
Light Blue USA-Rayhil

Client:

LumCAT: INV-20-CCT-UNV-**-5000K-F

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.265

Lamp flux(lm): 2757.8

Power (W): 31.590

Number of Lamps: 1

PF: 0.993

Length(mm): -480

Width(mm): -480

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2757.84, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 87.30

Central intensity(cd): 944.359, Maximum intensity(cd): 944.359

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(%): 0.53%

Down flux rate of lamp(%): 99.47%

Up flux rate of LUM(%): 0.53%

Down flux rate of LUM(%): 99.47%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 77.700%

Light Blue USA-Rayhil INV-20-CCT-UNV-**-5000K-F

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	944.359	0.000	0	0.00%	0.00%
5.0	940.429	22.532	22.532	0.82%	0.82%
10.0	928.677	66.864	89.396	2.42%	3.24%
15.0	908.380	108.973	198.369	3.95%	7.19%
20.0	880.714	147.447	345.815	5.35%	12.54%
25.0	845.765	181.076	526.891	6.57%	19.11%
30.0	803.799	208.754	735.645	7.57%	26.67%
35.0	755.038	229.550	965.195	8.32%	35.00%
40.0	700.829	242.901	1208.095	8.81%	43.81%
45.0	636.345	247.589	1455.684	8.98%	52.78%
50.0	568.013	243.358	1699.042	8.82%	61.61%
55.0	495.866	231.323	1930.365	8.39%	70.00%
60.0	423.304	212.464	2142.829	7.70%	77.70%
65.0	344.626	186.685	2329.514	6.77%	84.47%
70.0	266.490	154.739	2484.253	5.61%	90.08%
75.0	189.996	119.318	2603.571	4.33%	94.41%
80.0	116.708	82.065	2685.636	2.98%	97.38%
85.0	44.522	43.810	2729.446	1.59%	98.97%
90.0	6.141	13.872	2743.318	0.50%	99.47%
95.0	1.374	2.058	2745.376	0.07%	99.55%
100.0	1.374	0.746	2746.122	0.03%	99.58%
105.0	1.374	0.735	2746.857	0.03%	99.60%
110.0	1.526	0.758	2747.615	0.03%	99.63%
115.0	1.563	0.782	2748.397	0.03%	99.66%
120.0	1.374	0.714	2749.111	0.03%	99.68%
125.0	1.564	0.679	2749.791	0.02%	99.71%
130.0	1.831	0.738	2750.529	0.03%	99.74%
135.0	1.831	0.740	2751.269	0.03%	99.76%
140.0	1.984	0.706	2751.975	0.03%	99.79%
145.0	2.747	0.789	2752.765	0.03%	99.82%
150.0	4.121	1.011	2753.776	0.04%	99.85%
155.0	4.349	1.072	2754.848	0.04%	99.89%
160.0	4.998	0.980	2755.828	0.04%	99.93%
165.0	5.036	0.827	2756.655	0.03%	99.96%
170.0	5.723	0.638	2757.293	0.02%	99.98%
175.0	6.257	0.429	2757.722	0.02%	100.00%
180.0	3.205	0.113	2757.835	0.00%	100.00%

