
Light Blue USA-Rayhil

Client:

LumCAT: INV-9-CCT-120-**-2700K

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.050

LampCAT:

Current(A): 0.128

Lamp flux(lm): 698.8

Power (W): 14.530

Number of Lamps: 1

PF: 0.948

Length(mm): -210

Width(mm): -210

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 698.83, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 48.10

Central intensity(cd): 250.779, Maximum intensity(cd): 250.779

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=110.4

[C90/270]Total=110.0

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(%): 0.80%

Down flux rate of lamp(%): 99.20%

Up flux rate of LUM(%): 0.80%

Down flux rate of LUM(%): 99.20%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 79.726%

Light Blue USA-Rayhil INV-9-CCT-120-**-2700K

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	250.778	0.000	0	0.00%	0.00%
5.0	249.695	5.983	5.983	0.86%	0.86%
10.0	246.253	17.742	23.725	2.54%	3.39%
15.0	240.695	28.885	52.61	4.13%	7.53%
20.0	233.003	39.039	91.649	5.59%	13.11%
25.0	223.323	47.860	139.51	6.85%	19.96%
30.0	211.603	55.040	194.55	7.88%	27.84%
35.0	197.986	60.315	254.865	8.63%	36.47%
40.0	182.195	63.430	318.295	9.08%	45.55%
45.0	164.569	64.206	382.501	9.19%	54.73%
50.0	144.934	62.539	445.041	8.95%	63.68%
55.0	125.706	58.846	503.887	8.42%	72.10%
60.0	104.730	53.264	557.151	7.62%	79.73%
65.0	83.829	45.839	602.99	6.56%	86.29%
70.0	62.356	37.015	640.005	5.30%	91.58%
75.0	41.766	27.216	667.221	3.89%	95.48%
80.0	22.369	17.161	684.382	2.46%	97.93%
85.0	4.872	7.402	691.784	1.06%	98.99%
90.0	0.492	1.469	693.253	0.21%	99.20%
95.0	0.301	0.217	693.47	0.03%	99.23%
100.0	0.279	0.158	693.628	0.02%	99.26%
105.0	0.340	0.165	693.793	0.02%	99.28%
110.0	0.408	0.195	693.989	0.03%	99.31%
115.0	0.546	0.242	694.23	0.03%	99.34%
120.0	0.653	0.291	694.521	0.04%	99.38%
125.0	0.859	0.349	694.871	0.05%	99.43%
130.0	1.004	0.405	695.276	0.06%	99.49%
135.0	1.183	0.442	695.717	0.06%	99.55%
140.0	1.340	0.467	696.184	0.07%	99.62%
145.0	1.618	0.493	696.678	0.07%	99.69%
150.0	1.885	0.516	697.194	0.07%	99.77%
155.0	2.068	0.500	697.694	0.07%	99.84%
160.0	2.087	0.436	698.13	0.06%	99.90%
165.0	2.003	0.337	698.467	0.05%	99.95%
170.0	1.759	0.223	698.69	0.03%	99.98%
175.0	1.408	0.113	698.803	0.02%	100.00%
180.0	0.748	0.026	698.829	0.00%	100.00%

