-60	1503.18	62.72%	62.72%
0-90	2145.75	89.53%	89.53%
0-120	2350.52	98.08%	98.08%
0-180	2396.62	100.00%	100.00%
60-90	642.56	26.81%	26.81%
90-120	204.77	8.54%	8.54%
90-130	227.19	9.48%	9.48%
90-150	245.20	10.23%	10.23%
90-180	250.78	10.46%	10.46%
0-76.03	1917.29	80.00%	80.00%

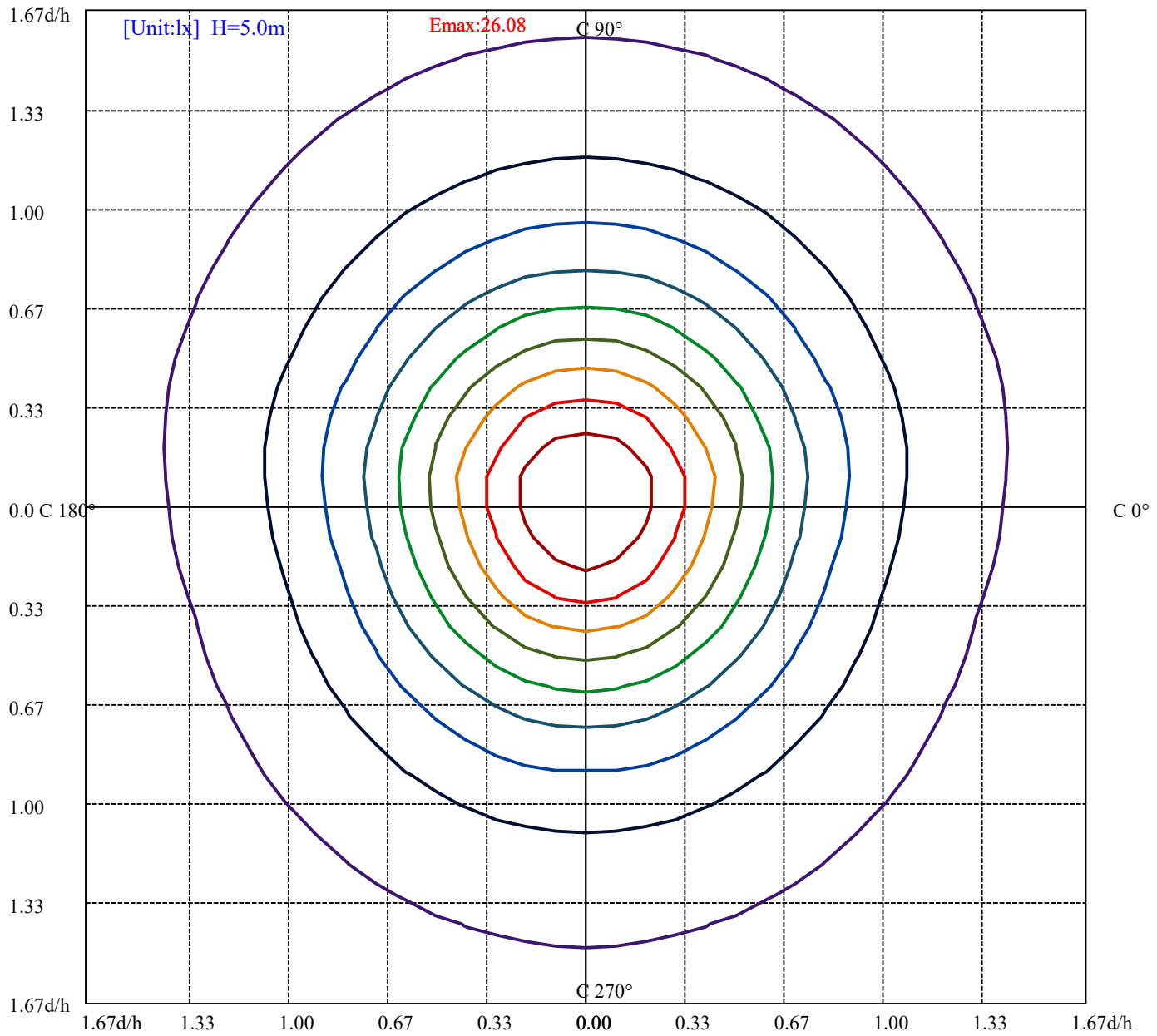
ZONAL LUMEN SUMMARY

0-10	61.68
10-20	176.67
20-30	268.25
30-40	325.94
40-50	344.47
50-60	326.16
60-70	278.54
70-80	213.97
80-90	150.06
90-100	100.35
100-110	64.91
110-120	39.52
120-130	22.41
130-140	11.72
140-150	6.30
150-160	3.51
160-170	1.71
170-180	0.36