Equipment: LC-I-902 GMS-2000
Temperature($^{\circ}$ C): 24.9

Date: 2024/12/18
Humidity(%): 60.8%

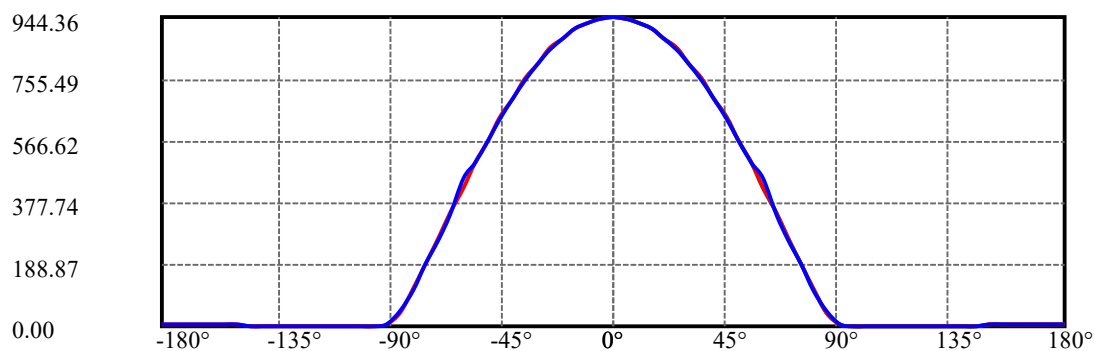
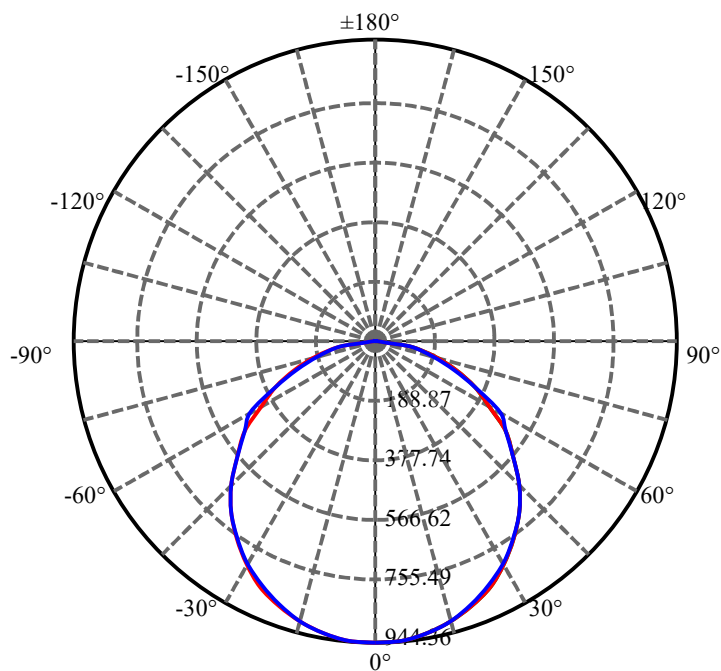
Operator: JUN WANG
Distance(m): 30.26

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	735.64	26.67%	26.67%
0-40	1208.10	43.81%	43.81%
0-60	2142.83	77.70%	77.70%
0-90	2743.32	99.47%	99.47%
0-120	2749.11	99.68%	99.68%
0-180	2757.84	100.00%	100.00%
60-90	600.49	21.77%	21.77%
90-120	5.79	0.21%	0.21%
90-130	7.21	0.26%	0.26%
90-150	10.46	0.38%	0.38%
90-180	14.40	0.52%	0.52%
0-61.70	2206.27	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	89.40
10-20	256.42
20-30	389.83
30-40	472.45
40-50	490.95
50-60	443.79
60-70	341.42
70-80	201.38
80-90	57.68
90-100	2.80
100-110	1.49
110-120	1.50
120-130	1.42
130-140	1.45
140-150	1.80
150-160	2.05
160-170	1.47
170-180	0.43



C0(Max):

C0/C180:

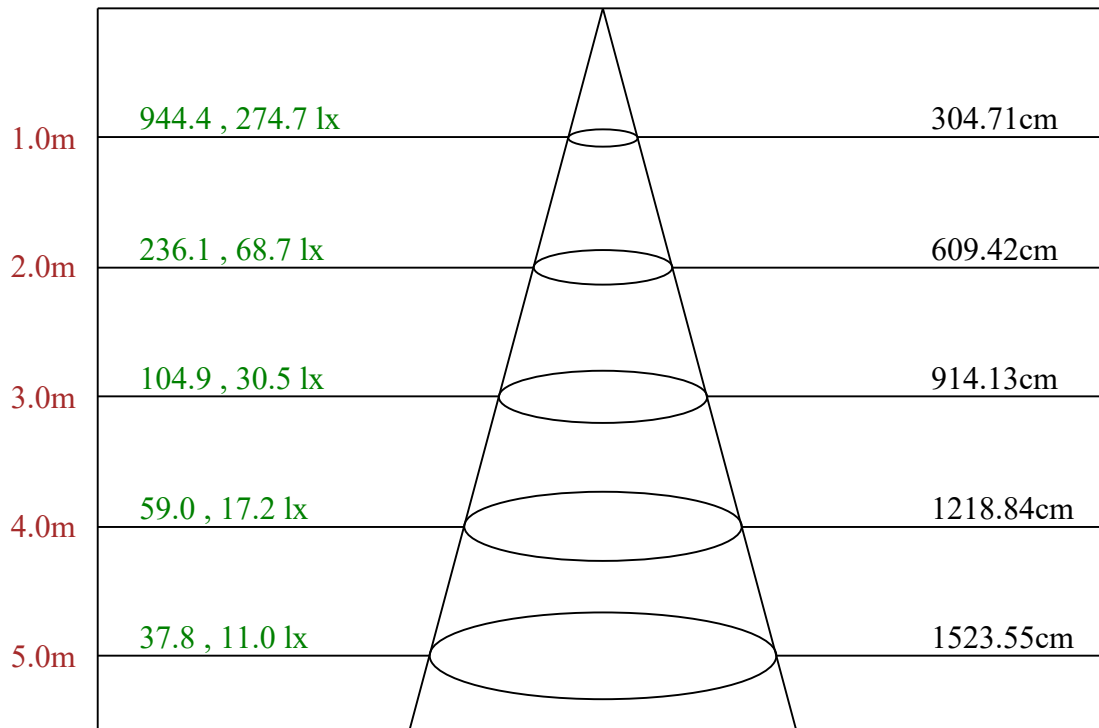
C90/C270:

Field angle(10%Imax):C0/180Left:81.4 Right:81.4

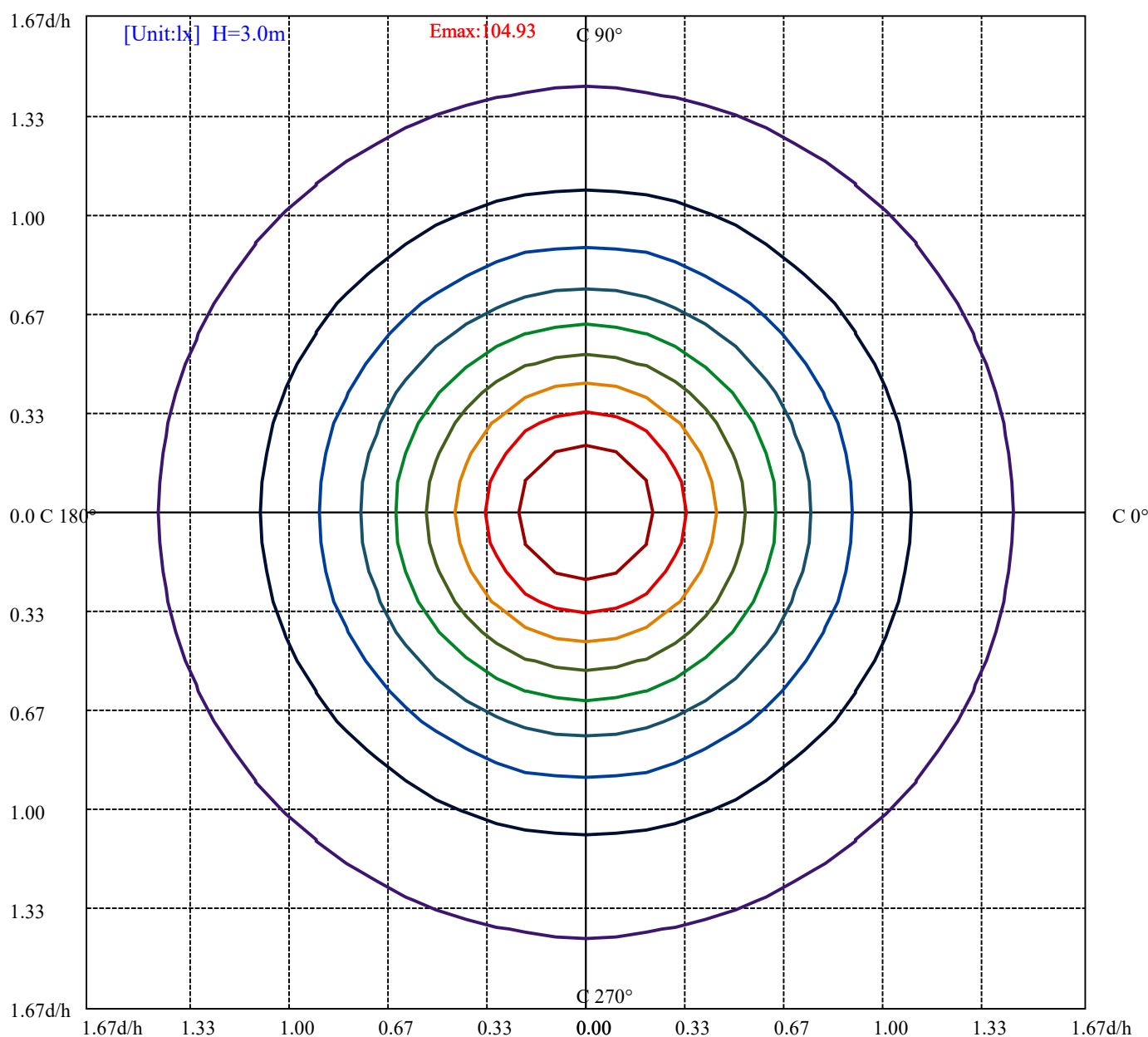
:C90/270Left:81.4 Right:81.4

Beam Angle(50%Imax):C0/180Left:56.6 Right:56.6

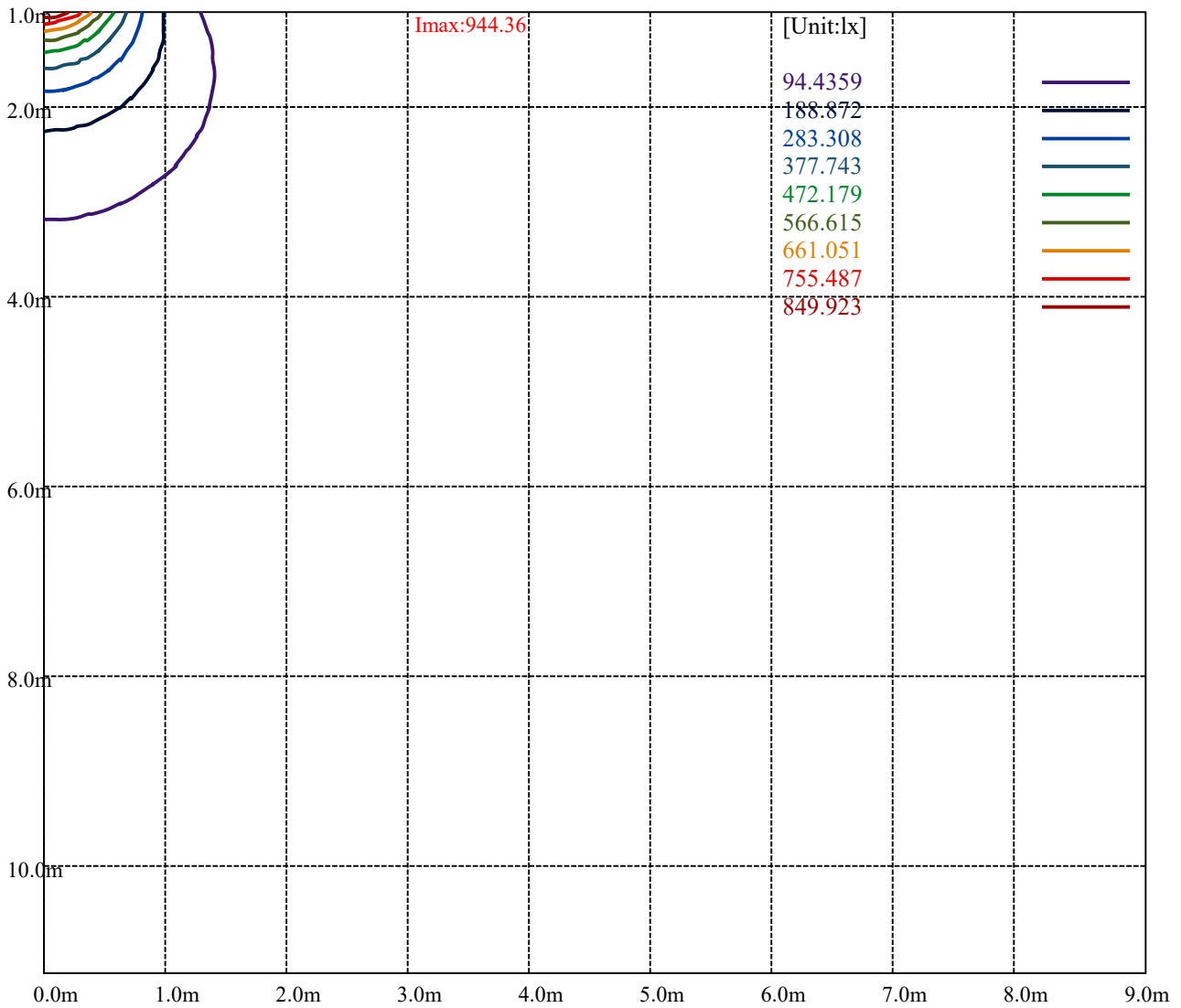
:C90/270Left:57.7 Right:57.7



Max , Ave Beam angle of C0 plane 113.44



(10%Emax)	10.49288	—
(20%Emax)	20.98578	—
(30%Emax)	31.47867	—
(40%Emax)	41.97145	—
(50%Emax)	52.46433	—
