
Light Blue USA-Rayhil

Client:

LumCAT: LB85190

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.187

Lamp flux(lm): 2953.5

Power (W): 22.070

Number of Lamps: 1

PF: 0.986

Length(mm): 610

Width(mm): 110

Phm Type: C

Height(mm): 50

Photometric Results

Lumens(lm): 2953.45, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 133.82

Central intensity(cd): 791.464, Maximum intensity(cd): 791.464

Angle of maximum intensity: C=75.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=133.2

[C90/270]Total=111.8

Field angle(10%Imax): [C0/180]Total=239.8

[C90/270]Total=159.0

Maximum s/h(1/2): C0_180=1.30 C90_270=1.25

Maximum s/h(1/4): C0_180=1.44 C90_270=1.37

Up flux rate of lamp(%): 11.09%

Down flux rate of lamp(%): 88.91%

Up flux rate of LUM(%): 11.09%

Down flux rate of LUM(%): 88.91%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 62.510%

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Zonal flux distribution table

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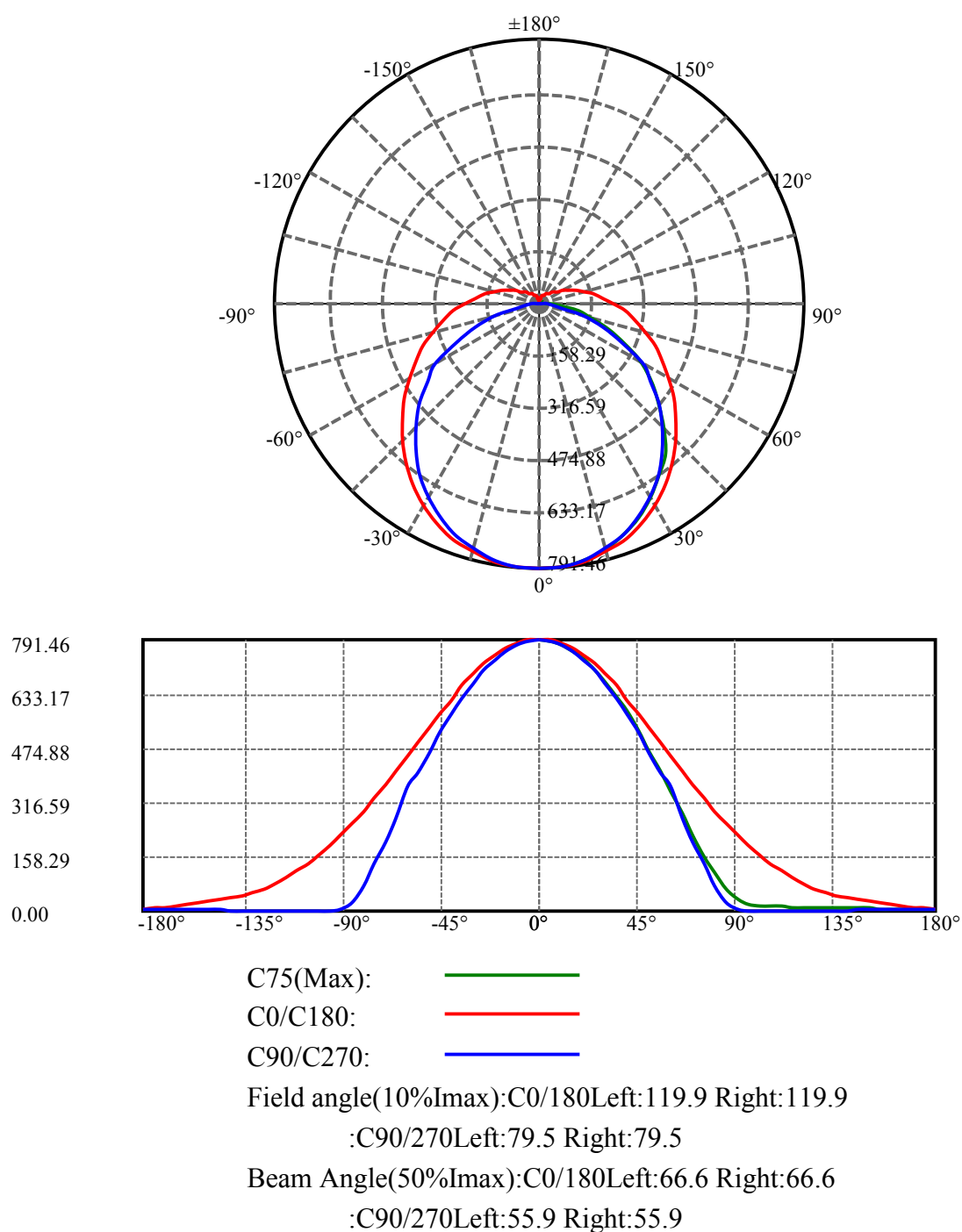
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	791.464	0.000	0	0.00%	0.00%
5.0	788.770	18.891	18.891	0.64%	0.64%
10.0	779.753	56.111	75.002	1.90%	2.54%
15.0	763.782	91.561	166.564	3.10%	5.64%
20.0	742.165	124.111	290.675	4.20%	9.84%
25.0	713.180	152.639	443.314	5.17%	15.01%
