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Light Blue USA-Rayhil

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Client:

LumCAT: INV-9-CCT-120-\*\*-4000K

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.030

LampCAT:

Current(A): 0.129

Lamp flux(lm): 781.3

Power (W): 14.650

Number of Lamps: 1

PF: 0.950

Length(mm): -210

Width(mm): -210

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 781.29, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 53.33

Central intensity(cd): 280.347, Maximum intensity(cd): 280.347

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=110.6

[C90/270]Total=109.8

Field angle(10%Imax): [C0/180]Total=158.4

[C90/270]Total=158.2

Maximum s/h(1/2): C0\_180=1.26 C90\_270=1.26

Maximum s/h(1/4): C0\_180=1.37 C90\_270=1.37

Up flux rate of lamp(%): 0.83%

Down flux rate of lamp(%): 99.17%

Up flux rate of LUM(%): 0.83%

Down flux rate of LUM(%): 99.17%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 79.699%

## Light Blue USA-Rayhil INV-9-CCT-120-\*\*-4000K

Zonal flux distribution table

Appendix Page: 2 Total:12

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	280.347	0.000	0	0.00%	0.00%
5.0	279.126	6.688	6.688	0.86%	0.86%
10.0	275.273	19.833	26.521	2.54%	3.39%
15.0	268.977	32.285	58.805	4.13%	7.53%
20.0	260.469	43.634	102.439	5.58%	13.11%
25.0	249.634	53.500	155.94	6.85%	19.96%
30.0	236.471	61.517	217.457	7.87%	27.83%
35.0	221.210	67.397	284.853	8.63%	36.46%
40.0	203.583	70.874	355.727	9.07%	45.53%
45.0	183.935	71.752	427.479	9.18%	54.71%
50.0	161.920	69.885	497.364	8.94%	63.66%
55.0	140.593	65.776	563.14	8.42%	72.08%
60.0	116.977	59.537	622.677	7.62%	79.70%
65.0	93.741	51.226	673.903	6.56%	86.26%
70.0	69.628	41.366	715.269	5.29%	91.55%
75.0	46.623	30.386	745.655	3.89%	95.44%
80.0	25.028	19.172	764.827	2.45%	97.89%
85.0	5.456	8.283	773.111	1.06%	98.95%
90.0	0.763	1.703	774.813	0.22%	99.17%
95.0	0.381	0.313	775.127	0.04%	99.21%
100.0	0.267	0.176	775.303	0.02%	99.23%
105.0	0.420	0.184	775.487	0.02%	99.26%
110.0	0.458	0.229	775.716	0.03%	99.29%
115.0	0.687	0.290	776.006	0.04%	99.32%
120.0	0.916	0.390	776.396	0.05%	99.37%
125.0	0.992	0.441	776.837	0.06%	99.43%
130.0	1.183	0.473	777.31	0.06%	99.49%
135.0	1.183	0.478	777.788	0.06%	99.55%
140.0	1.602	0.516	778.303	0.07%	99.62%
145.0	1.832	0.573	778.876	0.07%	99.69%
150.0	1.984	0.562	779.438	0.07%	99.76%
155.0	2.404	0.555	779.993	0.07%	99.83%
160.0	2.404	0.504	780.498	0.06%	99.90%
165.0	2.213	0.380	780.878	0.05%	99.95%
170.0	1.907	0.244	781.123	0.03%	99.98%
175.0	1.831	0.134	781.256	0.02%	100.00%
180.0	0.916	0.033	781.289	0.00%	100.00%

