
Light Blue USA-Rayhil

Client:

LumCAT: INV-20-CCT-UNV-**-3000K

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 119.990

LampCAT:

Current(A): 0.265

Lamp flux(lm): 2152.5

Power (W): 31.560

Number of Lamps: 1

PF: 0.993

Length(mm): -480

Width(mm): -480

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2152.50, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 68.20

Central intensity(cd): 736.884, Maximum intensity(cd): 736.884

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=113.2

[C90/270]Total=115.4

Field angle(10%Imax): [C0/180]Total=162.8

[C90/270]Total=162.8

Maximum s/h(1/2): C0_180=1.27 C90_270=1.26

Maximum s/h(1/4): C0_180=1.38 C90_270=1.38

Up flux rate of lamp(%): 0.58%

Down flux rate of lamp(%): 99.42%

Up flux rate of LUM(%): 0.58%

Down flux rate of LUM(%): 99.42%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 77.657%

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Zonal flux distribution table

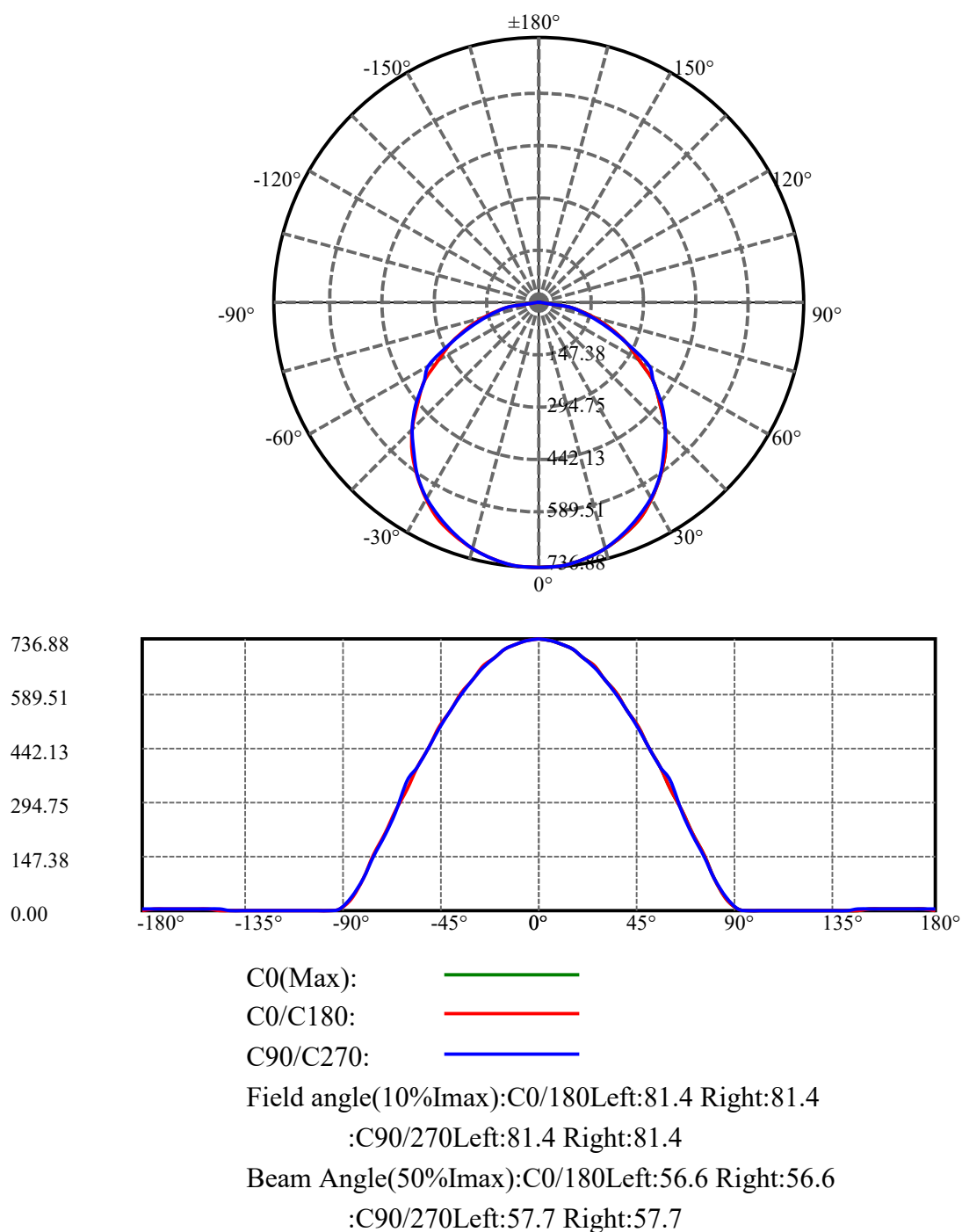