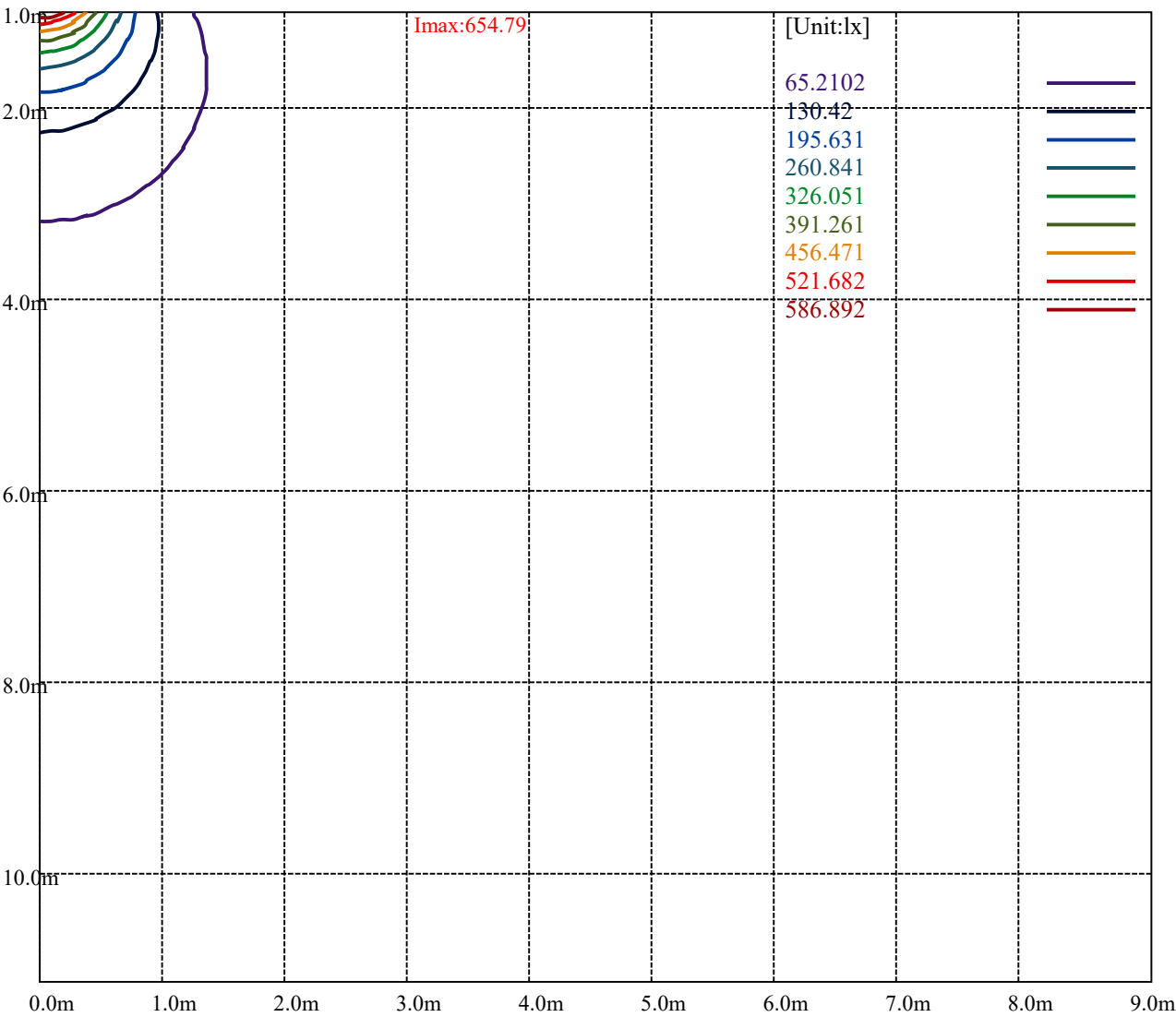




Max , Ave Beam angle of C75 plane 132.59



(10%Emax) 2.608408	—
(20%Emax) 5.2168	—
(30%Emax) 7.82524	—
(40%Emax) 10.43364	—
(50%Emax) 13.04204	—
(60%Emax) 15.65044	—
(70%Emax) 18.25884	—
(80%Emax) 20.86728	—
(90%Emax) 23.47568	—



Luminance Table

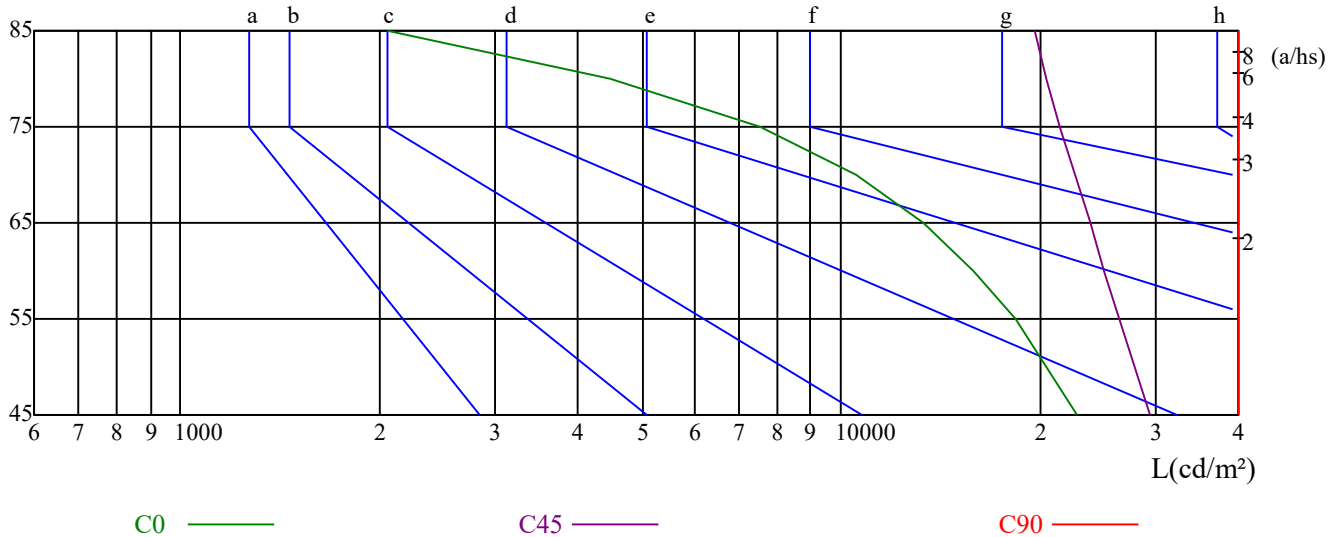
γ	45	50	55	60	65	70	75	80	85
C0	22764	20527	18334	15892	13300	10554	7548	4483	2058
C45	29361	27931	26484	25069	23913	22628	21451	20412	19618
C90	45639	46592	48650	51142	55094	61331	72404	94438	159827

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
32315	51149	43495	26328	67258	52558	17739	157354	109668