Equipment: LC-I-902 GMS-2000  
Temperature( $^{\circ}\text{C}$ ): 24.8

Date: 2024/12/18  
Humidity(%): 60.2%

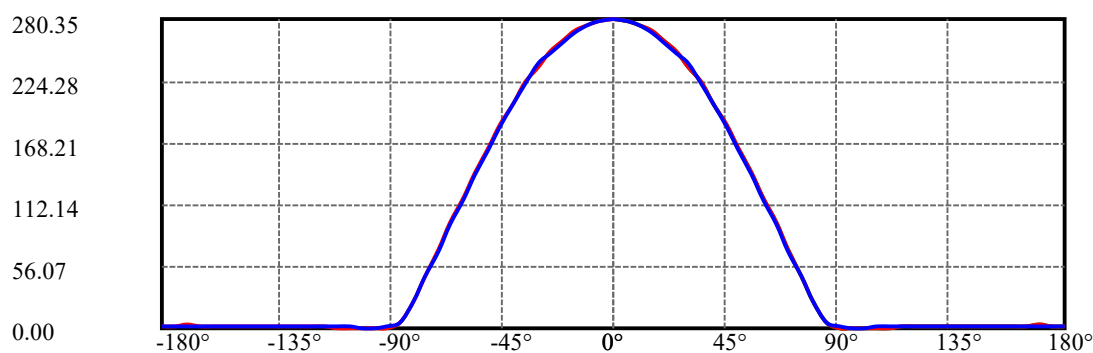
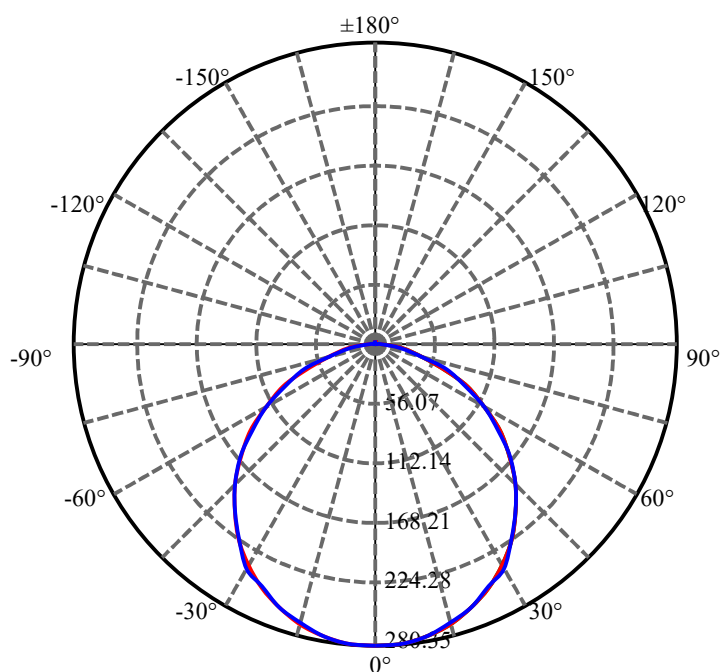
Operator: JUN WANG  
Distance(m): 30.26

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	217.46	27.83%	27.83%
0-40	355.73	45.53%	45.53%
0-60	622.68	79.70%	79.70%
0-90	774.81	99.17%	99.17%
0-120	776.40	99.37%	99.37%
0-180	781.29	100.00%	100.00%
60-90	152.14	19.47%	19.47%
90-120	1.58	0.20%	0.20%
90-130	2.50	0.32%	0.32%
90-150	4.62	0.59%	0.59%
90-180	6.44	0.82%	0.82%
0-60.23	625.03	80.00%	80.00%

## ZONAL LUMEN SUMMARY

0-10	26.52
10-20	75.92
20-30	115.02
30-40	138.27
40-50	141.64
50-60	125.31
60-70	92.59
70-80	49.56
80-90	9.99
90-100	0.49
100-110	0.41
110-120	0.68
120-130	0.91
130-140	0.99
140-150	1.13
150-160	1.06
160-170	0.62
170-180	0.13