30.0	679.487	176.243	619.557	5.97%	20.98%
35.0	639.993	194.303	813.859	6.58%	27.56%
40.0	597.704	206.500	1020.36	6.99%	34.55%
45.0	549.068	212.334	1232.694	7.19%	41.74%
50.0	499.427	211.864	1444.558	7.17%	48.91%
55.0	448.284	206.064	1650.621	6.98%	55.89%
60.0	397.789	195.567	1846.189	6.62%	62.51%
65.0	343.634	180.241	2026.43	6.10%	68.61%
70.0	292.479	161.068	2187.498	5.45%	74.07%
75.0	244.400	140.332	2327.829	4.75%	78.82%
80.0	201.532	119.319	2447.148	4.04%	82.86%
85.0	161.618	98.677	2545.825	3.34%	86.20%
90.0	131.390	80.228	2626.053	2.72%	88.91%
95.0	107.842	65.504	2691.557	2.22%	91.13%
100.0	89.459	53.612	2745.168	1.82%	92.95%
105.0	73.470	43.595	2788.764	1.48%	94.42%
110.0	60.657	35.059	2823.822	1.19%	95.61%
115.0	50.458	28.135	2851.957	0.95%	96.56%
120.0	42.609	22.625	2874.582	0.77%	97.33%
125.0	36.060	18.184	2892.766	0.62%	97.95%
130.0	30.963	14.573	2907.339	0.49%	98.44%
135.0	26.981	11.708	2919.047	0.40%	98.84%
140.0	23.967	9.433	2928.481	0.32%	99.15%
145.0	21.285	7.550	2936.031	0.26%	99.41%
150.0	18.790	5.901	2941.932	0.20%	99.61%
155.0	16.369	4.449	2946.381	0.15%	99.76%
160.0	13.947	3.180	2949.561	0.11%	99.87%
165.0	11.117	2.066	2951.627	0.07%	99.94%
170.0	8.660	1.173	2952.8	0.04%	99.98%
175.0	6.462	0.541	2953.341	0.02%	100.00%
180.0	2.840	0.111	2953.452	0.00%	100.00%