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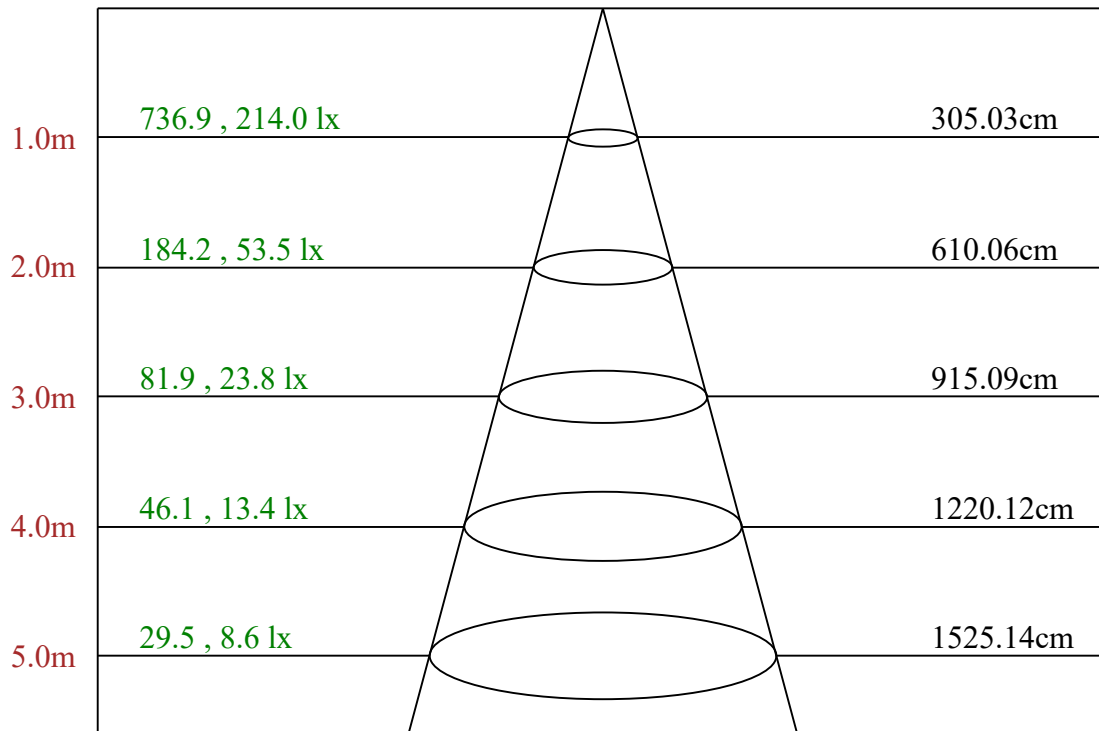
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	736.884	0.000	0	0.00%	0.00%
5.0	733.488	17.578	17.578	0.82%	0.82%
10.0	724.331	52.151	69.729	2.42%	3.24%
15.0	708.574	84.999	154.728	3.95%	7.19%
20.0	686.824	115.000	269.728	5.34%	12.53%
25.0	659.772	141.233	410.961	6.56%	19.09%
30.0	627.038	162.847	573.808	7.57%	26.66%
35.0	588.808	179.042	752.85	8.32%	34.98%
40.0	546.729	189.456	942.305	8.80%	43.78%
45.0	496.401	193.144	1135.449	8.97%	52.75%
50.0	443.217	189.864	1325.313	8.82%	61.57%
55.0	386.942	180.504	1505.817	8.39%	69.96%
60.0	330.137	165.751	1671.568	7.70%	77.66%
65.0	268.780	145.598	1817.166	6.76%	84.42%
70.0	207.927	120.705	1937.871	5.61%	90.03%
75.0	148.105	93.061	2030.932	4.32%	94.35%
80.0	90.995	63.976	2094.909	2.97%	97.32%
85.0	34.717	34.159	2129.068	1.59%	98.91%
90.0	4.997	10.874	2139.942	0.51%	99.42%
95.0	1.374	1.744	2141.686	0.08%	99.50%
100.0	1.374	0.746	2142.432	0.03%	99.53%