(60%Emax)	62.95722	—
(70%Emax)	73.45011	—
(80%Emax)	83.943	—
(90%Emax)	94.43588	—



Light Blue USA-Rayhil INV-20-CCT-UNV-**-5000K-F

Luminance Limiting Curve(no luminous side)

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Luminance Table

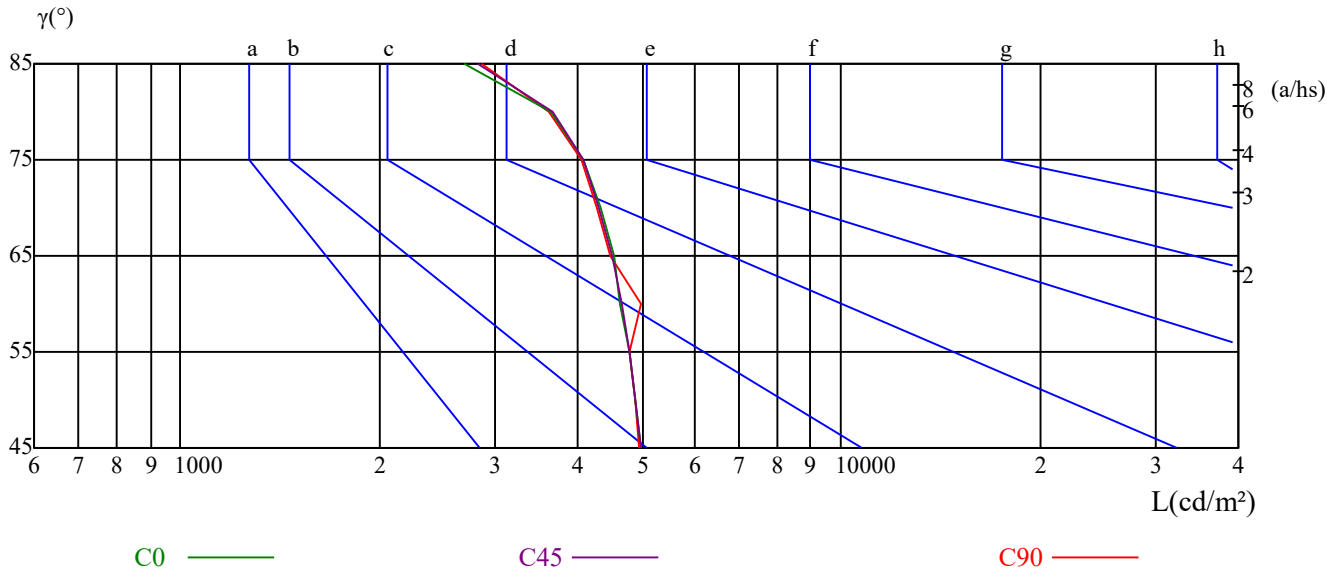
γ	45	50	55	60	65	70	75	80	85
C0	4978	4888	4789	4643	4535	4330	4069	3645	2698
C45	4980	4891	4777	4661	4517	4296	4067	3669	2819
C90	4962	4887	4788	4986	4472	4281	4052	3618	2849

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4535	4472	4517	4069	4052	4067	2698	2849	2819

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



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	1.02	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	0.40	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