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

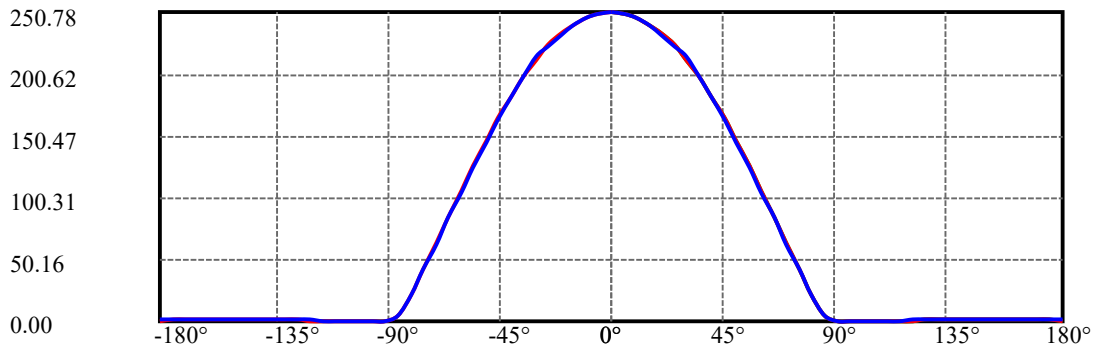
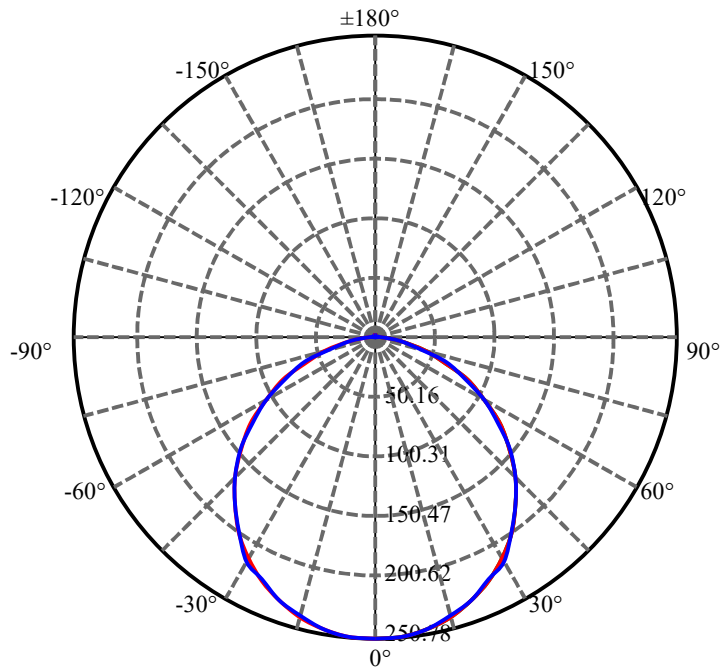
Date: 2024/12/18
Humidity(%): 60.2%

Operator: JUN WANG
Distance(m): 30.26

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	194.55	27.84%	27.84%
0-40	318.30	45.55%	45.55%
0-60	557.15	79.73%	79.73%
0-90	693.25	99.20%	99.20%
0-120	694.52	99.38%	99.38%
0-180	698.83	100.00%	100.00%
60-90	136.10	19.48%	19.48%
90-120	1.27	0.18%	0.18%
90-130	2.02	0.29%	0.29%
90-150	3.94	0.56%	0.56%
90-180	5.55	0.79%	0.79%
0-60.21	559.06	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	23.72
10-20	67.92
20-30	102.90
30-40	123.75
40-50	126.75
50-60	112.11
60-70	82.85
70-80	44.38
80-90	8.87
90-100	0.37
100-110	0.36
110-120	0.53
120-130	0.75
130-140	0.91
140-150	1.01
150-160	0.94
160-170	0.56
170-180	0.11



C0(Max):

C0/C180:

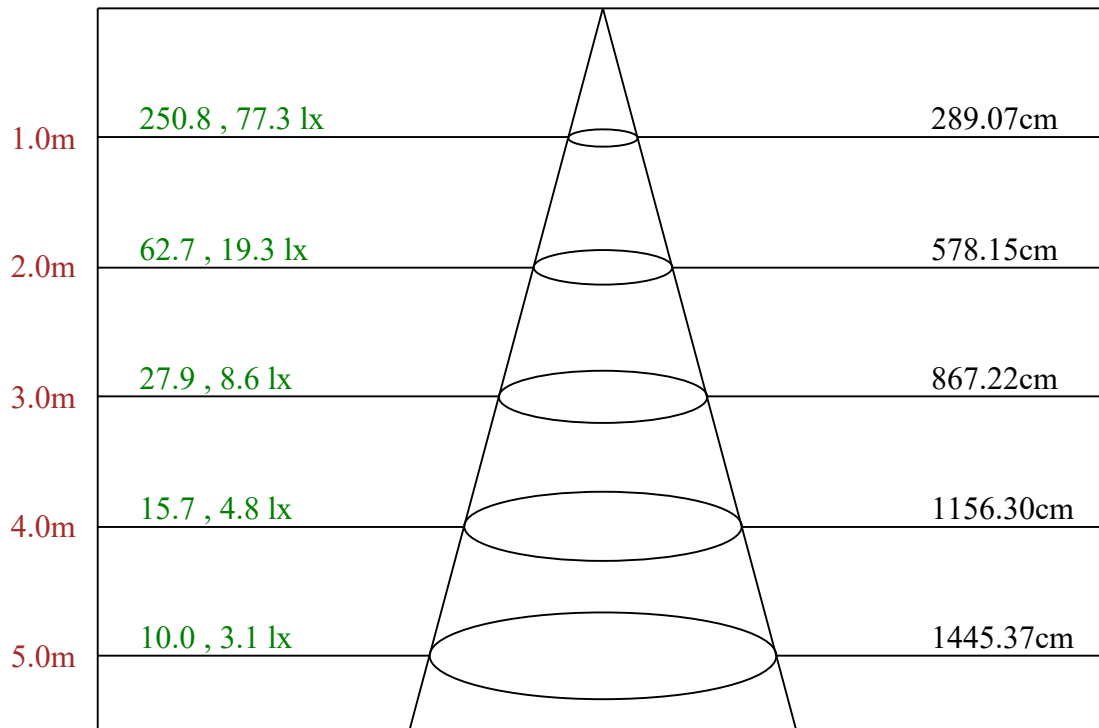
C90/C270:

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

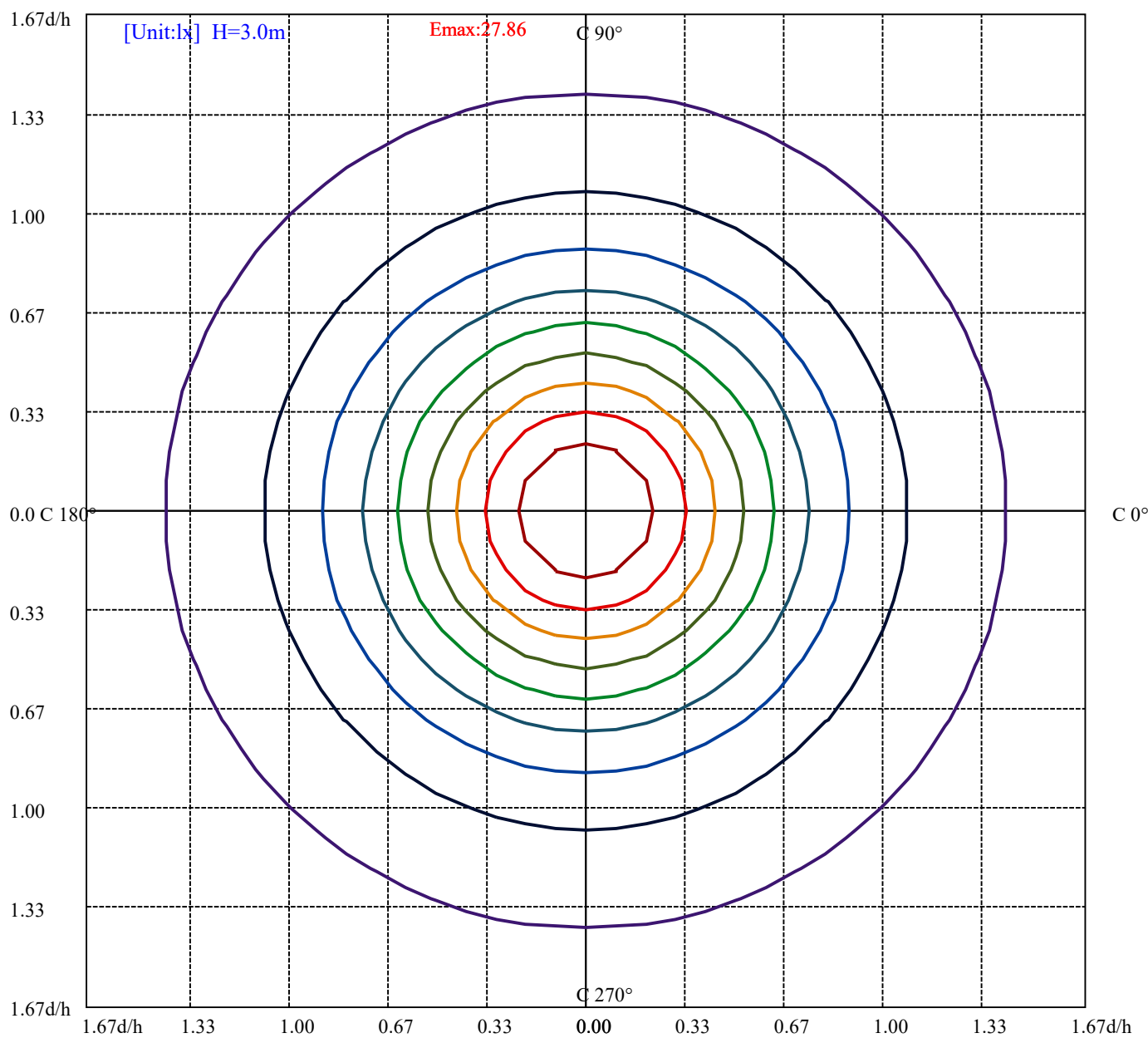
:C90/270Left:79.1 Right:79.1

Beam Angle(50%Imax):C0/180Left:55.2 Right:55.2

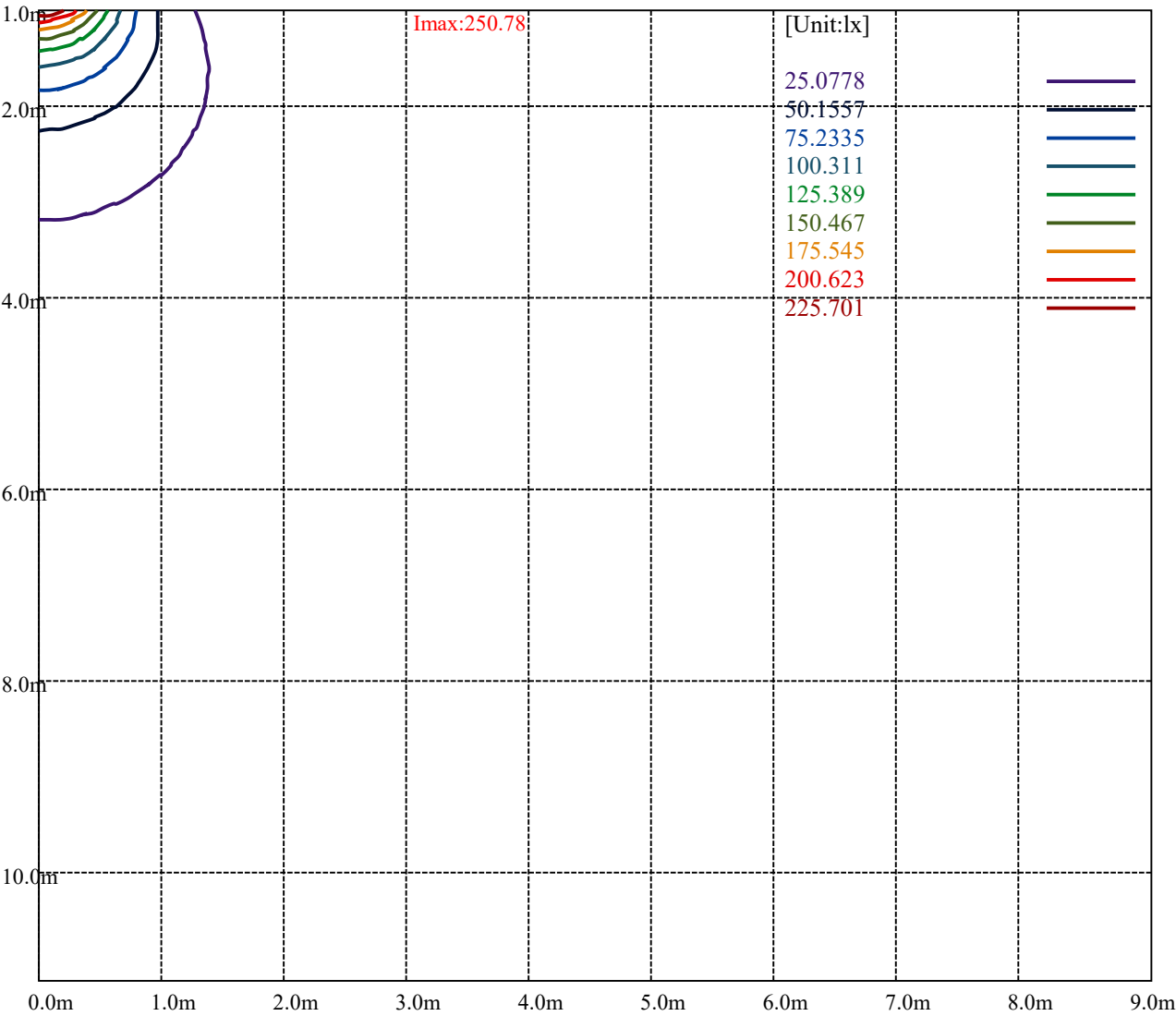
:C90/270Left:55.0 Right:55.0



Max , Ave Beam angle of C0 plane 110.64