105.0	1.374	0.735	2143.167	0.03%	99.57%
110.0	1.412	0.728	2143.895	0.03%	99.60%
115.0	1.449	0.725	2144.62	0.03%	99.63%
120.0	1.374	0.686	2145.306	0.03%	99.67%
125.0	1.374	0.635	2145.941	0.03%	99.70%
130.0	1.641	0.655	2146.597	0.03%	99.73%
135.0	1.831	0.702	2147.298	0.03%	99.76%
140.0	1.831	0.678	2147.976	0.03%	99.79%
145.0	2.289	0.687	2148.664	0.03%	99.82%
150.0	2.747	0.742	2149.405	0.03%	99.86%
155.0	3.205	0.753	2150.159	0.03%	99.89%
160.0	4.083	0.764	2150.923	0.04%	99.93%
165.0	4.121	0.676	2151.599	0.03%	99.96%
170.0	4.274	0.498	2152.097	0.02%	99.98%
175.0	4.578	0.317	2152.414	0.01%	100.00%
180.0	2.518	0.085	2152.499	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	573.81	26.66%	26.66%
0-40	942.31	43.78%	43.78%
0-60	1671.57	77.66%	77.66%
0-90	2139.94	99.42%	99.42%
0-120	2145.31	99.67%	99.67%
0-180	2152.50	100.00%	100.00%
60-90	468.37	21.76%	21.76%
90-120	5.36	0.25%	0.25%
90-130	6.65	0.31%	0.31%
90-150	9.46	0.44%	0.44%
90-180	12.47	0.58%	0.58%
0-61.73	1722.00	80.00%	80.00%