C0(Max): —————

C0/C180: —————

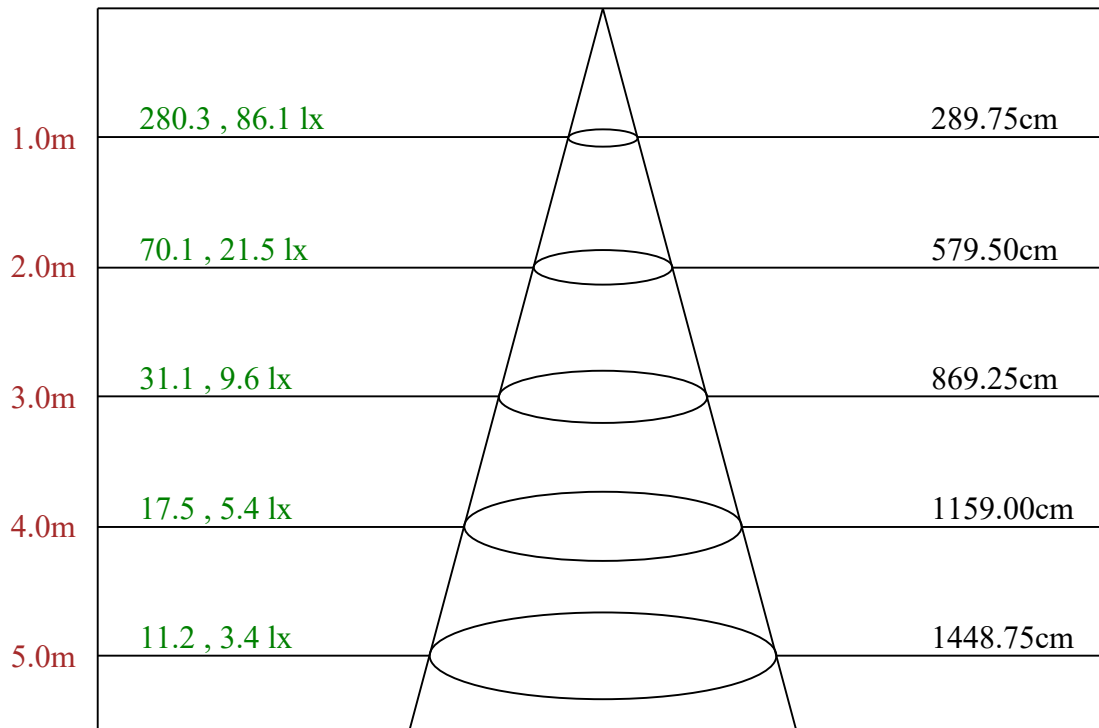
C90/C270: —————

Field angle(10%Imax):C0/180Left:79.2 Right:79.2

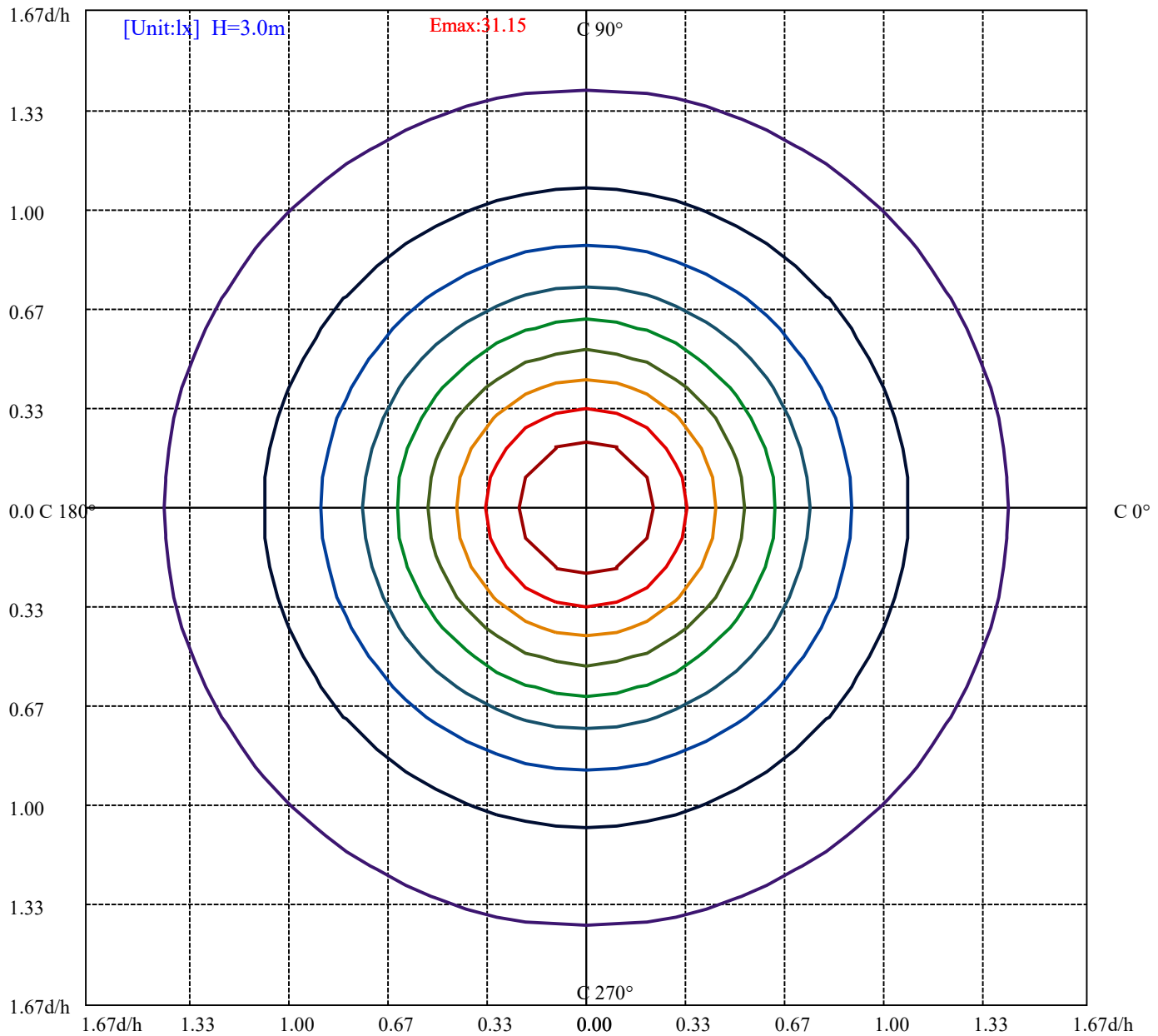
:C90/270Left:79.1 Right:79.1

Beam Angle(50%Imax):C0/180Left:55.3 Right:55.3

