
Light Blue USA-Rayhil

Client:

LumCAT: INF-RD-CCT-WH

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.040

LampCAT:

Current(A): 0.096

Lamp flux(lm): 826.3

Power (W): 11.300

Number of Lamps: 1

PF: 0.978

Length(mm): -50

Width(mm): -50

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 826.29, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 73.12

Central intensity(cd): 1680.018, Maximum intensity(cd): 1680.018

Angle of maximum intensity: C=45.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=35.2

[C90/270]Total=36.2

Field angle(10%Imax): [C0/180]Total=59.0

[C90/270]Total=60.2

Maximum s/h(1/2): C0_180=0.56 C90_270=0.58

Maximum s/h(1/4): C0_180=0.61 C90_270=0.61

Up flux rate of lamp(%): 0.21%

Down flux rate of lamp(%): 99.79%

Up flux rate of LUM(%): 0.21%

Down flux rate of LUM(%): 99.79%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.758%

Light Blue USA-Rayhil INF-RD-CCT-WH

Zonal flux distribution table

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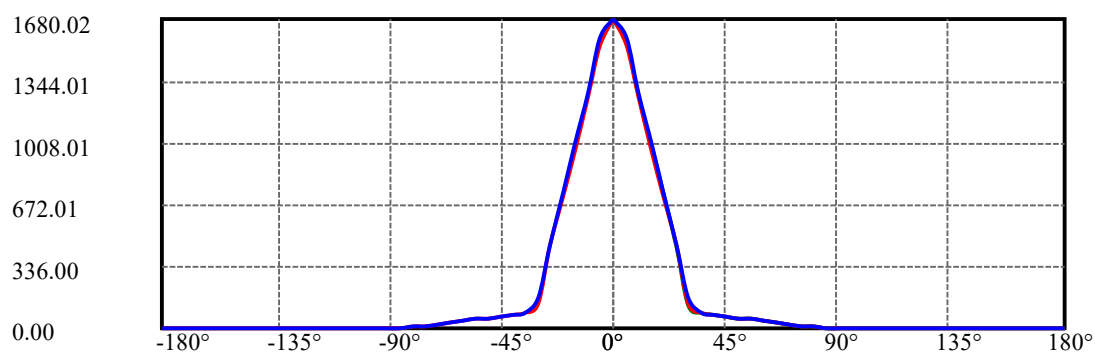
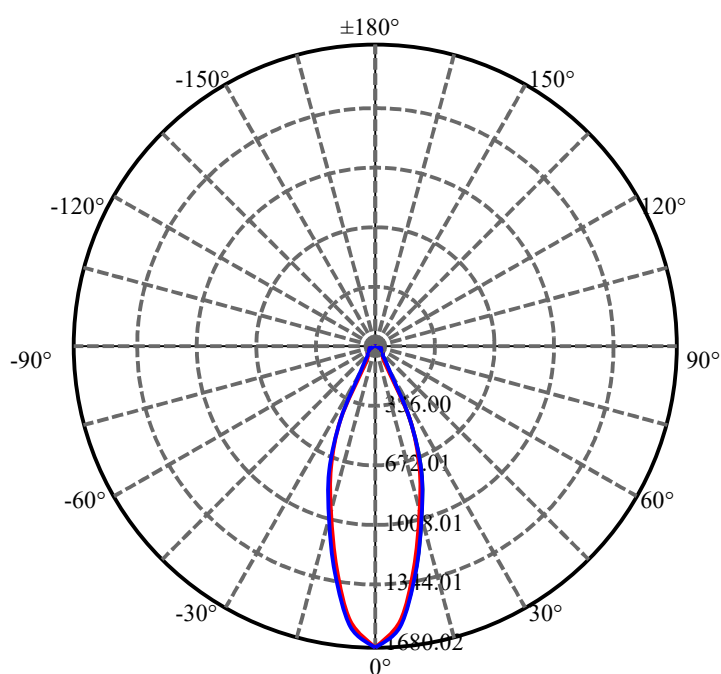
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1680.018	0.000	0	0.00%	0.00%
5.0	1558.567	38.716	38.716	4.69%	4.69%
10.0	1282.448	101.632	140.348	12.30%	16.99%
15.0	992.149	134.928	275.276	16.33%	33.31%
20.0	735.713	142.400	417.676	17.23%	50.55%
25.0	446.850	124.029	541.705	15.01%	65.56%
30.0	160.636	76.878	618.583	9.30%	74.86%
35.0	84.790	36.141	654.724	4.37%	79.24%
40.0	74.280	26.540	681.263	3.21%	82.45%
45.0	64.957	25.781	707.044	3.12%	85.57%
50.0	56.290	24.500	731.544	2.97%	88.53%
55.0	48.279	22.737	754.281	2.75%	91.28%
60.0	40.143	20.438	774.719	2.47%	93.76%
65.0	30.370	17.142	791.861	2.07%	95.83%
70.0	21.625	13.166	805.027	1.59%	97.43%
75.0	14.418	9.421	814.448	1.14%	98.57%
80.0	8.286	6.075	820.522	0.74%	99.30%
85.0	3.071	3.086	823.608	0.37%	99.68%
90.0	0.312	0.926	824.535	0.11%	99.79%
95.0	0.000	0.085	824.62	0.01%	99.80%
100.0	0.000	0.000	824.62	0.00%	99.80%
105.0	0.000	0.000	824.62	0.00%	99.80%
110.0	0.000	0.000	824.62	0.00%	99.80%
115.0	0.000	0.000	824.62	0.00%	99.80%
120.0	0.000	0.000	824.62	0.00%	99.80%
125.0	0.000	0.000	824.62	0.00%	99.80%
130.0	0.000	0.000	824.62	0.00%	99.80%
135.0	0.000	0.000	824.62	0.00%	99.80%
140.0	0.000	0.000	824.62	0.00%	99.80%
145.0	0.000	0.000	824.62	0.00%	99.80%
150.0	0.460	0.068	824.688	0.01%	99.81%
155.0	1.184	0.208	824.896	0.03%	99.83%
160.0	2.223	0.357	825.253	0.04%	99.87%
165.0	2.645	0.401	825.654	0.05%	99.92%
170.0	3.222	0.348	826.002	0.04%	99.96%
175.0	3.222	0.231	826.233	0.03%	99.99%
180.0	1.765	0.060	826.292	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	618.58	74.86%	74.86%
0-40	681.26	82.45%	82.45%
0-60	774.72	93.76%	93.76%
0-90	824.53	99.79%	99.79%
0-120	824.62	99.80%	99.80%
0-180	826.29	100.00%	100.00%
60-90	49.82	6.03%	6.03%
90-120	0.09	0.01%	0.01%
90-130	0.09	0.01%	0.01%
90-150	0.15	0.02%	0.02%
90-180	1.70	0.21%	0.21%
0-36.19	661.03	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	140.35
10-20	277.33
20-30	200.91
30-40	62.68
40-50	50.28
50-60	43.17
60-70	30.31
70-80	15.50
80-90	4.01
90-100	0.09
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.07
150-160	0.57
160-170	0.75
170-180	0.23



