
Light Blue USA-Rayhil

Client:

LumCAT: INV-9-CCT-120-**-5000K-F

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.128

Lamp flux(lm): 1240.2

Power (W): 14.520

Number of Lamps: 1

PF: 0.948

Length(mm): -210

Width(mm): -210

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1240.17, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 85.41

Central intensity(cd): 444.480, Maximum intensity(cd): 444.480

Angle of maximum intensity: C=15.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=110.2

[C90/270]Total=110.0

Field angle(10%Imax): [C0/180]Total=158.2

[C90/270]Total=158.4

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

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

Up flux rate of lamp(%): 0.92%

Down flux rate of lamp(%): 99.08%

Up flux rate of LUM(%): 0.92%

Down flux rate of LUM(%): 99.08%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 79.619%

Light Blue USA-Rayhil INV-9-CCT-120-**-5000K-F

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	444.480	0.000	0	0.00%	0.00%
5.0	442.420	10.603	10.603	0.85%	0.85%
10.0	436.316	31.435	42.038	2.53%	3.39%
15.0	426.663	51.191	93.229	4.13%	7.52%
20.0	412.775	69.181	162.411	5.58%	13.10%
25.0	395.758	84.800	247.211	6.84%	19.93%
30.0	375.080	97.550	344.761	7.87%	27.80%
35.0	350.891	106.904	451.665	8.62%	36.42%
40.0	322.887	112.415	564.08	9.06%	45.48%
45.0	291.564	113.771	677.851	9.17%	54.66%
50.0	257.111	110.868	788.718	8.94%	63.60%
55.0	222.698	104.326	893.045	8.41%	72.01%
60.0	185.575	94.371	987.416	7.61%	79.62%
65.0	148.604	81.240	1068.655	6.55%	86.17%
70.0	110.528	65.614	1134.269	5.29%	91.46%
75.0	74.130	48.267	1182.536	3.89%	95.35%
80.0	39.375	30.371	1212.907	2.45%	97.80%
85.0	8.775	13.083	1225.99	1.05%	98.86%
90.0	1.526	2.821	1228.811	0.23%	99.08%
95.0	0.763	0.627	1229.438	0.05%	99.13%
100.0	0.534	0.353	1229.79	0.03%	99.16%
105.0	0.839	0.368	1230.158	0.03%	99.19%
110.0	0.916	0.459	1230.616	0.04%	99.23%
115.0	1.373	0.580	1231.196	0.05%	99.28%
120.0	1.831	0.779	1231.975	0.06%	99.34%
125.0	1.908	0.864	1232.839	0.07%	99.41%
130.0	2.099	0.871	1233.71	0.07%	99.48%
135.0	2.060	0.840	1234.551	0.07%	99.55%
140.0	2.518	0.848	1235.399	0.07%	99.62%
145.0	2.900	0.904	1236.303	0.07%	99.69%
150.0	3.205	0.899	1237.202	0.07%	99.76%
155.0	3.854	0.893	1238.095	0.07%	99.83%
160.0	3.815	0.804	1238.899	0.06%	99.90%
165.0	3.624	0.613	1239.513	0.05%	99.95%
170.0	3.090	0.398	1239.911	0.03%	99.98%
175.0	2.747	0.209	1240.12	0.02%	100.00%
180.0	1.374	0.049	1240.169	0.00%	100.00%