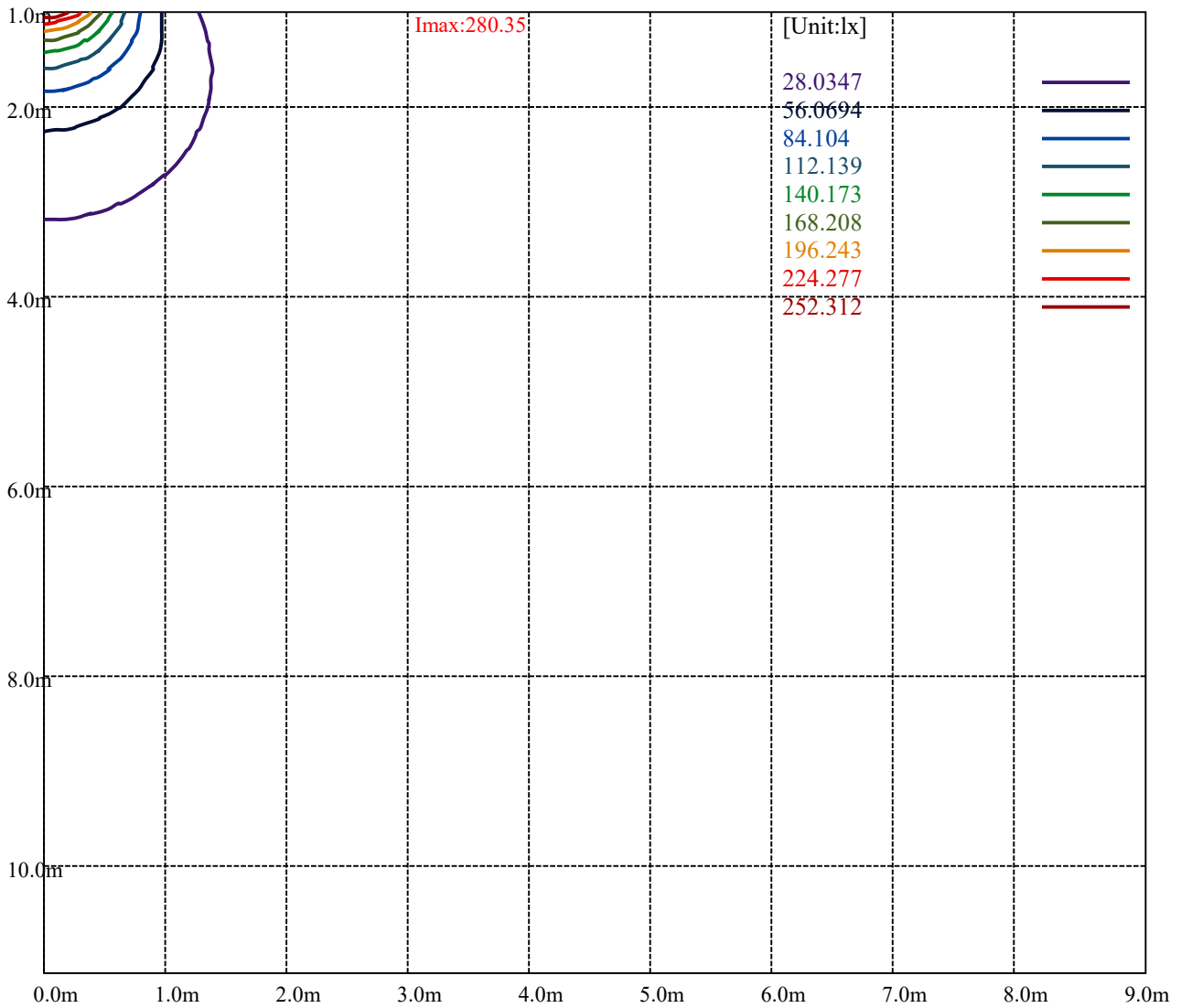
:C90/270Left:54.9 Right:54.9



Max , Ave      Beam angle of C0 plane 110.77



(10%Emax) 3.114967	—
(20%Emax) 6.229933	—
(30%Emax) 9.344889	—
(40%Emax) 12.45989	—
(50%Emax) 15.57478	—
(60%Emax) 18.68978	—
(70%Emax) 21.80478	—
(80%Emax) 24.91967	—