Light Blue USA-Rayhil INV-20-CCT-UNV-**-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	944.36	944.36	935.30	918.10	894.56	863.78	822.13	780.48	726.15		
15.0	944.36	944.36	937.09	920.73	898.00	866.19	828.02	781.66	729.86		
30.0	944.36	944.36	936.16	921.59	897.00	866.95	831.44	785.90	733.08		
45.0	944.36	945.27	939.79	923.33	901.39	871.22	833.74	788.95	736.84		
60.0	944.36	946.19	939.78	924.21	901.31	870.17	835.36	789.56	740.10		
75.0	944.36	945.27	939.78	925.12	901.31	872.00	831.70	789.56	737.35		
90.0	944.36	946.19	938.86	924.19	901.27	869.18	830.67	785.74	735.32		
105.0	944.36	947.12	938.84	925.97	901.14	870.80	831.26	785.28	735.63		
120.0	944.36	945.28	937.92	922.29	900.22	866.20	828.50	782.52	730.11		
135.0	944.36	944.36	937.00	921.37	895.62	864.36	823.90	779.76	723.67		
150.0	944.36	944.36	936.07	917.64	871.57	861.44	822.74	777.60	723.24		
165.0	944.36	944.36	934.23	916.75	890.05	857.84	817.34	772.24	712.41		
180.0	944.36	938.02	923.53	898.18	870.11	832.99	787.72	737.02	675.45		
195.0	944.36	937.09	921.64	898.00	867.10	829.84	781.66	729.86	672.59		
210.0	944.36	934.34	917.95	895.18	864.22	825.06	780.44	726.71	670.25		
225.0	944.36	936.13	919.68	894.08	862.08	823.69	777.98	724.04	664.62		
240.0	944.36	935.20	919.63	891.23	861.01	823.45	776.74	721.78	660.41		
255.0	944.36	934.28	916.88	890.32	857.34	817.96	773.99	718.12	659.49		
270.0	944.36	934.27	916.85	891.18	856.34	818.75	771.07	716.98	659.22		
285.0	944.36	936.08	917.69	892.86	859.76	818.38	773.33	723.67	707.12		
300.0	944.36	934.24	920.45	894.70	886.43	820.22	777.00	721.83	663.90		
315.0	944.36	934.24	917.69	895.62	860.68	825.74	778.84	726.43	667.58		
330.0	944.36	936.07	922.25	897.37	866.97	828.27	784.05	735.22	675.33		
345.0	944.36	938.84	923.19	901.10	871.64	833.91	791.57	740.02	680.20		
360.0	944.36	944.36	935.30	918.10	894.56	863.78	822.13	780.48	726.15		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	664.58	597.58	526.05	450.90	379.37	300.60	222.73	145.77	70.62		
15.0	671.69	607.15	535.35	461.73	383.56	309.94	228.14	153.61	78.17		
30.0	673.89	610.14	539.11	464.44	391.59	313.27	234.95	157.54	85.60		
45.0	680.16	610.68	543.03	469.89	394.02	314.48	240.43	163.64	87.76		
60.0	680.56	614.61	543.17	468.06	395.70	317.84	240.90	163.96	91.60		
75.0	680.56	611.86	545.91	472.64	395.70	317.84	238.15	163.96	88.85		
90.0	676.64	612.46	543.69	473.10	391.50	315.40	237.46	160.45	84.35		
105.0	674.02	611.49	539.76	465.28	388.04	309.88	231.72	159.08	83.68		
120.0	671.26	605.05	537.01	458.85	386.20	308.04	229.88	152.64	77.24		
135.0	667.58	602.29	531.49	457.01	378.85	299.77	221.61	148.96	73.56		
150.0	661.51	593.33	521.47	452.37	370.37	296.67	217.43	140.04	66.34		
165.0	653.50	586.31	517.28	441.81	363.57	286.25	213.54	136.22	61.67		
180.0	609.35	539.63	468.10	389.33	314.18	235.41	158.45	83.30	14.49		
195.0	607.15	536.26	461.73	385.38	306.30	229.05	154.51	76.35	10.91		
210.0	600.13	529.10	454.42	381.57	304.16	224.93	148.44	71.94	6.37		
225.0	597.88	526.57	450.70	374.82	300.77	219.41	146.27	70.39	5.49		
240.0	593.54	521.18	446.07	372.80	295.86	218.92	141.06	65.95	5.50		
255.0	592.63	522.10	446.99	370.05	296.77	214.34	141.06	119.99	5.50		
270.0	593.20	524.44	450.17	429.09	292.48	214.54	142.11	66.93	5.50		
285.0	596.78	522.29	450.57	374.25	297.01	219.77	142.53	68.05	5.52		
300.0	597.70	525.97	452.41	376.09	303.45	221.61	148.96	73.56	9.20		
315.0	603.21	536.09	457.93	385.28	308.04	229.88	153.56	78.16	11.03		
330.0	609.92	540.82	468.03	390.64	313.25	234.02	158.47	87.53	17.51		
345.0	614.85	544.89	470.34	393.94	320.31	243.91	167.52	92.96	22.09		
360.0	664.58	597.58	526.05	450.90	379.37	300.60	222.73	145.77	70.62		