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

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

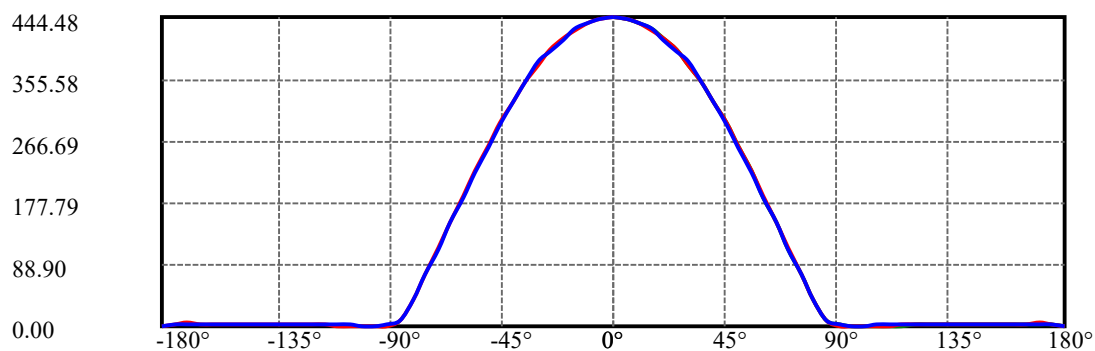
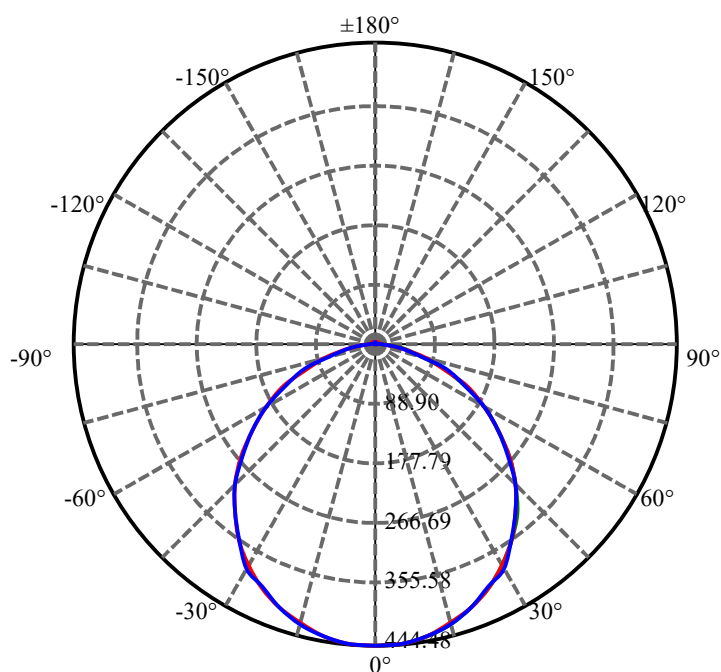
Operator: JUN WANG
Distance(m): 30.26

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	344.76	27.80%	27.80%
0-40	564.08	45.48%	45.48%
0-60	987.42	79.62%	79.62%
0-90	1228.81	99.08%	99.08%
0-120	1231.98	99.34%	99.34%
0-180	1240.17	100.00%	100.00%
60-90	241.40	19.46%	19.46%
90-120	3.16	0.26%	0.26%
90-130	4.90	0.40%	0.40%
90-150	8.39	0.68%	0.68%
90-180	11.31	0.91%	0.91%
0-60.29	992.14	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	42.04
10-20	120.37
20-30	182.35
30-40	219.32
40-50	224.64
50-60	198.70
60-70	146.85
70-80	78.64
80-90	15.90
90-100	0.98
100-110	0.83
110-120	1.36
120-130	1.74
130-140	1.69
140-150	1.80
150-160	1.70
160-170	1.01
170-180	0.21