(90%Emax) 28.03467	—



Luminance Table

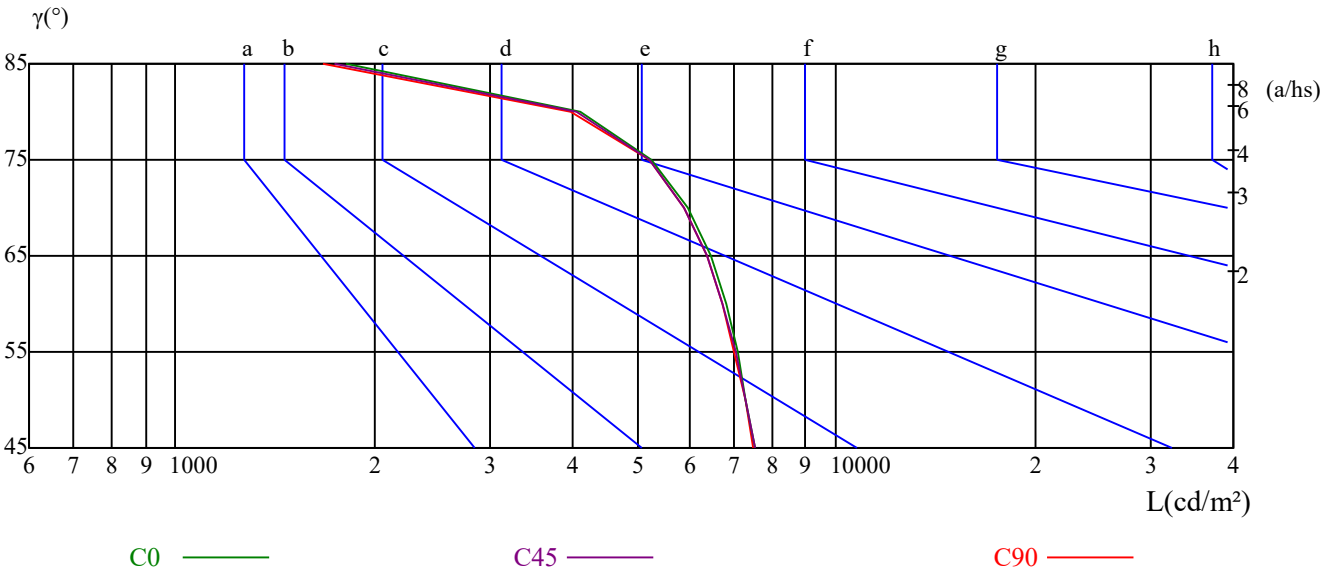
$\gamma$	45	50	55	60	65	70	75	80	85
C0	7532	7321	7125	6802	6488	5974	5246	4099	1815
C45	7528	7315	7056	6745	6368	5878	5212	4037	1745
C90	7482	7284	7033	6745	6384	5878	5212	3960	1669