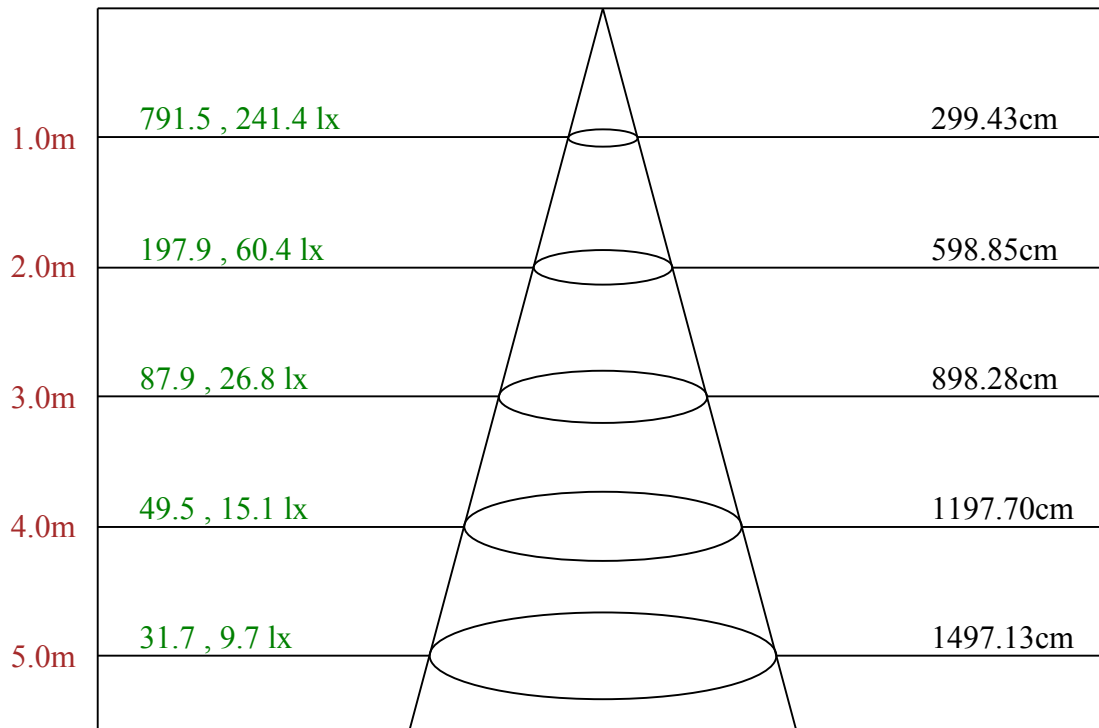
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	619.56	20.98%	20.98%
0-40	1020.36	34.55%	34.55%
0-60	1846.19	62.51%	62.51%
0-90	2626.05	88.91%	88.91%
0-120	2874.58	97.33%	97.33%
0-180	2953.45	100.00%	100.00%
60-90	779.86	26.41%	26.41%
90-120	248.53	8.41%	8.41%
90-130	281.29	9.52%	9.52%
90-150	315.88	10.70%	10.70%
90-180	327.29	11.08%	11.08%
0-76.46	2362.76	80.00%	80.00%