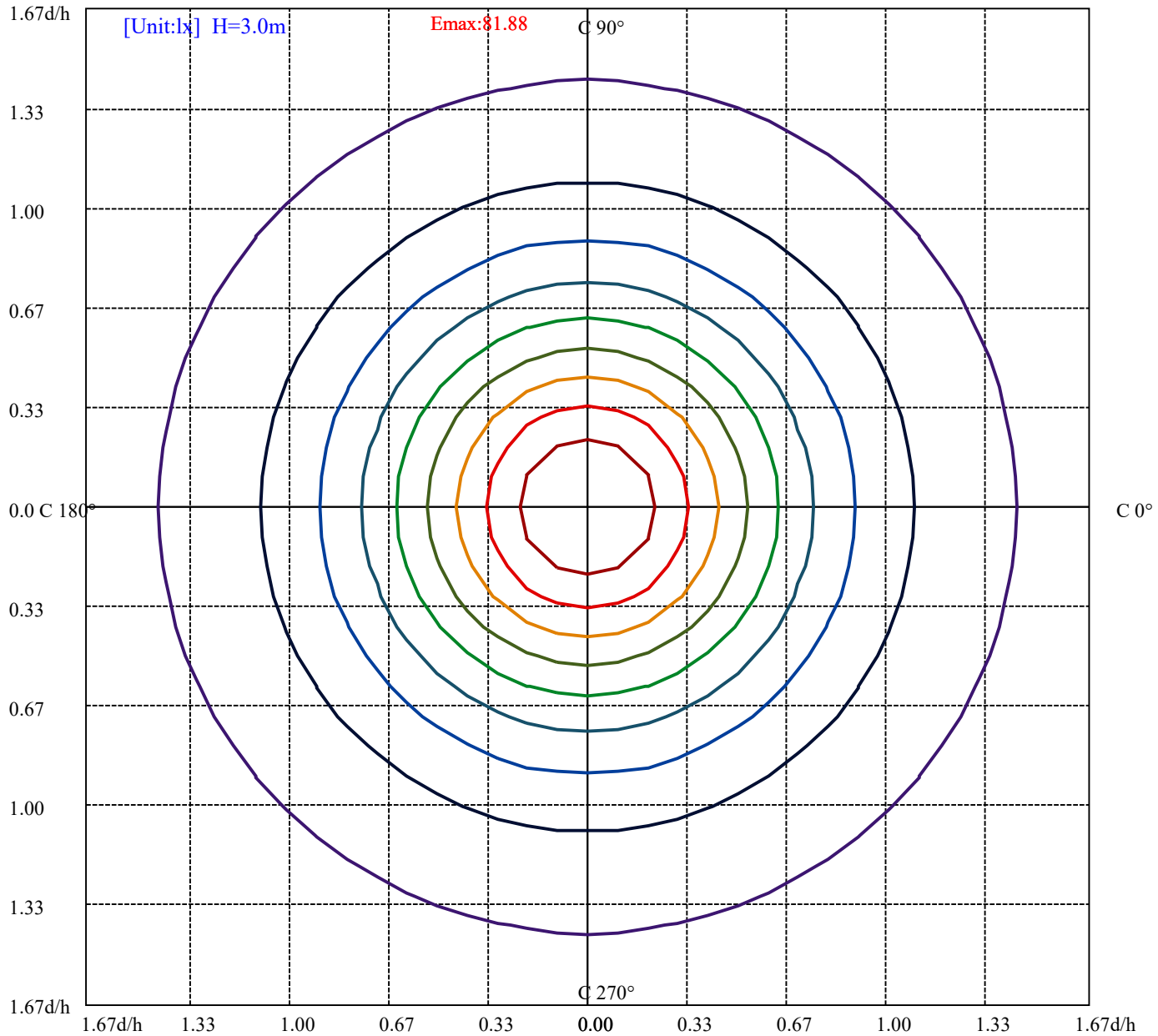
ZONAL LUMEN SUMMARY

0-10	69.73
10-20	200.00
20-30	304.08
30-40	368.50
40-50	383.01
50-60	346.25
60-70	266.30
70-80	157.04
80-90	45.03
90-100	2.49
100-110	1.46
110-120	1.41
120-130	1.29
130-140	1.38
140-150	1.43
150-160	1.52
160-170	1.17
170-180	0.32