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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	6.34	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.81		
15.0	9.09	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.82		
30.0	10.93	0.91	0.91	0.91	0.91	4.55	0.91	1.82	1.82		
45.0	15.54	0.91	0.91	0.91	0.91	0.91	0.91	1.83	1.83		
60.0	15.57	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83		
75.0	16.49	0.92	0.92	0.92	0.92	1.83	0.92	0.92	1.83		
90.0	14.67	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83		
105.0	12.87	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84		
120.0	9.20	0.92	0.92	0.92	0.92	0.92	0.92	1.84	1.84		
135.0	6.44	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84		
150.0	4.61	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84		
165.0	3.68	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84		
180.0	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		
210.0	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		
240.0	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	3.66	1.83	1.83	1.83	1.83		
270.0	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83		
285.0	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	3.68	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		
330.0	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		
360.0	6.34	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.81		
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	3.62	4.53	5.43	5.43	5.43	6.34	6.34		
15.0	1.82	1.82	3.64	4.54	5.45	5.45	5.45	5.45	6.36		
30.0	1.82	3.64	3.64	4.55	5.46	5.46	5.46	5.46	6.37		
45.0	1.83	1.83	3.66	4.57	5.49	5.49	5.49	6.40	6.40		
60.0	1.83	1.83	3.66	4.58	4.58	5.50	5.50	5.50	6.41		
75.0	1.83	1.83	3.66	4.58	4.58	5.50	5.50	5.50	6.41		
90.0	1.83	1.83	3.67	4.58	4.58	5.50	5.50	6.42	5.50		
105.0	1.84	3.68	3.68	4.60	4.60	5.52	5.52	6.44	6.44		
120.0	1.84	1.84	3.68	4.60	5.52	5.52	5.52	6.44	6.44		
135.0	1.84	1.84	3.68	4.60	4.60	5.52	5.52	5.52	6.44		
150.0	1.84	1.84	3.69	4.61	4.61	5.53	5.53	5.53	6.45		
165.0	1.84	1.84	3.68	4.60	5.52	5.52	5.52	6.44	6.44		
180.0	1.81	1.81	1.81	3.62	3.62	4.53	4.53	5.43	6.34		
195.0	1.82	1.82	1.82	3.64	3.64	3.64	4.54	5.45	5.45		
210.0	1.82	1.82	1.82	3.64	3.64	4.55	4.55	5.46	6.37		
225.0	1.83	1.83	1.83	3.66	3.66	4.57	4.57	5.49	6.40		
240.0	1.83	1.83	1.83	3.66	3.66	4.58	4.58	5.50	6.41		
255.0	1.83	1.83	1.83	3.66	3.66	4.58	4.58	5.50	6.41		
270.0	1.83	1.83	1.83	3.67	3.67	4.58	4.58	5.50	6.42		
285.0	1.84	1.84	1.84	3.68	3.68	4.60	4.60	5.52	6.44		
300.0	1.84	1.84	1.84	3.68	3.68	4.60	4.60	5.52	5.52		
315.0	1.84	1.84	1.84	3.68	3.68	4.60	4.60	5.52	5.52		
330.0	1.84	1.84	1.84	3.69	3.69	4.61	4.61	5.53	6.45		
345.0	1.84	1.84	1.84	3.68	3.68	4.60	4.60	5.52	6.44		
360.0	1.81	1.81	3.62	4.53	5.43	5.43	5.43	6.34	6.34		

Intensity data(cd)

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C/γ(°)	180.0
0.0	6.34
15.0	6.36
30.0	6.37
45.0	6.40
60.0	6.41
75.0	6.41
90.0	6.42
105.0	6.44
120.0	6.44
135.0	6.44
150.0	6.45
165.0	6.44
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	6.34