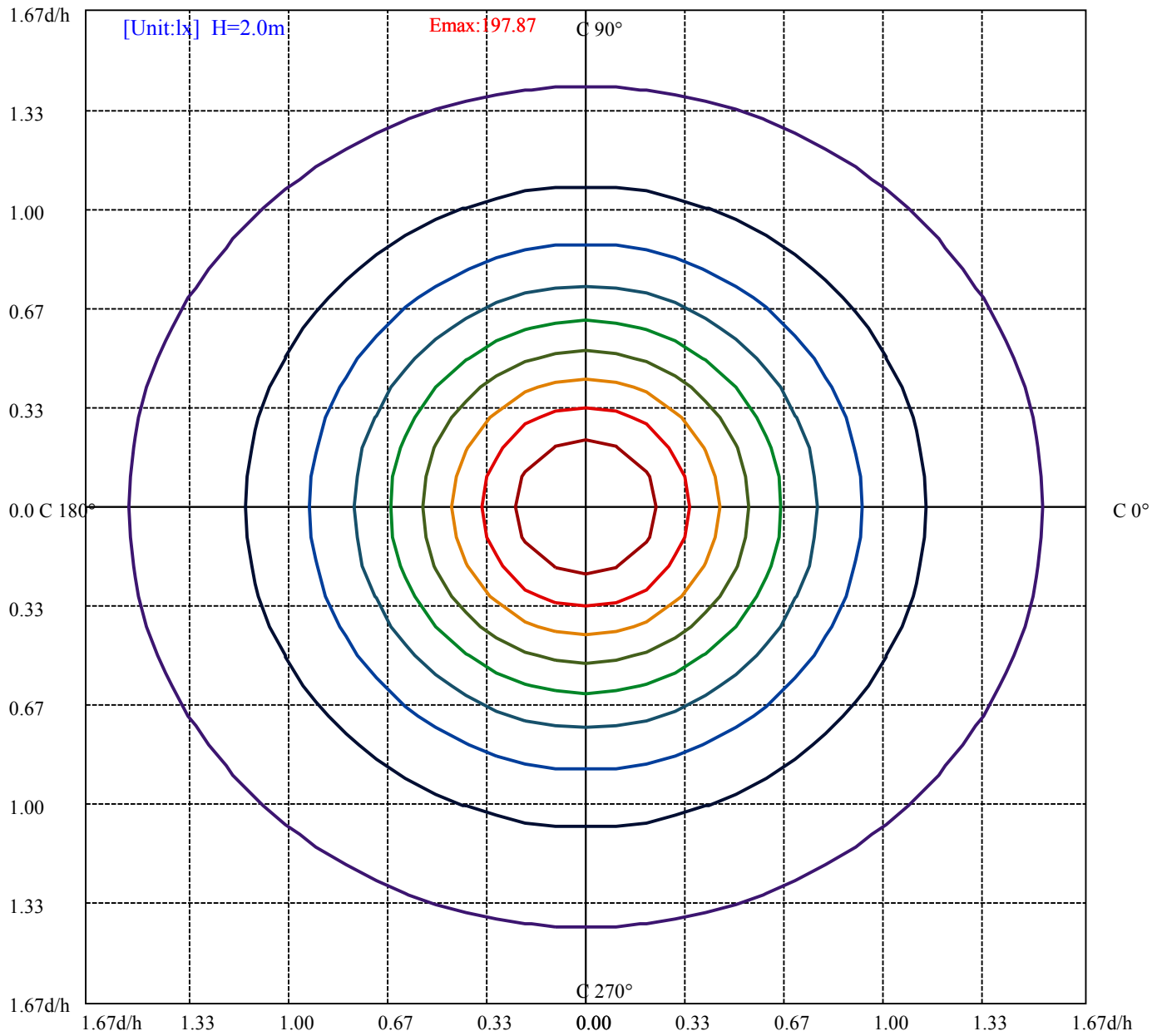
ZONAL LUMEN SUMMARY

0-10	75.00
10-20	215.67
20-30	328.88
30-40	400.80
40-50	424.20
50-60	401.63
60-70	341.31
70-80	259.65
80-90	178.90
90-100	119.12
100-110	78.65
110-120	50.76
120-130	32.76
130-140	21.14
140-150	13.45
150-160	7.63
160-170	3.24
170-180	0.54