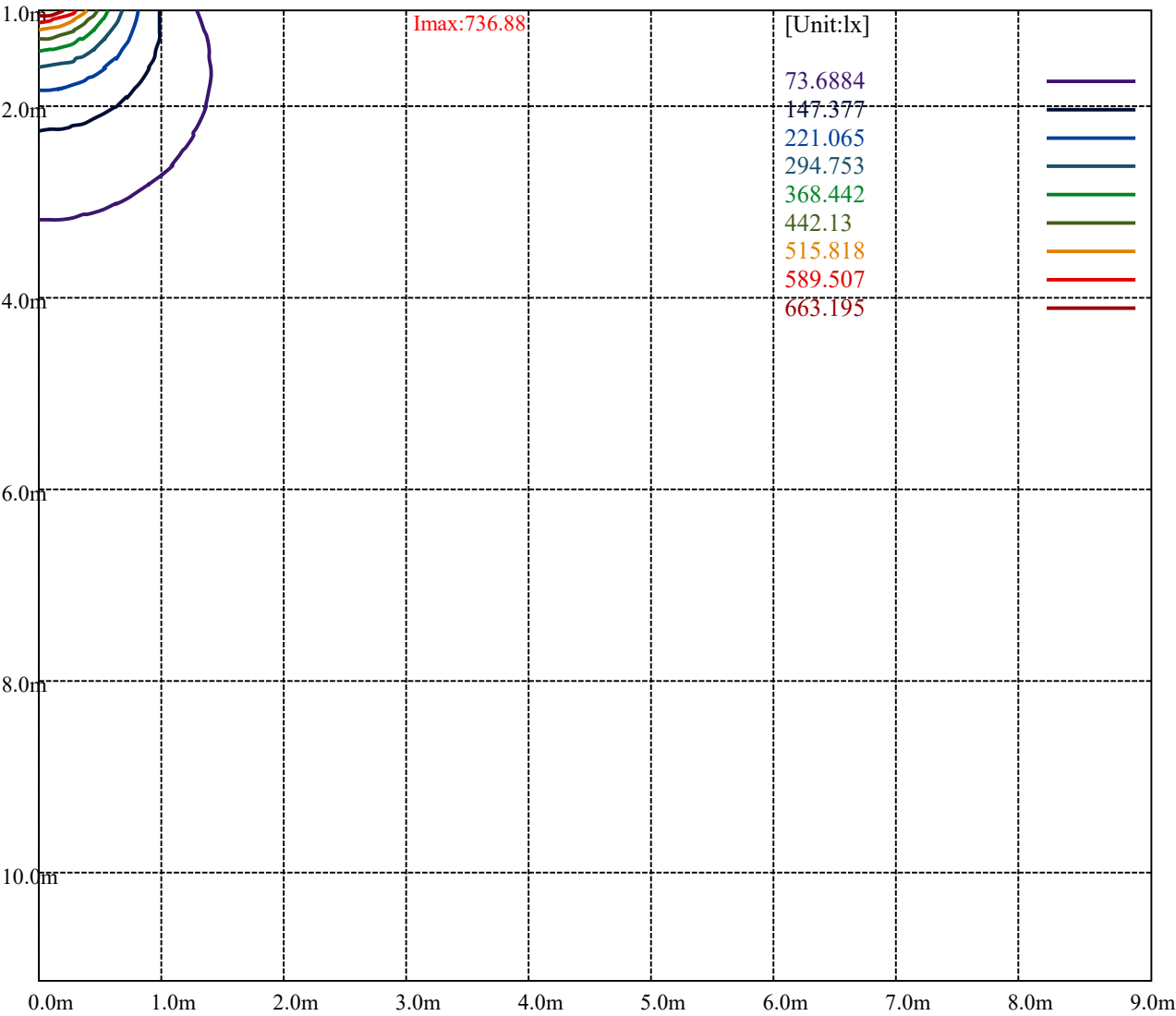




Max , Ave Beam angle of C0 plane 113.50



(10%Emax)	8.187589	
(20%Emax)	16.37522	
(30%Emax)	24.56278	
(40%Emax)	32.75033	
(50%Emax)	40.938	
(60%Emax)	49.12556	
(70%Emax)	57.31311	
(80%Emax)	65.50078	
(90%Emax)	73.68833	