C15(Max): —————

C0/C180: —————

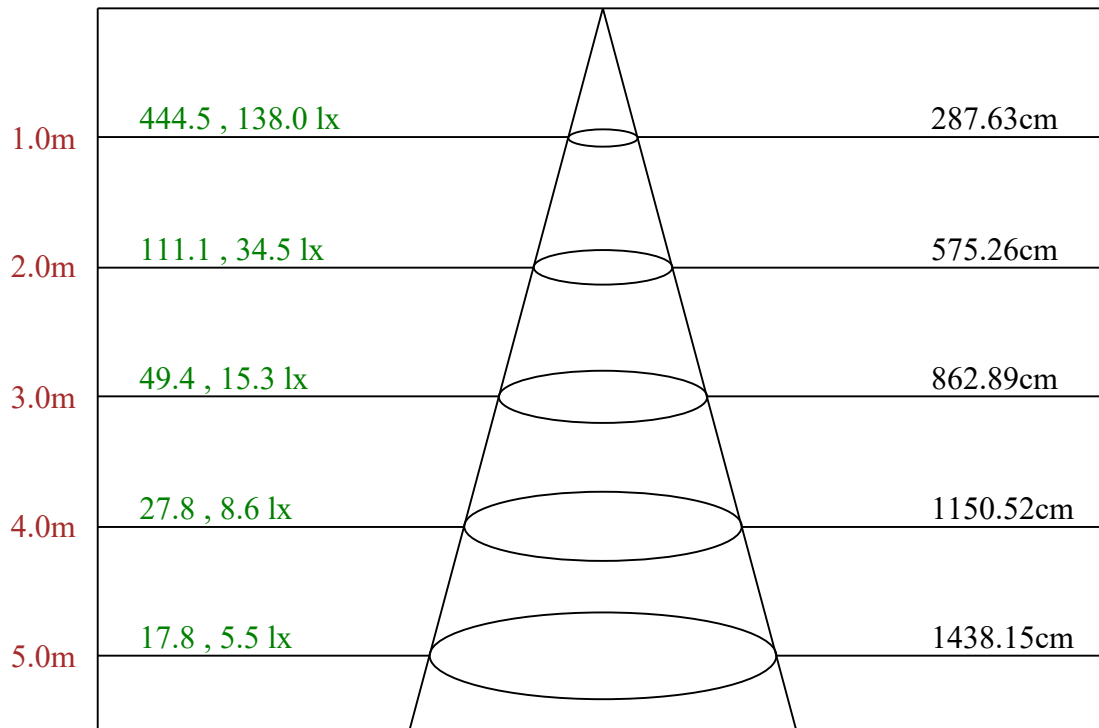
C90/C270: —————

Field angle(10%Imax):C0/180Left:79.1 Right:79.1

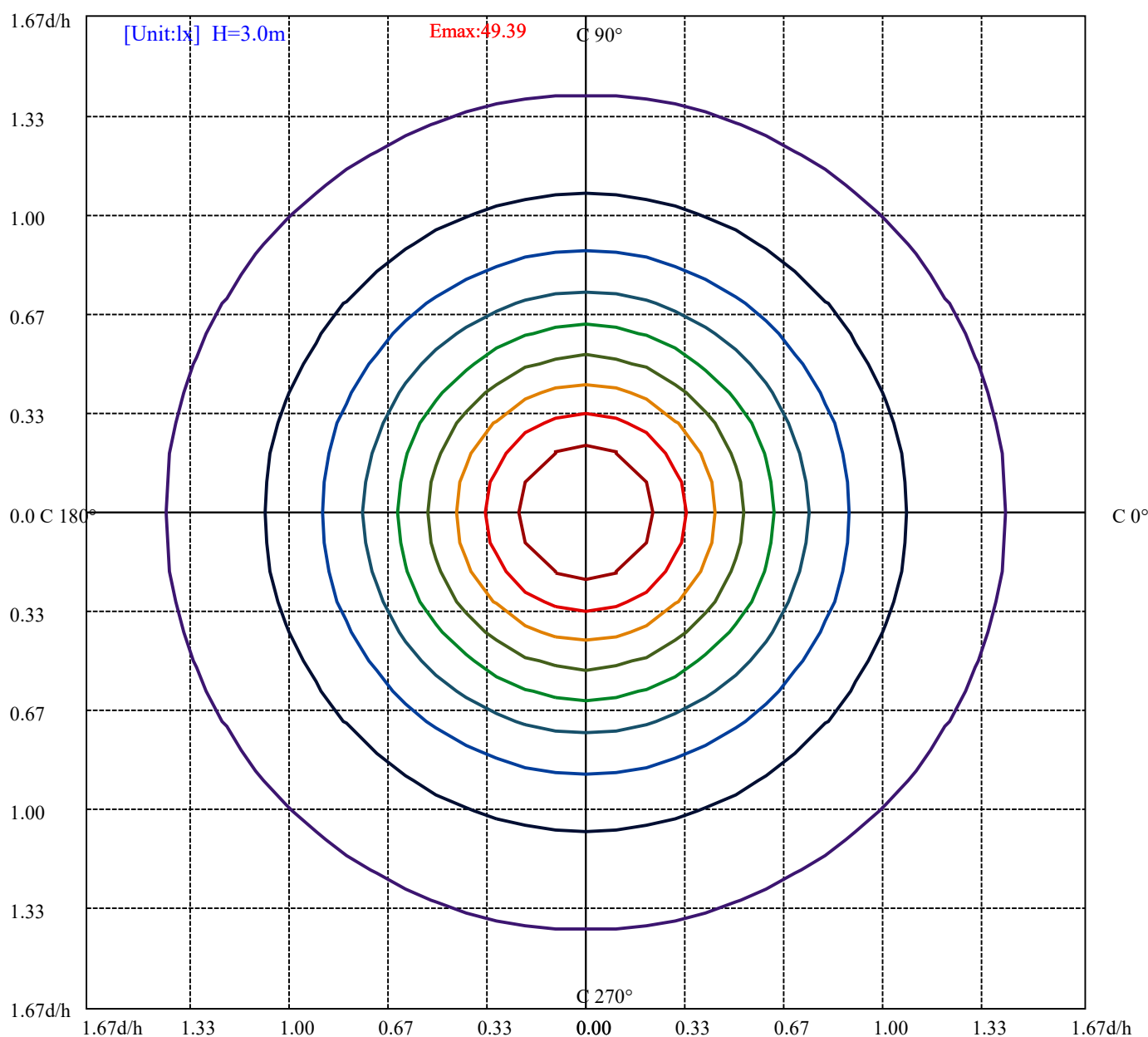