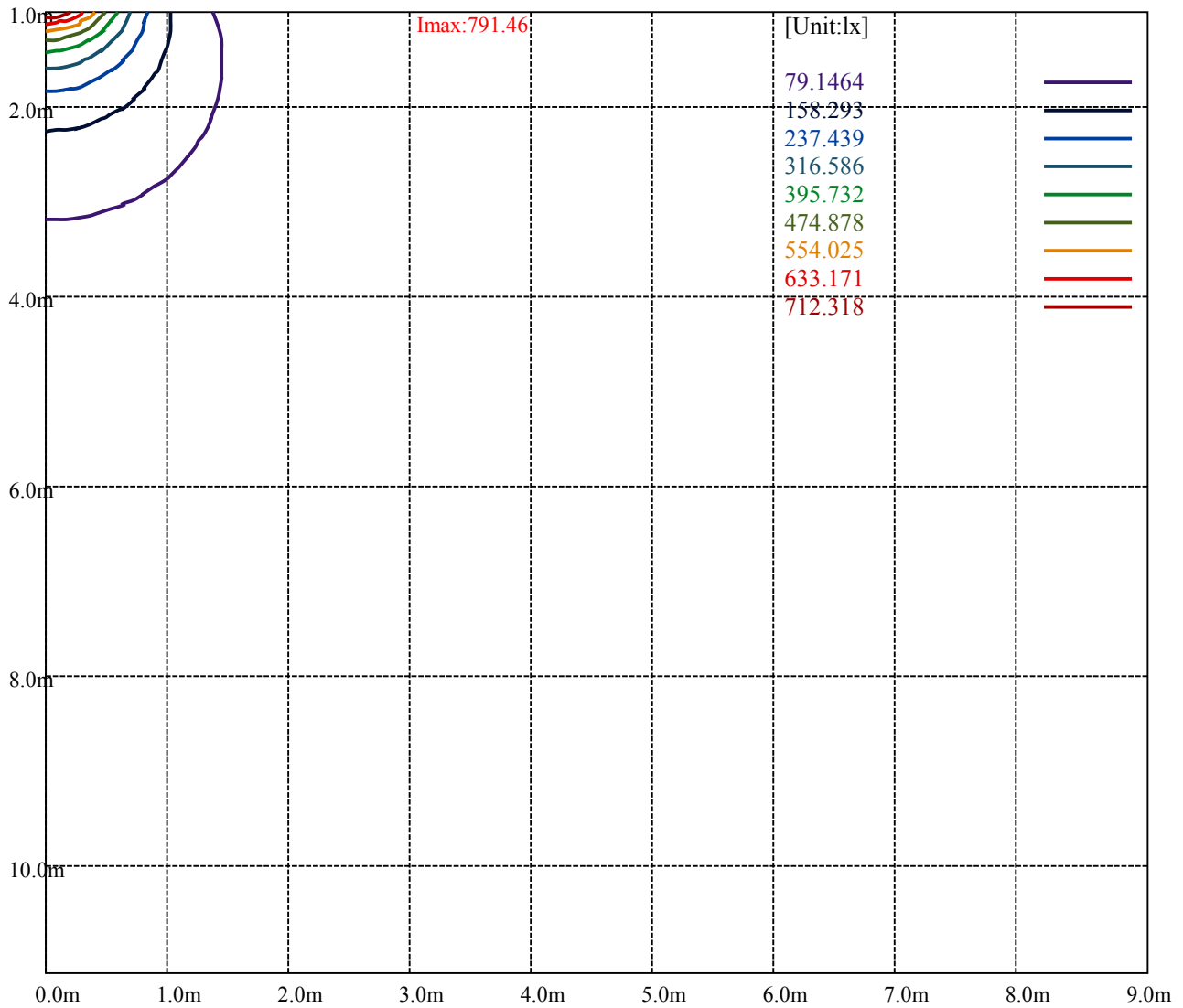




Max , Ave Beam angle of C75 plane 112.52



(10%Emax) 19.7866	—
(20%Emax) 39.57325	—
(30%Emax) 59.35975	—
(40%Emax) 79.1465	—
(50%Emax) 98.933	—
(60%Emax) 118.7195	—
(70%Emax) 138.5063	—
(80%Emax) 158.2928	—
(90%Emax) 178.0795	—



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Luminance Limiting Curve(no luminous side)