Luminance Table

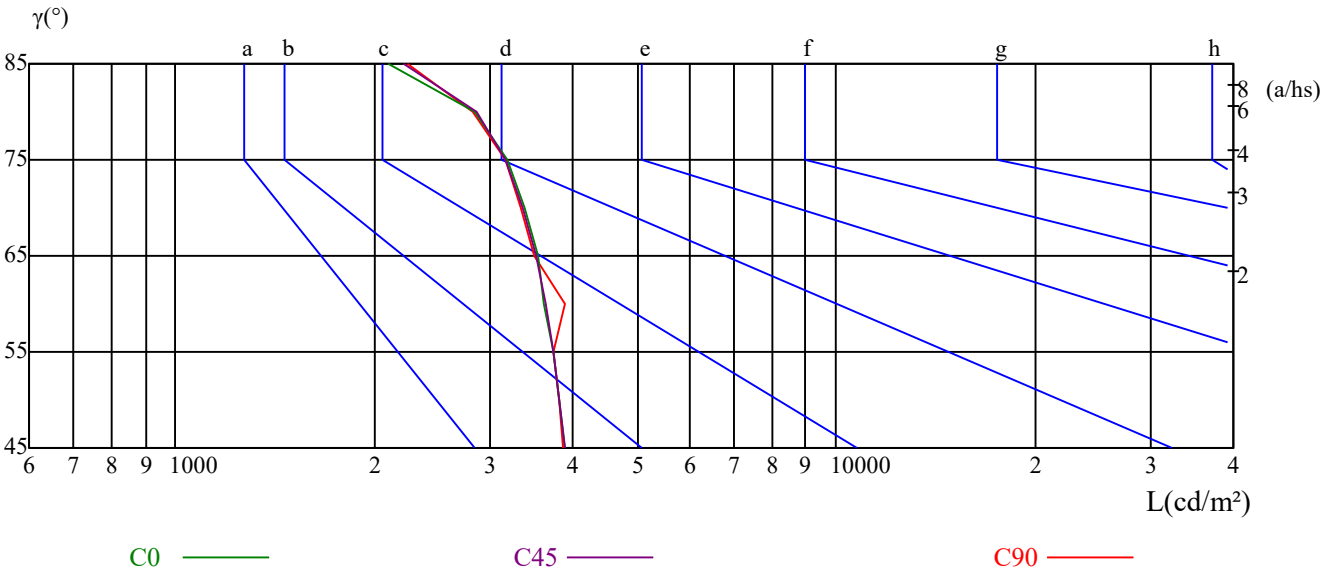
γ	45	50	55	60	65	70	75	80	85
C0	3884	3814	3737	3622	3539	3379	3180	2838	2095
C45	3885	3818	3731	3634	3523	3356	3167	2853	2209
C90	3873	3822	3735	3890	3492	3344	3155	2818	2240

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3539	3492	3523	3180	3155	3167	2095	2240	2209

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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	0.99
1	1.04	0.99	0.95	1.01	0.97	0.94	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
2	0.90	0.83	0.77	0.88	0.82	0.76	0.84	0.79	0.74	0.81	0.77	0.73	0.78	0.74	0.71	0.69
3	0.79	0.71	0.64	0.77	0.70	0.63	0.74	0.68	0.62	0.71	0.66	0.61	0.69	0.64	0.60	0.58
4	0.70	0.61	0.54	0.68	0.60	0.54	0.66	0.59	0.53	0.63	0.57	0.52	0.61	0.56	0.51	0.49
5	0.62	0.53	0.47	0.61	0.53	0.46	0.59	0.51	0.46	0.57	0.50	0.45	0.55	0.49	0.45	0.42
6	0.56	0.47	0.41	0.55	0.47	0.40	0.53	0.46	0.40	0.51	0.45	0.39	0.50	0.44	0.39	0.37
7	0.51	0.42	0.36	0.50	0.42	0.36	0.48	0.41	0.35	0.47	0.40	0.35	0.45	0.39	0.35	0.33
8	0.46	0.38	0.32	0.46	0.37	0.32	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.29
9	0.42	0.34	0.29	0.42	0.34	0.29	0.41	0.33	0.28	0.40	0.33	0.28	0.38	0.32	0.28	0.26
10	0.39	0.31	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.25	0.24