:C90/270Left:79.2 Right:79.2

Beam Angle(50%Imax):C0/180Left:55.1 Right:55.1

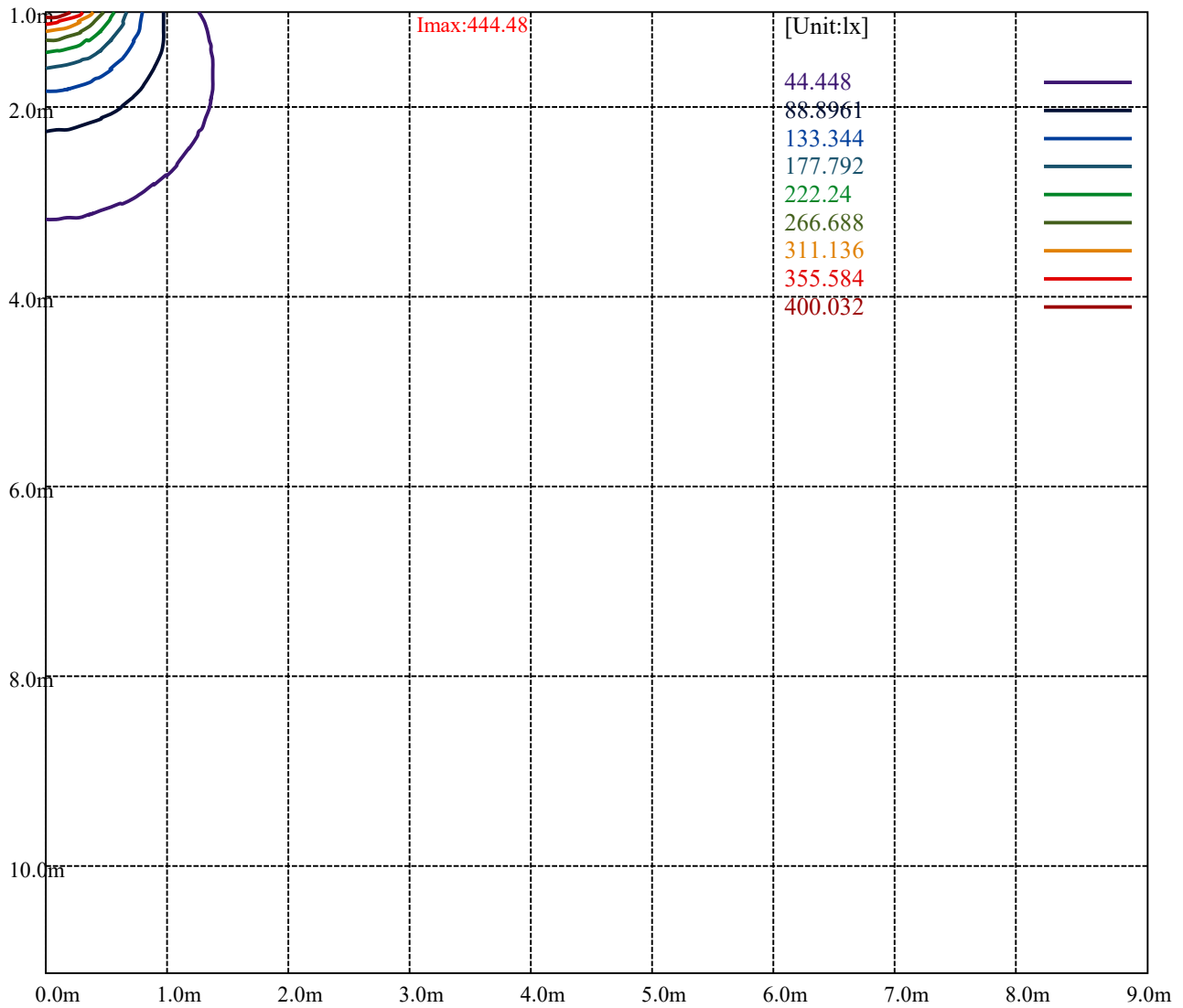
:C90/270Left:55.0 Right:55.0



Max , Ave Beam angle of C15 plane 110.38



(10%Emax) 4.938667	—
(20%Emax) 9.877334	—
(30%Emax) 14.816	—
(40%Emax) 19.75467	—
(50%Emax) 24.69333	—
(60%Emax) 29.632	—
(70%Emax) 34.57066	—
(80%Emax) 39.50933	—
(90%Emax) 44.448	—