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Luminance Table

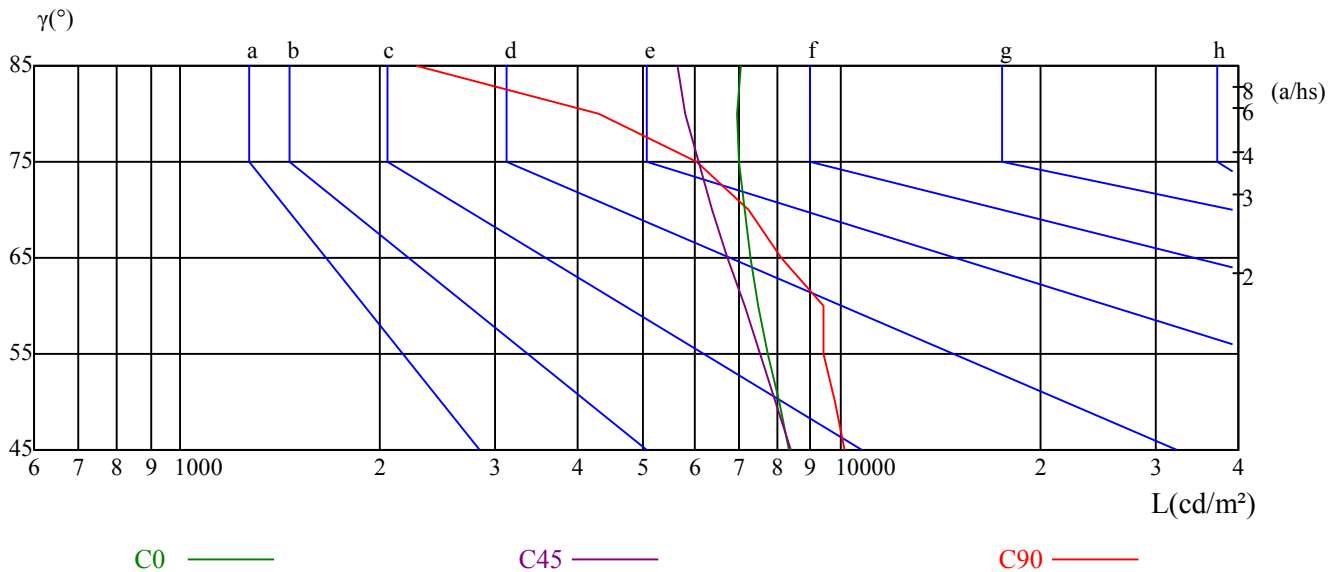
γ	45	50	55	60	65	70	75	80	85
C0	8365	8047	7773	7509	7286	7139	7014	6972	7075
C45	8379	7947	7549	7146	6745	6388	6095	5805	5655
C90	10137	9809	9383	9433	8116	7230	6055	4288	2273