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6488	6384	6368	5246	5212	5212	1815	1669	1745

Glare Table

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

Luminance Limiting Curve





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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.04	1.00	0.96	1.02	0.98	0.95	0.98	0.94	0.92	0.93	0.91	0.89	0.90	0.88	0.86	0.84
2	0.91	0.84	0.79	0.89	0.83	0.78	0.85	0.80	0.76	0.82	0.78	0.74	0.79	0.75	0.72	0.70
3	0.80	0.72	0.66	0.78	0.71	0.65	0.75	0.69	0.64	0.72	0.67	0.62	0.70	0.65	0.61	0.59
4	0.71	0.62	0.56	0.70	0.61	0.55	0.67	0.60	0.54	0.64	0.58	0.53	0.62	0.57	0.53	0.50
5	0.63	0.54	0.48	0.62	0.54	0.48	0.60	0.53	0.47	0.58	0.51	0.46	0.56	0.50	0.46	0.44
6	0.57	0.48	0.42	0.56	0.48	0.42	0.54	0.47	0.41	0.52	0.46	0.41	0.51	0.45	0.40	0.38
7	0.52	0.43	0.37	0.51	0.43	0.37	0.49	0.42	0.36	0.48	0.41	0.36	0.46	0.40	0.36	0.34
8	0.47	0.39	0.33	0.46	0.38	0.33	0.45	0.38	0.33	0.44	0.37	0.32	0.43	0.37	0.32	0.30
9	0.43	0.35	0.30	0.43	0.35	0.30	0.41	0.34	0.29	0.40	0.34	0.29	0.39	0.33	0.29	0.27
10	0.40	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.27	0.37	0.31	0.26	0.36	0.31	0.26	0.25