Luminance Table

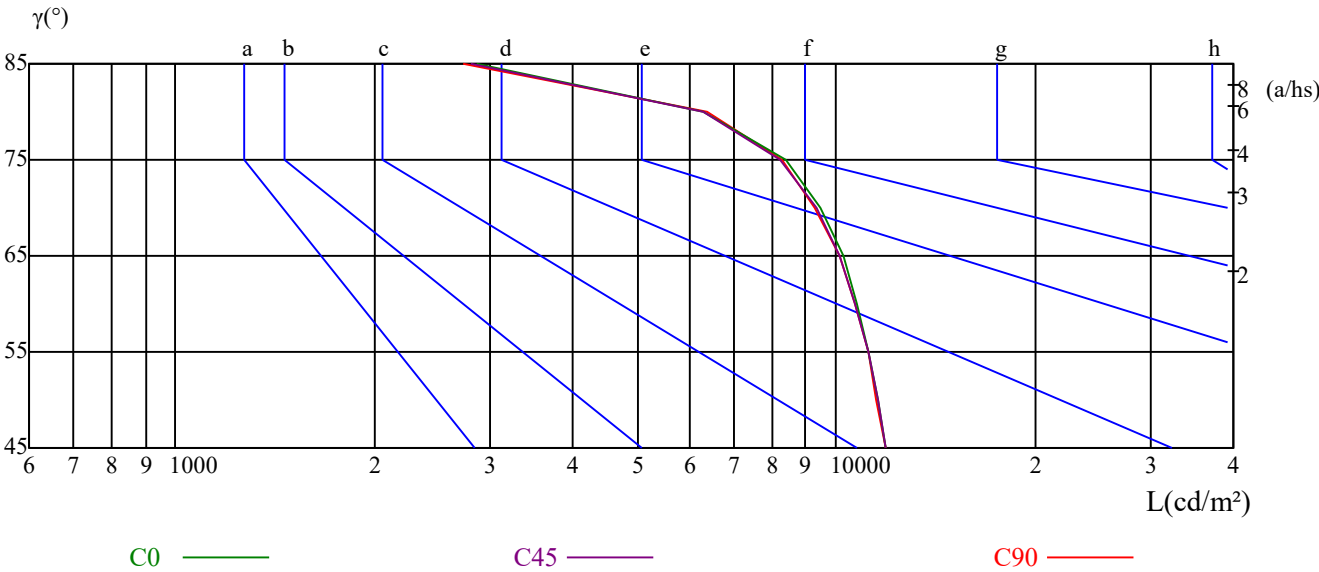
γ	45	50	55	60	65	70	75	80	85
C0	11901	11598	11210	10782	10267	9457	8382	6285	2866
C45	11927	11618	11221	10703	10127	9342	8255	6285	2808
C90	11881	11526	11187	10716	10111	9284	8281	6400	2732

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10267	10111	10127	8382	8281	8255	2866	2732	2808

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	1.01	1.01	1.01	0.99
1	1.04	1.00	0.96	1.02	0.98	0.95	0.97	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	0.65	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-**-5000K-F