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14389	9542	12233	18913	7908	14725	43834	4403	30178

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



Equipment: LC-I-902 GMS-2000
Temperature($^{\circ}\text{C}$): 25.2

Date: 2025/2/19
Humidity(%): 50.8%

Operator: JUN WANG
Distance(m): 29.95

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	1.16	1.16	1.16	1.12	1.12	1.12	1.05	1.05	1.05	0.98	0.98	0.98	0.92	0.92	0.92	0.89
1	0.98	0.93	0.89	0.95	0.90	0.86	0.89	0.85	0.81	0.83	0.80	0.77	0.77	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	0.71	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	0.62	0.57	0.52	0.58	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	0.49	0.43	0.38	0.46	0.41	0.36	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	0.36	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	0.38	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	0.29	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	0.32	0.27	0.23	0.21
10	0.36	0.28	0.23	0.35	0.28	0.22	0.33	0.26	0.22	0.32	0.26	0.21	0.30	0.25	0.21	0.19

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Intensity data(cd)									Appendix Page: 10 Total:12		
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	791.46	790.58	784.43	770.36	752.77	728.15	697.37	661.31	622.62		
15.0	791.46	789.69	782.60	770.19	750.69	726.76	693.97	659.41	619.52		
30.0	791.46	789.68	781.63	768.21	748.54	721.71	689.51	651.95	611.71		
45.0	791.46	788.77	780.67	766.28	745.60	715.92	683.54	643.96	599.89		
60.0	791.46	788.77	779.77	763.58	741.10	711.42	676.34	634.97	589.10		
75.0	791.46	788.76	778.84	761.72	739.18	708.53	672.47	631.01	583.23		
90.0	791.46	789.66	779.72	761.65	737.25	706.54	669.49	628.83	579.14		
105.0	791.46	789.66	779.72	763.46	740.87	711.05	675.82	633.35	586.37		
120.0	791.46	789.66	781.55	766.22	744.59	715.74	682.39	641.83	596.75		
135.0	791.46	790.56	783.35	768.93	750.00	722.95	690.50	652.64	608.47		
150.0	791.46	791.46	784.26	771.66	735.64	728.44	698.72	660.00	622.19		
165.0	791.46	791.46	785.19	773.54	755.61	731.41	700.93	668.67	625.64		
180.0	791.46	788.83	780.91	765.96	744.86	717.59	685.94	651.64	611.19		
195.0	791.46	788.81	779.94	764.88	745.38	716.13	685.99	649.66	609.77		
210.0	791.46	788.78	779.84	764.63	742.28	714.55	681.46	643.01	602.76		
225.0	791.46	787.87	777.97	760.88	740.20	711.42	676.34	635.87	590.90		
240.0	791.46	786.97	776.17	759.09	734.80	702.42	667.35	625.08	580.11		
255.0	791.46	786.96	775.24	756.31	732.87	698.62	662.56	619.29	571.51		
270.0	791.46	786.95	774.30	756.23	730.03	697.50	660.46	614.38	568.30		
285.0	791.46	786.95	775.20	756.23	730.03	698.40	662.26	618.90	606.25		
300.0	791.46	786.96	777.04	759.01	751.80	703.12	664.36	623.80	576.92		
315.0	791.46	787.86	778.84	759.01	737.38	706.73	671.57	630.11	585.03		
330.0	791.46	787.86	777.96	761.75	739.24	710.43	678.01	638.39	596.07		
345.0	791.46	786.98	778.92	760.99	741.27	710.79	680.32	641.78	601.44		
360.0	791.46	790.58	784.43	770.36	752.77	728.15	697.37	661.31	622.62		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	582.17	539.95	498.62	454.65	412.44	371.11	333.29	292.84	259.42		
15.0	577.87	533.55	490.12	447.58	402.38	361.61	320.84	282.73	247.28		
30.0	565.20	520.49	473.98	426.59	380.08	335.37	295.12	254.88	219.11		
45.0	552.23	500.96	451.49	396.63	347.16	298.60	255.43	210.46	173.58		
60.0	539.63	485.67	428.11	369.65	311.19	254.53	202.36	158.29	118.72		
75.0	531.85	475.06	414.66	354.27	288.46	223.56	160.46	107.27	60.40		
90.0	529.45	472.53	412.00	346.04	280.08	214.13	146.37	82.22	30.72		
105.0	534.87	478.85	421.93	359.59	295.44	231.30	170.76	119.26	73.18		
120.0	547.17	493.99	438.10	380.41	326.32	269.53	220.85	173.98	135.22		
135.0	561.60	512.02	464.24	412.86	363.28	314.60	271.33	227.16	191.11		
150.0	578.97	533.05	487.12	441.20	397.08	351.16	310.64	271.02	234.11		
165.0	588.89	548.56	504.64	461.61	417.69	375.56	335.23	297.58	260.83		
180.0	572.49	530.28	488.07	445.86	403.65	365.83	323.62	288.44	253.27		
195.0	568.12	525.57	483.92	437.83	397.95	356.29	315.52	278.30	242.85		
210.0	556.26	513.33	465.94	419.43	374.72	330.00	288.86	249.51	215.53		
225.0	543.23	491.97	440.70	392.13	339.07	293.20	248.23	206.86	169.98		
240.0	526.14	474.88	417.32	359.76	302.20	246.43	195.17	150.20	112.42		
255.0	518.33	461.54	400.24	337.14	275.84	210.04	148.74	133.41	54.09		
270.0	511.38	456.27	394.83	376.76	261.11	192.45	128.30	64.15	20.78		
285.0	518.61	458.98	402.06	338.81	273.76	211.42	152.69	102.10	65.05		
300.0	525.54	470.55	413.76	356.97	301.08	247.90	199.22	157.75	121.69		
315.0	536.36	485.88	435.40	387.62	338.04	291.17	247.90	208.23	171.27		
330.0	551.95	506.03	456.51	414.19	369.17	325.95	285.43	248.51	212.50		
345.0	559.31	516.29	475.06	429.34	389.01	347.78	309.24	271.59	235.74		
360.0	582.17	539.95	498.62	454.65	412.44	371.11	333.29	292.84	259.42		