(10%Emax) 2.786422	—
(20%Emax) 5.572855	—
(30%Emax) 8.359278	—
(40%Emax) 11.14567	—
(50%Emax) 13.93211	—
(60%Emax) 16.71856	—
(70%Emax) 19.505	—
(80%Emax) 22.29144	—
(90%Emax) 25.07789	—



Light Blue USA-Rayhil INV-9-CCT-120-**-2700K

Luminance Limiting Curve(no luminous side)

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Luminance Table

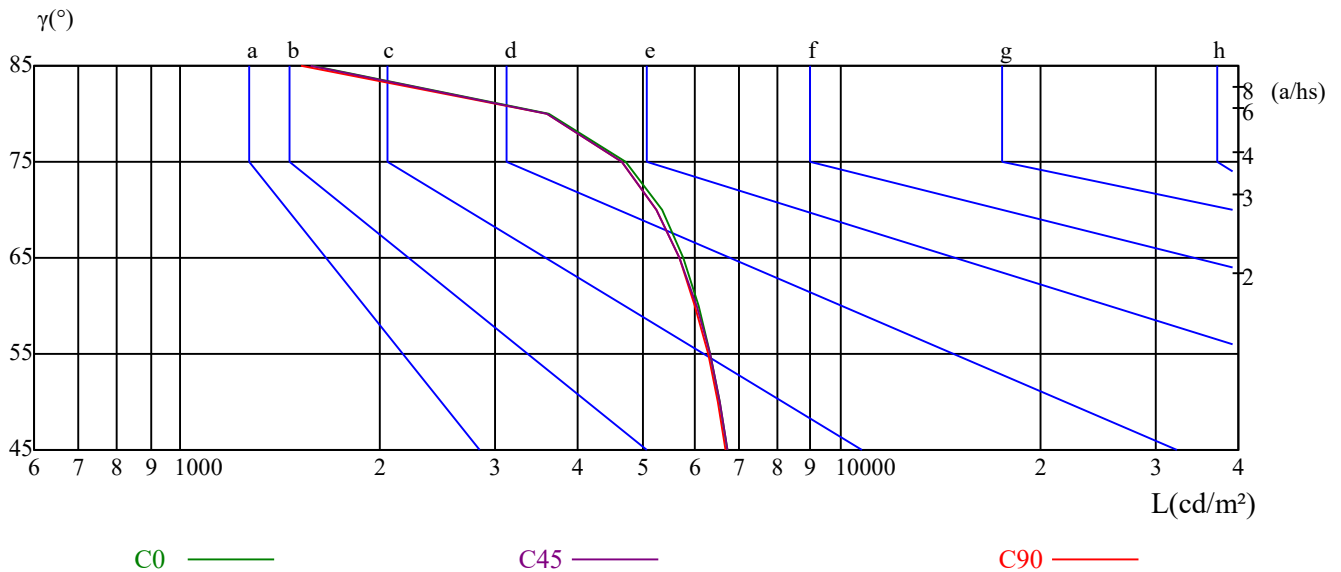
γ	45	50	55	60	65	70	75	80	85
C0	6731	6543	6351	6080	5785	5348	4713	3622	1585
C45	6728	6551	6320	6045	5706	5266	4655	3595	1570
C90	6701	6515	6302	6026	5711	5246	4668	3589	1518