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	444.48	442.66	437.19	429.91	417.16	402.58	380.72	358.86	330.63		
15.0	444.48	444.48	438.99	429.85	418.87	400.58	382.29	358.51	331.99		
30.0	444.48	443.57	437.16	428.93	415.21	400.58	380.46	356.68	329.24		
45.0	444.48	444.48	438.07	429.82	416.07	398.66	379.41	356.50	328.09		
60.0	444.48	442.65	438.07	429.82	415.15	400.49	378.50	356.50	328.09		
75.0	444.48	442.65	438.07	427.98	416.07	398.66	379.41	356.50	329.92		
90.0	444.48	442.65	438.07	429.82	415.15	398.66	378.50	356.50	328.09		
105.0	444.48	442.65	438.07	429.82	416.07	398.66	379.41	356.50	328.09		
120.0	444.48	442.65	430.73	429.82	416.07	400.49	379.41	357.42	331.76		
135.0	444.48	442.65	438.07	429.82	416.07	400.49	364.75	359.25	331.76		
150.0	444.48	442.65	438.07	429.82	417.90	401.41	383.08	359.25	332.67		
165.0	444.48	442.65	438.07	430.73	416.07	401.41	383.08	359.25	334.51		
180.0	444.48	441.75	434.46	422.62	409.87	390.74	368.88	344.29	315.14		
195.0	444.48	443.57	436.25	424.36	409.73	392.35	371.31	346.62	316.44		
210.0	444.48	441.74	436.25	424.36	409.73	392.35	371.31	345.71	316.44		
225.0	444.48	442.65	435.32	425.23	410.57	391.33	372.08	344.59	317.09		
240.0	444.48	441.73	435.32	425.23	410.57	393.16	371.16	344.59	317.09		
255.0	444.48	441.73	435.32	423.40	408.74	391.33	369.33	346.42	317.09		
270.0	444.48	441.73	434.40	423.40	408.74	391.33	385.83	342.75	315.26		
285.0	444.48	441.73	439.90	423.40	408.74	390.41	369.33	342.75	315.26		
300.0	444.48	441.73	434.40	423.40	408.74	391.33	369.33	344.59	315.26		
315.0	444.48	441.73	434.40	423.40	408.74	390.41	369.33	342.75	313.43		
330.0	444.48	441.73	432.57	422.49	408.74	390.41	368.41	342.75	313.43		
345.0	444.48	439.90	434.40	422.49	407.82	390.41	366.58	341.84	312.51		
360.0	444.48	442.66	437.19	429.91	417.16	402.58	380.72	358.86	330.63		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	300.57	266.87	231.35	196.74	160.30	122.05	84.71	46.45	12.75		
15.0	299.98	267.97	231.39	194.80	156.39	119.81	82.31	46.64	12.80		
30.0	298.15	265.22	231.39	192.97	158.22	117.06	82.31	45.73	12.80		
45.0	298.76	265.77	231.86	193.37	155.80	119.14	82.48	43.99	11.91		
60.0	297.85	265.77	230.03	192.46	156.71	119.14	80.65	45.82	11.91		
75.0	295.10	265.77	230.03	192.46	155.80	117.31	80.65	45.82	12.83		
90.0	297.85	263.94	230.03	193.37	156.71	119.14	82.48	45.82	11.91		
105.0	300.60	265.77	231.86	195.20	156.71	119.14	80.65	46.74	11.91		
120.0	298.76	266.69	231.86	196.12	159.46	119.14	82.48	46.74	12.83		
135.0	300.60	268.52	231.86	196.12	158.55	120.06	83.40	46.74	12.83		
150.0	302.43	241.94	232.78	196.12	159.46	121.89	86.15	49.49	14.66		
165.0	303.35	271.27	234.61	197.95	161.30	117.31	86.15	49.49	16.50		
180.0	282.35	249.56	214.04	176.70	140.27	102.01	65.58	29.15	4.55		
195.0	285.35	250.59	214.01	177.43	139.01	102.43	65.85	32.01	4.57		
210.0	283.52	250.59	214.92	175.60	140.84	104.26	67.68	31.10	4.57		
225.0	285.93	251.11	215.37	177.79	141.13	102.64	65.98	31.16	4.58		
240.0	284.10	251.11	215.37	178.71	141.13	102.64	65.98	31.16	4.58		
255.0	284.10	251.11	214.45	175.96	139.30	100.81	64.15	56.82	4.58		
270.0	284.10	249.28	214.45	177.79	139.30	100.81	65.98	31.16	4.58		
285.0	283.18	249.28	214.45	177.79	139.30	102.64	65.98	29.33	4.58		
300.0	283.18	249.28	212.62	175.96	137.47	102.64	65.98	29.33	4.58		
315.0	283.18	249.28	212.62	174.13	137.47	100.81	64.15	29.33	4.58		
330.0	281.35	247.44	212.62	174.13	139.30	99.89	64.15	27.49	4.58		
345.0	283.18	246.53	210.78	174.13	136.55	99.89	63.24	27.49	4.58		
360.0	300.57	266.87	231.35	196.74	160.30	122.05	84.71	46.45	12.75		