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Intensity data(cd)								Appendix Page: 11 Total:12	
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	226.01	194.35	166.21	140.70	118.72	97.61	80.91	66.83	56.28
15.0	215.37	182.58	156.87	132.06	109.01	90.40	75.34	62.04	52.29
30.0	186.02	156.50	130.57	108.21	87.64	72.44	59.92	50.08	42.93
45.0	143.00	115.12	91.74	73.75	58.46	47.67	40.47	35.08	31.48
60.0	88.14	64.76	47.67	36.88	29.68	25.18	23.38	21.59	20.69
75.0	33.35	18.03	12.62	10.82	10.82	9.92	9.92	9.92	9.01
90.0	3.61	1.81	1.81	1.81	0.90	0.90	1.81	1.81	1.81
105.0	45.17	28.01	18.97	15.36	14.46	13.55	12.65	12.65	11.75
120.0	102.76	77.52	59.50	45.07	36.06	30.65	27.04	25.24	23.44
135.0	157.75	128.91	104.57	83.83	66.71	54.99	45.97	39.66	34.25
150.0	199.89	169.28	143.17	118.85	97.24	79.24	65.73	54.93	46.82
165.0	226.77	195.40	166.72	139.83	116.52	96.80	79.77	65.43	54.68
180.0	220.73	189.95	161.81	136.31	113.44	94.98	76.51	64.20	52.76
195.0	210.05	179.92	153.33	127.63	106.36	86.86	71.79	59.38	48.75
210.0	180.65	153.82	126.99	104.63	85.85	69.76	58.13	48.29	41.14
225.0	138.51	111.52	89.04	71.95	57.56	47.67	45.87	35.08	30.58
240.0	84.54	61.16	57.56	35.98	30.58	26.98	24.28	21.59	19.79
255.0	29.75	18.03	14.42	12.62	11.72	11.72	10.82	9.92	9.01
270.0	2.71	2.71	2.71	2.71	2.71	2.71	1.81	1.81	1.81
285.0	37.95	24.39	18.07	15.36	14.46	13.55	12.65	11.75	10.84
300.0	91.95	69.41	53.18	41.47	34.25	28.85	26.14	23.44	21.63
315.0	141.53	116.29	92.85	75.72	61.30	50.48	42.37	36.06	31.55
330.0	181.88	153.07	127.86	106.25	87.34	72.03	58.53	49.52	41.42
345.0	205.26	175.68	148.79	125.49	103.97	86.05	70.81	59.16	48.40
360.0	226.01	194.35	166.21	140.70	118.72	97.61	80.91	66.83	56.28

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	46.61	40.45	36.06	31.66	27.26	22.86	17.59	12.31	8.79
15.0	44.31	38.11	34.57	30.13	26.59	21.27	16.84	12.41	7.98
30.0	37.56	33.09	29.51	26.83	23.25	19.67	15.20	11.63	8.05
45.0	28.78	26.08	23.38	21.59	18.89	15.29	12.59	9.89	7.20
60.0	18.89	17.09	16.19	14.39	12.59	10.79	9.89	8.09	6.30
75.0	8.11	8.11	8.11	7.21	7.21	7.21	6.31	6.31	5.41
90.0	1.81	2.71	3.61	3.61	4.52	5.42	5.42	5.42	5.42
105.0	10.84	9.94	9.94	9.03	9.03	8.13	7.23	6.32	5.42
120.0	21.63	19.83	18.03	16.23	14.42	12.62	9.92	8.11	6.31
135.0	30.65	27.94	25.24	22.54	19.83	17.13	14.42	9.92	6.31
150.0	39.62	35.12	31.51	27.91	24.31	20.71	16.21	12.61	8.10
165.0	46.61	40.34	34.96	31.37	26.89	22.41	17.93	13.45	8.96
180.0	44.85	37.81	33.42	28.14	23.74	19.35	14.95	10.55	7.04
195.0	41.66	36.34	31.02	26.59	23.04	21.27	14.18	9.75	6.20
210.0	35.77	34.88	27.72	23.25	19.67	16.10	12.52	8.94	6.26
225.0	27.88	24.28	21.59	18.89	16.19	13.49	9.89	7.20	5.40
240.0	17.99	16.19	14.39	12.59	10.79	8.99	7.20	6.30	5.40
255.0	8.11	7.21	6.31	6.31	5.41	5.41	4.51	5.41	5.41
270.0	1.81	1.81	1.81	2.71	3.61	3.61	4.52	5.42	5.42
285.0	9.03	8.13	7.23	7.23	6.32	6.32	5.42	5.42	5.42
300.0	18.93	17.13	15.32	13.52	10.82	9.92	8.11	6.31	5.41
315.0	28.85	25.24	21.63	18.93	16.23	12.62	9.92	8.11	6.31
330.0	36.02	31.51	27.91	23.41	19.81	16.21	12.61	9.00	6.30
345.0	41.23	35.85	31.37	26.89	22.41	17.93	13.45	8.96	6.27
360.0	46.61	40.45	36.06	31.66	27.26	22.86	17.59	12.31	8.79

Light Blue USA-Rayhil LB85190

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Intensity data(cd)

C/γ(°)	180.0
0.0	6.16
15.0	6.20
30.0	6.26
45.0	5.40
60.0	6.30
75.0	5.41
90.0	5.42
105.0	5.42
120.0	5.41
135.0	5.41
150.0	5.40
165.0	5.38
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	6.16