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5785	5711	5706	4713	4668	4655	1585	1518	1570

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	1.01	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	0.65	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	0.42	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-**-2700K

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	250.78	250.23	247.31	242.57	235.74	226.99	214.95	202.74	186.88		
15.0	250.78	250.41	247.13	242.38	235.35	226.13	215.17	201.75	187.06		
30.0	250.78	250.05	247.12	241.91	234.60	225.74	214.77	201.43	185.71		
45.0	250.78	250.32	247.39	241.99	234.76	225.23	213.97	200.88	185.31		
60.0	250.78	250.23	247.21	242.17	234.47	225.49	213.67	200.66	185.36		
75.0	250.78	249.95	246.93	241.62	234.39	224.96	213.70	200.60	185.68		
90.0	250.78	249.95	247.20	242.07	234.28	224.84	213.47	201.01	185.52		
105.0	250.78	250.41	247.39	242.16	234.73	225.20	214.19	200.81	185.13		
120.0	250.78	250.32	243.62	242.25	235.19	226.20	214.55	202.16	186.75		
135.0	250.78	250.23	247.39	242.44	235.20	226.21	205.68	202.38	186.89		
150.0	250.78	250.23	247.66	242.61	235.92	227.02	216.01	202.99	187.85		
165.0	250.78	250.32	247.84	243.25	235.64	227.10	216.00	202.97	188.75		
180.0	250.78	249.05	244.94	238.65	231.09	220.88	208.57	194.35	177.76		
195.0	250.78	249.41	245.57	239.18	230.88	221.02	209.06	195.27	177.84		
210.0	250.78	249.13	245.57	239.08	231.22	221.08	209.47	194.85	178.40		
225.0	250.78	249.41	245.65	239.52	231.37	220.93	209.58	194.65	178.91		
240.0	250.78	249.31	245.56	239.97	231.72	221.37	209.00	194.61	178.30		
255.0	250.78	249.22	245.28	239.15	231.00	220.56	208.30	195.02	178.72		
270.0	250.78	249.13	245.19	239.05	231.26	220.90	217.60	193.40	178.09		
285.0	250.78	249.13	248.30	239.32	230.97	220.52	208.51	193.84	178.07		
300.0	250.78	249.22	245.09	239.50	230.69	220.88	208.40	194.55	178.32		
315.0	250.78	249.04	245.10	238.77	230.52	220.53	208.34	193.95	177.27		
330.0	250.78	249.13	244.72	238.30	230.69	219.96	208.22	193.91	177.31		
345.0	250.78	248.85	244.91	238.76	230.41	220.04	207.28	192.88	176.82		
360.0	250.78	250.23	247.31	242.57	235.74	226.99	214.95	202.74	186.88		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	169.74	150.78	131.00	111.31	90.16	68.73	47.40	26.71	7.38		
15.0	168.62	150.45	130.46	109.64	88.46	67.28	46.10	26.66	7.49		
30.0	168.43	149.61	130.69	108.85	88.83	66.26	46.34	25.77	7.59		
45.0	168.74	149.24	130.29	109.05	87.90	66.75	46.60	24.90	6.96		
60.0	167.86	149.53	129.56	108.48	88.33	66.98	45.81	25.38	6.60		
75.0	166.36	149.51	129.46	108.68	87.35	66.29	45.32	25.82	7.05		
90.0	168.01	149.13	129.61	108.89	88.73	67.19	46.20	25.57	6.78		
105.0	169.36	149.92	131.03	109.76	88.57	67.12	45.94	26.59	6.60		
120.0	169.14	150.43	130.53	111.08	89.98	67.42	46.23	26.69	7.61		
135.0	169.39	151.79	130.52	110.54	89.46	68.19	47.30	26.86	7.52		
150.0	170.33	136.49	131.81	111.17	90.26	68.89	48.80	28.07	8.53		
165.0	171.77	152.87	132.78	112.22	91.03	66.62	49.00	28.26	9.36		
180.0	159.98	140.57	121.33	99.27	79.22	57.98	37.10	16.86	2.19		
195.0	160.58	141.14	120.60	99.78	78.60	57.70	36.97	17.80	2.37		
210.0	160.21	140.93	121.55	99.34	79.33	58.22	37.65	17.46	2.38		
225.0	161.05	141.73	121.41	100.35	79.01	57.86	36.90	17.76	2.38		
240.0	160.53	141.38	121.77	100.79	79.44	58.18	37.29	17.32	2.38		
255.0	160.32	141.00	120.49	99.25	78.28	57.41	36.71	32.05	2.29		
270.0	160.22	140.97	120.81	99.82	78.46	57.10	37.49	17.60	2.38		
285.0	160.00	140.75	121.22	100.13	78.86	57.67	36.86	16.87	2.38		
300.0	160.06	140.52	119.98	99.06	77.97	57.79	36.97	16.97	2.29		
315.0	159.94	140.60	119.98	98.81	77.73	56.74	36.11	16.96	2.11		
330.0	159.33	139.88	120.44	98.51	78.52	56.04	36.05	15.96	2.11		
345.0	159.66	139.20	119.65	98.73	77.44	56.16	35.24	15.97	2.20		
360.0	169.74	150.78	131.00	111.31	90.16	68.73	47.40	26.71	7.38		