Light Blue USA-Rayhil INV-9-CCT-120-**-5000K-F

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	1.82	0.00	0.00	0.00	0.00	1.82	1.82	1.82	1.82
15.0	1.83	0.00	0.00	0.00	0.00	1.83	1.83	1.83	1.83
30.0	1.83	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83
45.0	1.83	0.00	0.00	0.00	0.00	1.83	1.83	1.83	1.83
60.0	1.83	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83
75.0	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83	1.83
90.0	1.83	0.00	0.00	1.83	1.83	1.83	1.83	1.83	2.75
105.0	1.83	0.00	0.00	0.00	0.00	1.83	1.83	1.83	2.75
120.0	1.83	0.00	0.00	0.00	0.00	1.83	1.83	1.83	1.83
135.0	1.83	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83
150.0	1.83	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83
165.0	1.83	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83
180.0	0.00	1.82	0.00	1.82	1.82	1.82	1.82	1.82	1.82
195.0	1.83	1.83	0.00	1.83	1.83	1.83	1.83	1.83	1.83
210.0	1.83	1.83	1.83	1.83	1.83	0.00	1.83	1.83	1.83
225.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
240.0	0.00	0.00	0.00	0.00	1.83	1.83	1.83	1.83	1.83
255.0	0.00	0.00	0.00	0.00	0.00	1.83	1.83	1.83	1.83
270.0	1.83	1.83	0.00	1.83	1.83	1.83	1.83	1.83	2.75
285.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	2.75	2.75
300.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	2.75	2.75
315.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	2.75
330.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	2.75
345.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
360.0	1.82	0.00	0.00	0.00	0.00	1.82	1.82	1.82	1.82

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	1.82	2.73	2.73	4.55	4.55	4.55	4.55	4.55	2.73
15.0	1.83	2.74	2.74	2.74	4.57	4.57	4.57	4.57	2.74
30.0	1.83	2.74	2.74	2.74	4.57	4.57	4.57	2.74	2.74
45.0	1.83	2.75	2.75	2.75	4.58	2.75	2.75	4.58	2.75
60.0	1.83	2.75	2.75	2.75	4.58	4.58	2.75	2.75	2.75
75.0	1.83	2.75	2.75	2.75	4.58	4.58	4.58	2.75	2.75
90.0	2.75	2.75	2.75	4.58	4.58	4.58	4.58	2.75	2.75
105.0	2.75	2.75	4.58	4.58	4.58	5.50	4.58	2.75	2.75
120.0	2.75	2.75	4.58	4.58	5.50	5.50	4.58	2.75	2.75
135.0	1.83	2.75	2.75	4.58	4.58	5.50	4.58	4.58	2.75
150.0	1.83	2.75	2.75	4.58	4.58	4.58	4.58	4.58	2.75
165.0	1.83	1.83	2.75	2.75	2.75	4.58	4.58	4.58	2.75
180.0	1.82	1.82	1.82	1.82	2.73	2.73	2.73	4.55	2.73
195.0	1.83	1.83	1.83	1.83	2.74	2.74	2.74	2.74	2.74
210.0	1.83	1.83	1.83	1.83	2.74	2.74	2.74	2.74	2.74
225.0	0.00	1.83	1.83	1.83	2.75	2.75	2.75	2.75	2.75
240.0	1.83	2.75	2.75	2.75	2.75	1.83	2.75	2.75	2.75
255.0	1.83	2.75	2.75	2.75	2.75	2.75	1.83	1.83	2.75
270.0	2.75	2.75	2.75	2.75	2.75	2.75	1.83	1.83	2.75
285.0	2.75	2.75	4.58	4.58	4.58	2.75	1.83	1.83	2.75
300.0	2.75	2.75	4.58	4.58	4.58	4.58	2.75	1.83	2.75
315.0	2.75	2.75	2.75	2.75	4.58	2.75	4.58	1.83	2.75
330.0	2.75	2.75	2.75	2.75	2.75	4.58	4.58	2.75	2.75
345.0	1.83	1.83	2.75	2.75	2.75	2.75	4.58	2.75	2.75
360.0	1.82	2.73	2.73	4.55	4.55	4.55	4.55	4.55	2.73

Light Blue USA-Rayhil INV-9-CCT-120-**-5000K-F

Intensity data(cd)

Appendix Page: 12 Total:12

C/γ(°)	180.0
0.0	2.73
15.0	2.74
30.0	2.74
45.0	2.75
60.0	2.75
75.0	2.75
90.0	2.75
105.0	2.75
120.0	2.75
135.0	2.75
150.0	2.75
165.0	2.75
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	2.73