Light Blue USA-Rayhil INV-9-CCT-120-\*\*-4000K

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	280.35	280.35	276.69	271.21	263.91	253.86	241.08	227.38	209.12		
15.0	280.35	280.35	276.69	271.21	263.00	252.95	240.17	225.56	209.12		
30.0	280.35	279.43	275.78	270.30	262.08	252.04	240.17	224.64	207.29		
45.0	280.35	280.35	276.68	270.27	262.94	251.95	239.12	224.46	207.05		
60.0	280.35	279.43	276.68	270.27	262.02	251.95	239.12	224.46	207.05		
75.0	280.35	279.43	275.77	270.27	262.02	251.95	239.12	224.46	207.97		
90.0	280.35	279.43	275.77	270.27	262.02	251.03	238.20	224.46	207.05		
105.0	280.35	279.43	276.68	270.27	262.02	251.03	239.12	224.46	207.05		
120.0	280.35	279.43	272.10	270.27	262.94	252.86	239.12	225.38	208.89		
135.0	280.35	279.43	276.68	271.19	262.94	252.86	229.96	226.29	208.89		
150.0	280.35	279.43	276.68	271.19	262.94	253.78	240.95	226.29	209.80		
165.0	280.35	280.35	277.59	272.07	263.80	254.61	241.74	227.03	211.41		
180.0	280.35	278.52	273.95	267.56	258.43	247.47	233.77	217.34	199.07		
195.0	280.35	278.52	274.87	267.56	258.43	247.47	233.77	218.25	199.07		
210.0	280.35	278.52	273.95	266.65	258.43	246.56	233.77	217.34	199.07		
225.0	280.35	278.51	274.85	267.52	258.36	247.36	234.54	218.05	199.72		
240.0	280.35	278.51	274.85	268.44	259.28	247.36	233.62	217.13	198.81		
255.0	280.35	278.51	273.93	267.52	258.36	246.45	232.71	218.05	199.72		
270.0	280.35	278.51	273.93	266.60	258.36	246.45	242.78	216.22	198.81		
285.0	280.35	278.51	277.60	267.52	258.36	246.45	232.71	216.22	198.81		
300.0	280.35	278.51	273.93	267.52	257.44	246.45	232.71	217.13	198.81		
315.0	280.35	278.51	273.93	266.60	257.44	246.45	232.71	216.22	197.89		
330.0	280.35	278.51	273.02	265.69	257.44	245.53	232.71	216.22	197.89		
345.0	280.35	278.51	273.91	267.48	258.29	246.34	231.63	216.00	197.62		
360.0	280.35	280.35	276.69	271.21	263.91	253.86	241.08	227.38	209.12		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	189.94	168.94	147.02	124.19	101.36	76.71	52.96	30.13	8.22		
15.0	188.12	168.03	146.11	122.37	98.62	74.88	51.14	30.13	8.22		
30.0	188.12	167.11	146.11	121.45	99.54	73.97	52.05	29.22	8.22		
45.0	188.73	166.74	145.67	121.85	98.03	74.21	52.22	27.48	7.33		
60.0	187.81	166.74	144.75	120.93	98.95	75.13	51.31	28.40	7.33		
75.0	185.98	167.66	144.75	121.85	98.03	74.21	50.39	29.32	8.25		
90.0	187.81	166.74	144.75	121.85	98.95	75.13	51.31	28.40	7.33		
105.0	188.73	167.66	146.59	122.77	98.95	75.13	51.31	29.32	7.33		
120.0	188.73	167.66	145.67	123.68	100.78	75.13	51.31	30.23	8.25		
135.0	189.65	169.49	145.67	123.68	99.86	76.04	53.14	30.23	8.25		
150.0	190.56	152.08	147.50	123.68	100.78	76.96	54.05	31.15	9.16		
165.0	192.11	170.97	148.91	125.93	102.03	74.45	55.15	31.25	10.11		
180.0	178.98	157.07	136.06	111.41	88.58	64.84	41.09	19.18	2.74		
195.0	179.90	157.98	135.15	111.41	87.67	64.84	41.09	20.09	2.74		
210.0	178.98	157.07	136.06	110.49	88.58	64.84	42.01	19.18	2.74		
225.0	180.48	158.50	135.59	111.77	87.95	65.05	41.23	20.16	2.75		
240.0	179.57	157.58	136.51	112.69	88.87	65.05	41.23	19.24	2.75		
255.0	179.57	157.58	134.68	110.86	87.95	64.13	41.23	35.73	2.75		
270.0	178.65	157.58	134.68	111.77	87.95	64.13	42.14	19.24	2.75		
285.0	178.65	157.58	135.59	111.77	87.95	64.13	41.23	19.24	2.75		
300.0	178.65	156.66	133.76	110.86	87.04	64.13	41.23	19.24	2.75		
315.0	178.65	156.66	133.76	109.94	87.04	63.22	40.31	19.24	2.75		
330.0	177.74	155.75	134.68	109.94	87.95	62.30	40.31	17.41	2.75		
345.0	178.32	156.26	134.20	110.30	86.40	62.50	39.52	17.46	2.76		
360.0	189.94	168.94	147.02	124.19	101.36	76.71	52.96	30.13	8.22		