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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	736.88	735.98	729.64	716.06	697.05	673.52	640.93	608.34	566.69
15.0	736.88	736.88	730.52	717.80	699.63	676.01	646.02	609.68	568.79
30.0	736.88	735.97	730.51	718.67	699.54	675.86	648.53	613.01	572.02
45.0	736.88	737.80	733.23	720.43	703.97	679.29	650.03	615.29	575.06
60.0	736.88	737.80	732.31	721.32	703.01	678.30	650.84	615.14	576.69
75.0	736.88	737.80	733.22	722.22	703.89	680.06	649.81	615.90	575.58
90.0	736.88	738.72	733.21	721.28	703.85	679.07	647.87	613.00	573.54
105.0	736.88	737.80	732.29	721.26	702.89	679.00	647.76	611.93	574.25
120.0	736.88	737.80	732.28	719.40	702.85	676.17	646.73	610.85	570.37
135.0	736.88	736.88	731.36	718.48	699.17	674.33	643.05	608.09	564.85
150.0	736.88	735.96	730.44	715.70	678.85	671.49	641.09	606.09	563.72
165.0	736.88	735.96	728.60	714.80	693.65	668.81	637.53	602.57	554.73
180.0	736.88	731.45	720.59	700.67	678.04	649.98	614.67	573.94	526.86
195.0	736.88	730.52	718.71	699.63	676.01	646.93	609.68	568.79	525.18
210.0	736.88	728.69	715.93	698.63	674.03	643.98	608.45	566.55	521.92
225.0	736.88	730.48	716.77	697.57	671.97	642.72	607.06	564.09	518.38
240.0	736.88	728.65	716.75	695.69	670.98	641.68	605.98	562.96	515.36
255.0	736.88	728.63	714.89	694.72	669.06	638.82	603.99	559.99	515.09
270.0	736.88	729.54	714.86	695.59	668.98	639.61	602.90	560.69	513.89
285.0	736.88	728.61	715.75	695.54	669.81	638.57	602.74	564.15	551.28
300.0	736.88	729.52	717.56	698.25	690.89	640.29	606.25	563.01	517.93
315.0	736.88	729.52	716.64	699.17	671.57	643.97	608.09	566.69	521.61
330.0	736.88	730.44	718.46	700.04	675.17	645.69	611.61	573.85	526.87
345.0	736.88	732.28	719.40	702.85	678.93	650.41	617.29	576.81	530.81
360.0	736.88	735.98	729.64	716.06	697.05	673.52	640.93	608.34	566.69
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	518.72	466.21	410.08	352.15	296.02	234.46	173.81	113.16	55.22
15.0	524.27	473.39	417.96	359.81	299.84	241.69	177.18	119.94	60.88
30.0	526.48	475.47	420.82	362.52	305.14	244.11	183.08	122.97	66.49
45.0	530.26	477.24	424.21	365.70	307.19	245.93	187.42	127.08	68.57
60.0	530.01	478.75	423.82	365.24	308.48	248.07	187.65	127.24	71.40
75.0	531.58	478.42	426.18	368.44	308.87	247.46	186.05	128.31	68.74
90.0	527.66	479.02	423.96	368.90	305.58	246.85	185.37	124.80	66.07
105.0	524.64	475.94	420.81	362.93	302.29	241.65	181.01	124.04	65.24
120.0	523.45	471.94	419.50	357.86	300.83	240.11	179.39	118.67	60.72
135.0	520.69	470.10	414.90	356.02	295.31	234.59	172.95	115.91	57.96
150.0	515.82	463.32	407.13	352.78	288.31	231.20	170.40	109.61	51.58
165.0	509.65	457.22	402.94	344.06	283.35	223.55	165.59	106.71	48.76
180.0	475.26	420.95	365.73	303.26	245.33	183.77	124.02	65.18	10.86
195.0	473.39	417.96	359.81	299.84	238.96	178.09	120.85	59.06	8.18
210.0	468.18	412.62	354.32	297.85	236.82	175.80	115.68	56.47	5.47
225.0	466.27	410.50	351.99	292.56	234.96	170.96	113.37	54.85	4.57
240.0	462.27	406.43	347.85	291.09	230.68	170.26	109.85	51.26	3.66
255.0	462.84	407.85	349.19	289.62	231.88	167.72	109.98	93.49	4.58
270.0	463.42	410.20	351.47	334.95	228.50	167.01	110.12	52.31	4.59
285.0	464.92	407.03	350.98	291.26	231.54	170.90	111.18	53.29	4.59
300.0	466.42	411.22	353.26	293.47	236.43	172.95	115.91	57.96	6.44
315.0	471.02	418.58	357.86	300.83	240.11	179.39	119.59	60.72	8.28
330.0	476.21	421.87	364.76	304.89	244.09	183.30	123.43	68.16	13.82
345.0	480.22	425.02	367.06	307.26	250.23	190.43	130.63	72.68	16.56
360.0	518.72	466.21	410.08	352.15	296.02	234.46	173.81	113.16	55.22