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

 $\gamma(^{\circ})$ 

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	1.17	1.17	1.17	1.13	1.13	1.13	1.05	1.05	1.05	0.99	0.99	0.99	0.92	0.92	0.92	0.90
1	0.98	0.93	0.89	0.95	0.90	0.86	0.89	0.85	0.82	0.83	0.80	0.77	0.78	0.75	0.73	0.70
2	0.85	0.77	0.71	0.82	0.75	0.69	0.76	0.71	0.66	0.72	0.67	0.63	0.67	0.63	0.60	0.57
3	0.74	0.65	0.58	0.71	0.63	0.57	0.67	0.60	0.54	0.63	0.57	0.52	0.59	0.54	0.50	0.47
4	0.65	0.56	0.49	0.63	0.54	0.48	0.59	0.52	0.46	0.55	0.49	0.44	0.52	0.47	0.42	0.40
5	0.58	0.48	0.42	0.56	0.47	0.41	0.53	0.45	0.39	0.50	0.43	0.38	0.47	0.41	0.37	0.34
6	0.52	0.43	0.36	0.50	0.42	0.35	0.47	0.40	0.34	0.45	0.38	0.33	0.42	0.37	0.32	0.30
7	0.47	0.38	0.32	0.46	0.37	0.31	0.43	0.36	0.30	0.41	0.34	0.29	0.39	0.33	0.28	0.26
8	0.43	0.34	0.28	0.42	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.30	0.25	0.23
9	0.39	0.31	0.25	0.38	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.23	0.33	0.27	0.23	0.21
10	0.36	0.28	0.23	0.35	0.28	0.22	0.33	0.27	0.22	0.32	0.26	0.21	0.30	0.25	0.21	0.19