Light Blue USA-Rayhil INV-9-CCT-120-**-2700K

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	0.73	0.18	0.18	0.27	0.27	0.46	0.55	0.82	0.91		
15.0	0.55	0.18	0.18	0.18	0.27	0.46	0.46	0.82	0.91		
30.0	0.46	0.18	0.18	0.18	0.37	0.37	0.55	0.73	0.91		
45.0	0.46	0.18	0.09	0.27	0.27	0.46	0.55	0.73	0.92		
60.0	0.46	0.18	0.18	0.18	0.18	0.37	0.55	0.73	0.92		
75.0	0.37	0.09	0.18	0.09	0.18	0.46	0.55	0.82	1.01		
90.0	0.46	0.18	0.18	0.46	0.55	0.64	0.82	1.10	1.28		
105.0	0.46	0.09	0.18	0.18	0.37	0.64	0.73	1.01	1.28		
120.0	0.46	0.18	0.09	0.09	0.18	0.46	0.55	0.83	1.10		
135.0	0.55	0.09	0.09	0.18	0.18	0.27	0.46	0.64	0.82		
150.0	0.73	0.09	0.00	0.09	0.18	0.37	0.46	0.64	0.83		
165.0	0.64	0.18	0.09	0.18	0.18	0.28	0.46	0.64	0.83		
180.0	0.36	0.46	0.36	0.55	0.55	0.55	0.73	0.91	0.91		
195.0	0.55	0.46	0.37	0.46	0.55	0.64	0.64	0.73	0.82		
210.0	0.55	0.46	0.46	0.46	0.46	0.37	0.55	0.55	0.55		
225.0	0.46	0.46	0.46	0.46	0.55	0.55	0.55	0.46	0.46		
240.0	0.37	0.37	0.37	0.37	0.46	0.55	0.55	0.64	0.82		
255.0	0.37	0.27	0.27	0.27	0.37	0.55	0.46	0.82	0.92		
270.0	0.46	0.46	0.37	0.46	0.64	0.82	0.92	1.19	1.28		
285.0	0.46	0.46	0.46	0.55	0.64	0.83	1.01	1.28	1.38		
300.0	0.46	0.46	0.46	0.64	0.55	0.73	0.92	1.28	1.47		
315.0	0.46	0.55	0.46	0.55	0.64	0.73	0.92	1.19	1.37		
330.0	0.55	0.55	0.55	0.55	0.55	0.73	0.83	1.10	1.28		
345.0	0.46	0.46	0.46	0.46	0.64	0.83	0.92	0.92	1.10		
360.0	0.73	0.18	0.18	0.27	0.27	0.46	0.55	0.82	0.91		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	1.19	1.28	1.64	2.10	2.19	2.37	2.55	2.10	1.46		
15.0	1.19	1.28	1.64	2.01	2.19	2.37	2.56	2.10	1.55		
30.0	1.10	1.28	1.55	2.01	2.19	2.28	2.19	2.01	1.55		
45.0	1.10	1.37	1.56	1.92	2.11	2.01	1.92	2.20	1.46		
60.0	1.19	1.37	1.56	2.02	2.11	2.20	2.02	2.02	1.47		
75.0	1.19	1.28	1.56	2.01	2.29	2.29	2.11	1.74	1.46		
90.0	1.37	1.74	2.02	2.47	2.29	2.29	2.29	1.65	1.56		
105.0	1.47	1.93	2.29	2.66	2.84	2.93	2.66	1.47	1.47		
120.0	1.38	1.74	2.11	2.48	2.94	2.94	2.66	2.02	1.47		
135.0	1.19	1.47	2.02	2.29	2.66	2.93	2.29	2.38	1.47		
150.0	1.01	1.38	1.74	2.11	2.38	2.38	2.29	2.38	1.47		
165.0	0.92	1.19	1.56	1.84	2.02	2.11	2.29	2.29	1.65		
180.0	0.91	1.00	1.09	1.19	1.55	1.64	2.01	2.10	1.28		
195.0	0.91	0.73	0.91	1.19	1.46	1.46	2.01	1.92	1.28		
210.0	0.55	0.55	0.73	1.19	1.37	1.65	1.74	1.65	1.37		
225.0	0.37	0.64	0.82	1.01	1.46	1.46	1.74	1.65	1.28		
240.0	1.10	1.28	1.56	1.37	1.37	1.01	1.37	1.56	1.37		
255.0	1.19	1.28	1.46	1.56	1.74	1.46	1.19	1.19	1.37		
270.0	1.47	1.56	1.65	1.74	1.83	1.83	1.10	1.10	1.28		
285.0	1.56	1.65	2.11	2.20	2.38	2.02	1.10	1.19	1.28		
300.0	1.74	1.74	2.20	2.38	2.38	2.29	1.65	1.19	1.28		
315.0	1.56	1.65	1.92	2.02	2.11	2.02	2.11	1.19	1.28		
330.0	1.56	1.56	1.65	2.02	2.02	2.11	2.11	1.47	1.38		
345.0	1.19	1.19	1.47	1.47	1.74	2.02	2.11	1.65	1.28		
360.0	1.19	1.28	1.64	2.10	2.19	2.37	2.55	2.10	1.46		

Intensity data(cd)

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C/γ(°)	180.0
0.0	1.37
15.0	1.46
30.0	1.46
45.0	1.46
60.0	1.47
75.0	1.56
90.0	1.56
105.0	1.56
120.0	1.47
135.0	1.56
150.0	1.47
165.0	1.56
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	1.37