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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	5.43	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
15.0	7.27	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
30.0	9.11	0.91	0.91	0.91	0.91	0.91	2.73	0.91	0.91	1.82	
45.0	11.89	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.83	
60.0	11.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.83	
75.0	12.83	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.83	
90.0	11.01	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84	
105.0	10.11	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84	
120.0	7.36	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84	
135.0	5.52	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
150.0	2.76	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
165.0	2.76	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
180.0	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	
195.0	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	
210.0	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	
225.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	
240.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	
255.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	
270.0	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	
285.0	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	
300.0	1.84	1.84	1.84	1.84	1.84	2.76	1.84	1.84	1.84	1.84	
315.0	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	
330.0	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	
345.0	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84	
360.0	5.43	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	1.81	1.81	2.72	3.62	3.62	4.53	4.53	4.53	4.53		
15.0	1.82	1.82	2.73	2.73	3.63	4.54	4.54	4.54	4.54		
30.0	1.82	1.82	2.73	3.64	3.64	4.55	4.55	4.55	4.55		
45.0	1.83	1.83	2.74	3.66	3.66	4.57	4.57	4.57	4.57		
60.0	1.83	1.83	2.75	3.66	3.66	4.58	4.58	4.58	4.58		
75.0	1.83	1.83	2.75	2.75	3.67	4.58	4.58	4.58	4.58		
90.0	1.84	1.84	2.75	2.75	3.67	4.59	4.59	4.59	4.59		
105.0	1.84	1.84	2.76	3.68	3.68	4.59	4.59	4.59	4.59		
120.0	1.84	1.84	2.76	2.76	3.68	4.60	4.60	4.60	4.60		
135.0	1.84	1.84	2.76	2.76	3.68	4.60	4.60	4.60	4.60		
150.0	1.84	1.84	2.76	2.76	3.68	4.61	4.61	4.61	4.61		
165.0	1.84	1.84	2.76	3.68	3.68	4.60	4.60	4.60	4.60		
180.0	1.81	1.81	1.81	1.81	2.72	3.62	3.62	3.62	4.53		
195.0	1.82	1.82	1.82	1.82	2.73	2.73	3.63	3.63	4.54		
210.0	1.82	1.82	1.82	2.73	2.73	3.64	3.64	3.64	4.55		
225.0	1.83	1.83	1.83	2.74	2.74	3.66	3.66	3.66	4.57		
240.0	1.83	1.83	1.83	2.75	2.75	3.66	3.66	3.66	4.58		
255.0	1.83	1.83	1.83	1.83	2.75	3.67	3.67	4.58	4.58		
270.0	1.84	1.84	1.84	1.84	2.75	3.67	3.67	4.59	4.59		
285.0	1.84	1.84	1.84	2.76	2.76	3.68	3.68	4.59	4.59		
300.0	1.84	1.84	1.84	2.76	2.76	3.68	3.68	4.60	4.60		
315.0	1.84	1.84	1.84	1.84	2.76	3.68	3.68	3.68	4.60		
330.0	1.84	1.84	1.84	1.84	2.76	3.68	3.68	3.68	4.61		
345.0	1.84	1.84	1.84	2.76	2.76	3.68	3.68	3.68	4.60		
360.0	1.81	1.81	2.72	3.62	3.62	4.53	4.53	4.53	4.53		

Intensity data(cd)

C/γ(°)	180.0
0.0	4.53
15.0	5.45
30.0	4.55
45.0	5.49
60.0	5.49
75.0	5.50
90.0	4.59
105.0	4.59
120.0	5.52
135.0	5.52
150.0	4.61
165.0	4.60
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	4.53