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	652.10	653.89	650.32	636.92	619.94	594.04	566.35	532.40	493.99
15.0	652.10	654.80	650.30	640.39	624.18	600.76	572.84	541.32	504.39
30.0	652.10	653.89	649.41	638.67	622.54	601.94	575.07	542.82	507.89
45.0	652.10	653.90	652.10	643.11	629.62	608.93	584.64	556.76	524.38
60.0	652.10	653.90	652.10	646.71	633.21	614.32	590.94	562.16	533.37
75.0	652.10	655.70	654.80	646.71	634.11	617.02	594.54	567.55	540.57
90.0	652.10	654.78	649.42	638.70	627.98	611.90	589.57	562.77	535.97
105.0	652.10	653.89	648.53	640.49	627.09	609.22	586.00	562.77	531.51
120.0	652.10	652.10	648.53	638.70	624.41	603.86	579.75	552.95	520.79
135.0	652.10	651.20	645.82	634.16	618.91	596.49	570.48	540.88	505.00
150.0	652.10	653.00	647.59	634.06	597.99	592.57	563.71	529.44	491.56
165.0	652.10	651.20	643.11	629.62	608.93	584.64	554.06	518.08	474.01
180.0	652.10	643.17	628.88	607.44	581.53	550.27	514.54	475.23	431.46
195.0	652.10	644.90	630.49	609.77	583.65	550.32	516.10	475.57	430.53
210.0	652.10	642.25	625.23	605.52	577.76	549.09	512.37	476.54	432.64
225.0	652.10	641.31	628.72	608.03	584.64	555.86	521.68	485.70	447.93
240.0	652.10	644.01	630.52	611.63	588.24	560.36	531.58	497.40	462.32
255.0	652.10	644.01	632.31	614.32	591.84	566.65	536.97	506.39	471.31
270.0	652.10	646.74	635.13	616.37	597.61	570.81	541.33	509.18	475.23
285.0	652.10	646.74	631.56	614.58	594.93	568.13	541.33	510.07	501.14
300.0	652.10	644.96	633.34	615.48	609.22	566.35	537.76	505.60	468.98
315.0	652.10	644.03	633.27	615.33	591.11	563.30	534.60	498.72	461.05
330.0	652.10	646.69	634.97	616.93	595.28	564.61	531.24	494.26	451.87
345.0	652.10	645.81	635.01	615.22	590.94	561.26	527.98	491.10	447.03
360.0	652.10	653.89	650.32	636.92	619.94	594.04	566.35	532.40	493.99
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	452.00	405.55	359.10	307.29	253.69	199.20	146.50	90.22	44.66
15.0	462.06	417.02	369.28	321.55	267.51	217.07	168.43	121.59	80.16
30.0	468.47	426.37	386.07	341.28	295.60	249.02	208.71	167.50	133.47
45.0	486.60	448.83	408.35	366.98	328.30	289.62	250.05	213.17	179.89
60.0	498.30	465.92	428.14	392.16	353.48	316.61	280.63	247.35	214.07
75.0	507.29	474.01	439.83	403.85	370.57	333.70	300.42	267.14	236.56
90.0	508.28	472.55	441.29	405.55	370.72	335.88	302.83	269.77	241.19
105.0	500.24	465.40	430.57	394.83	359.10	326.94	292.11	260.84	230.47
120.0	485.95	450.22	414.49	378.76	339.45	302.83	267.99	234.04	205.46
135.0	470.91	430.55	389.29	348.03	310.35	269.09	232.32	197.33	165.04
150.0	451.87	406.77	363.48	320.19	275.09	229.09	187.60	150.62	115.45
165.0	434.43	391.26	341.79	293.22	241.95	191.58	144.81	98.94	62.06
180.0	385.01	333.20	281.39	226.90	172.41	119.70	66.10	25.91	3.57
195.0	385.50	336.86	284.62	235.98	184.64	136.00	93.67	59.45	34.23
210.0	391.44	345.76	300.97	257.08	213.19	175.57	135.26	106.59	81.51
225.0	410.15	366.08	327.40	285.13	249.15	213.17	179.89	150.21	124.12
240.0	425.44	387.66	349.89	313.01	277.03	242.85	214.07	182.59	158.30
255.0	436.23	402.95	366.08	331.90	297.72	266.24	234.76	227.56	179.89
270.0	442.18	407.34	370.72	362.68	303.72	270.67	240.30	212.60	186.70
285.0	441.29	404.66	369.82	334.09	298.36	267.09	235.83	206.35	179.55
300.0	432.35	393.94	358.21	320.69	284.07	249.23	217.07	188.48	159.01
315.0	421.58	379.42	338.16	296.90	259.23	219.76	186.57	155.18	127.37
330.0	407.68	364.38	314.78	271.48	226.39	184.00	145.21	110.94	84.78
345.0	400.26	351.69	302.22	250.95	199.68	151.11	104.34	65.66	37.78
360.0	452.00	405.55	359.10	307.29	253.69	199.20	146.50	90.22	44.66

Intensity data(cd)