Light Blue USA-Rayhil INV-9-CCT-120-\*\*-4000K

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	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91	0.91
15.0	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91	0.91
30.0	0.91	0.00	0.00	0.00	0.00	0.00	0.91	0.91	0.91
45.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92
60.0	0.92	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92
75.0	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92
90.0	0.92	0.00	0.00	0.92	0.92	0.92	0.92	0.92	1.83
105.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	1.83
120.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92
135.0	0.92	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92
150.0	0.92	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92
165.0	0.92	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92
180.0	0.00	0.91	0.00	0.91	0.91	0.91	0.91	0.91	0.91
195.0	0.91	0.91	0.00	0.91	0.91	0.91	0.91	0.91	0.91
210.0	0.91	0.91	0.91	0.91	0.91	0.00	0.91	0.91	0.91
225.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
240.0	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92	0.92
255.0	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92
270.0	0.92	0.92	0.00	0.92	0.92	0.92	0.92	0.92	1.83
285.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83
300.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83
315.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.83
330.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.83
345.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
360.0	0.91	0.00	0.00	0.00	0.00	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	0.91	1.83	1.83	2.74	2.74	2.74	2.74	2.74	1.83
15.0	0.91	1.83	1.83	1.83	2.74	2.74	2.74	2.74	1.83
30.0	0.91	1.83	1.83	1.83	2.74	2.74	2.74	1.83	1.83
45.0	0.92	1.83	1.83	1.83	2.75	1.83	1.83	2.75	1.83
60.0	0.92	1.83	1.83	1.83	2.75	2.75	1.83	1.83	1.83
75.0	0.92	1.83	1.83	1.83	2.75	2.75	2.75	1.83	1.83
90.0	1.83	1.83	1.83	2.75	2.75	2.75	2.75	1.83	1.83
105.0	1.83	1.83	2.75	2.75	2.75	3.66	2.75	1.83	1.83
120.0	1.83	1.83	2.75	2.75	3.66	3.66	2.75	1.83	1.83
135.0	0.92	1.83	1.83	2.75	2.75	3.66	2.75	2.75	1.83
150.0	0.92	1.83	1.83	2.75	2.75	2.75	2.75	2.75	1.83
165.0	0.92	0.92	1.84	1.84	1.84	2.76	2.76	2.76	1.84
180.0	0.91	0.91	0.91	0.91	1.83	1.83	1.83	2.74	1.83
195.0	0.91	0.91	0.91	0.91	1.83	1.83	1.83	1.83	1.83
210.0	0.91	0.91	0.91	0.91	1.83	1.83	1.83	1.83	1.83
225.0	0.00	0.92	0.92	0.92	1.83	1.83	1.83	1.83	1.83
240.0	0.92	1.83	1.83	1.83	1.83	0.92	1.83	1.83	1.83
255.0	0.92	1.83	1.83	1.83	1.83	1.83	0.92	0.92	1.83
270.0	1.83	1.83	1.83	1.83	1.83	1.83	0.92	0.92	1.83
285.0	1.83	1.83	2.75	2.75	2.75	1.83	0.92	0.92	1.83
300.0	1.83	1.83	2.75	2.75	2.75	2.75	1.83	0.92	1.83
315.0	1.83	1.83	1.83	1.83	2.75	1.83	2.75	0.92	1.83
330.0	1.83	1.83	1.83	1.83	1.83	2.75	2.75	1.83	1.83
345.0	0.92	0.92	1.84	1.84	1.84	1.84	2.76	1.84	1.84
360.0	0.91	1.83	1.83	2.74	2.74	2.74	2.74	2.74	1.83

Intensity data(cd)

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C/γ(°)	180.0
0.0	1.83
15.0	1.83
30.0	1.83
45.0	1.83
60.0	1.83
75.0	1.83
90.0	1.83
105.0	1.83
120.0	1.83
135.0	1.83
150.0	1.83
165.0	1.84
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	1.83