C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	9.83	0.89	0.89	0.89	0.00	0.00	0.89	0.89	0.89
15.0	49.54	29.72	17.11	10.81	7.21	5.40	4.50	4.50	4.50
30.0	103.01	77.93	58.22	43.00	32.25	24.19	17.91	14.33	10.75
45.0	150.21	124.12	102.54	80.95	64.76	50.37	39.58	30.58	23.39
60.0	187.09	159.20	134.92	111.53	91.74	74.65	59.36	47.67	35.98
75.0	206.87	180.79	153.81	131.32	109.73	89.95	72.86	58.46	45.87
90.0	211.71	184.02	158.11	134.89	113.45	92.90	76.82	61.64	48.24
105.0	201.88	173.30	150.07	126.85	105.41	86.65	70.57	57.17	44.66
120.0	176.87	150.07	125.95	105.41	85.76	70.57	56.28	43.77	33.95
135.0	138.13	112.12	92.39	73.55	58.30	45.75	35.88	27.81	21.53
150.0	89.29	66.74	49.61	36.08	27.06	20.74	15.33	12.63	9.92
165.0	35.98	20.69	11.69	8.10	5.40	4.50	4.50	4.50	3.60
180.0	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	0.89
195.0	19.82	12.61	9.01	7.21	5.40	5.40	4.50	4.50	3.60
210.0	60.01	44.79	33.14	25.08	17.91	14.33	11.64	8.96	7.17
225.0	101.64	80.95	65.66	51.27	40.48	30.58	28.78	17.99	13.49
240.0	133.12	111.53	91.74	75.55	60.26	47.67	36.88	27.88	21.59
255.0	154.71	131.32	109.73	90.84	74.65	59.36	46.77	35.98	26.98
270.0	159.90	137.57	116.13	96.48	79.50	63.42	50.02	38.41	28.59
285.0	154.54	131.31	110.77	91.12	73.25	58.96	46.45	34.84	25.91
300.0	134.89	111.66	92.90	75.04	59.85	47.34	35.73	27.69	20.55
315.0	104.05	82.52	64.58	50.23	39.47	29.60	22.42	17.04	12.56
330.0	62.23	46.00	33.37	24.35	18.04	13.53	9.92	8.12	7.22
345.0	20.69	11.69	7.20	5.40	4.50	4.50	3.60	3.60	2.70
360.0	9.83	0.89	0.89	0.89	0.00	0.00	0.89	0.89	0.89
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.89	1.79	2.68	3.57	3.57	4.47	4.47	4.47	4.47
15.0	4.50	4.50	4.50	4.50	5.40	4.50	5.40	4.50	4.50
30.0	8.96	8.06	8.06	8.06	8.06	6.27	6.27	5.37	5.37
45.0	17.99	14.39	11.69	10.79	9.89	8.10	7.20	6.30	5.40
60.0	27.88	21.59	17.09	13.49	11.69	9.89	8.99	6.30	5.40
75.0	35.08	26.98	20.69	16.19	13.49	10.79	8.99	7.20	5.40
90.0	37.52	28.59	22.33	16.97	14.29	11.61	9.83	7.15	6.25
105.0	33.95	25.91	20.55	16.08	13.40	10.72	8.93	7.15	6.25
120.0	25.91	20.55	16.08	13.40	11.61	9.83	8.93	7.15	6.25
135.0	17.04	13.45	11.66	9.87	9.87	8.07	7.18	6.28	5.38
150.0	8.12	8.12	8.12	8.12	7.22	6.31	6.31	5.41	5.41
165.0	3.60	3.60	4.50	4.50	5.40	4.50	5.40	4.50	4.50
180.0	0.89	0.89	1.79	2.68	2.68	3.57	3.57	4.47	4.47
195.0	3.60	2.70	2.70	2.70	2.70	2.70	3.60	4.50	4.50
210.0	6.27	6.27	5.37	5.37	4.48	4.48	3.58	4.48	4.48
225.0	10.79	8.99	8.10	7.20	6.30	5.40	4.50	4.50	4.50
240.0	16.19	11.69	9.89	8.10	7.20	6.30	5.40	4.50	4.50
255.0	19.79	15.29	11.69	9.89	8.10	7.20	6.30	4.50	4.50
270.0	21.44	16.08	12.51	9.83	8.04	7.15	6.25	4.47	4.47
285.0	19.65	15.19	11.61	8.93	8.04	7.15	6.25	4.47	4.47
300.0	15.19	11.61	9.83	8.04	7.15	6.25	5.36	4.47	4.47
315.0	9.87	8.07	7.18	6.28	6.28	5.38	4.48	4.48	4.48
330.0	6.31	5.41	5.41	4.51	4.51	3.61	3.61	4.51	4.51
345.0	2.70	2.70	2.70	2.70	2.70	3.60	3.60	4.50	4.50
360.0	0.89	1.79	2.68	3.57	3.57	4.47	4.47	4.47	4.47

Intensity data(cd)

C/ γ (°)	180.0
0.0	4.47
15.0	5.40
30.0	4.48
45.0	4.50
60.0	5.40
75.0	4.50
90.0	4.47
105.0	4.47
120.0	4.47
135.0	4.48
150.0	4.51
165.0	4.50
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	4.47