C45(Max): ———

C0/C180: ———

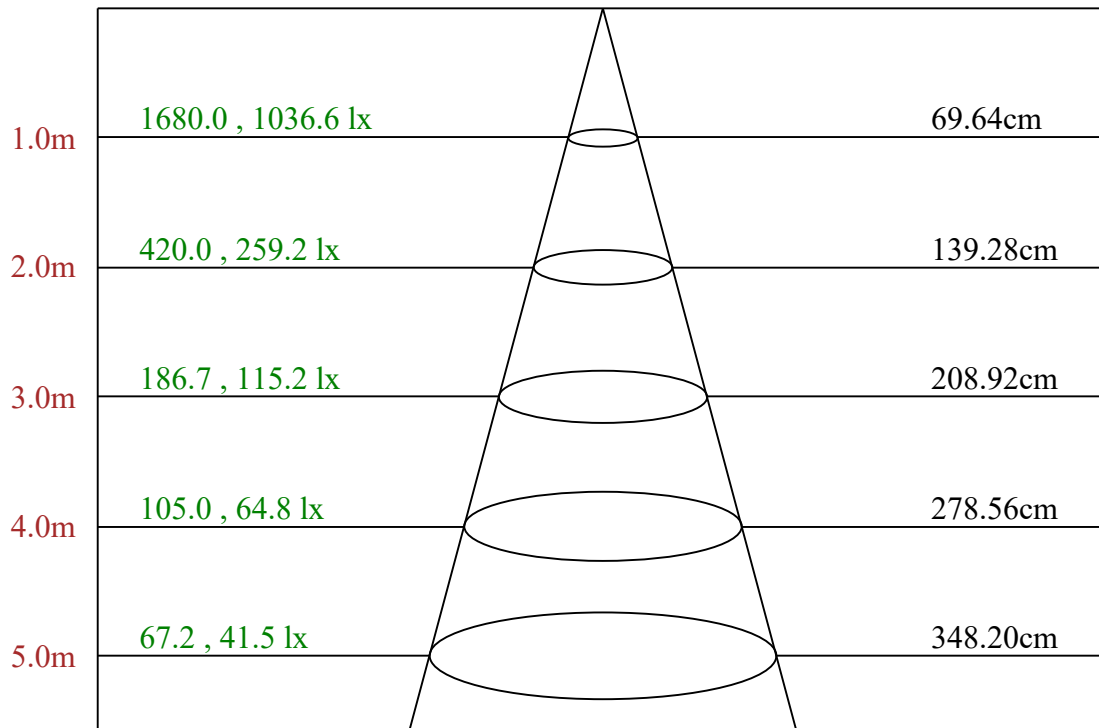
C90/C270: ———

Field angle(10%Imax):C0/180Left:29.5 Right:29.5

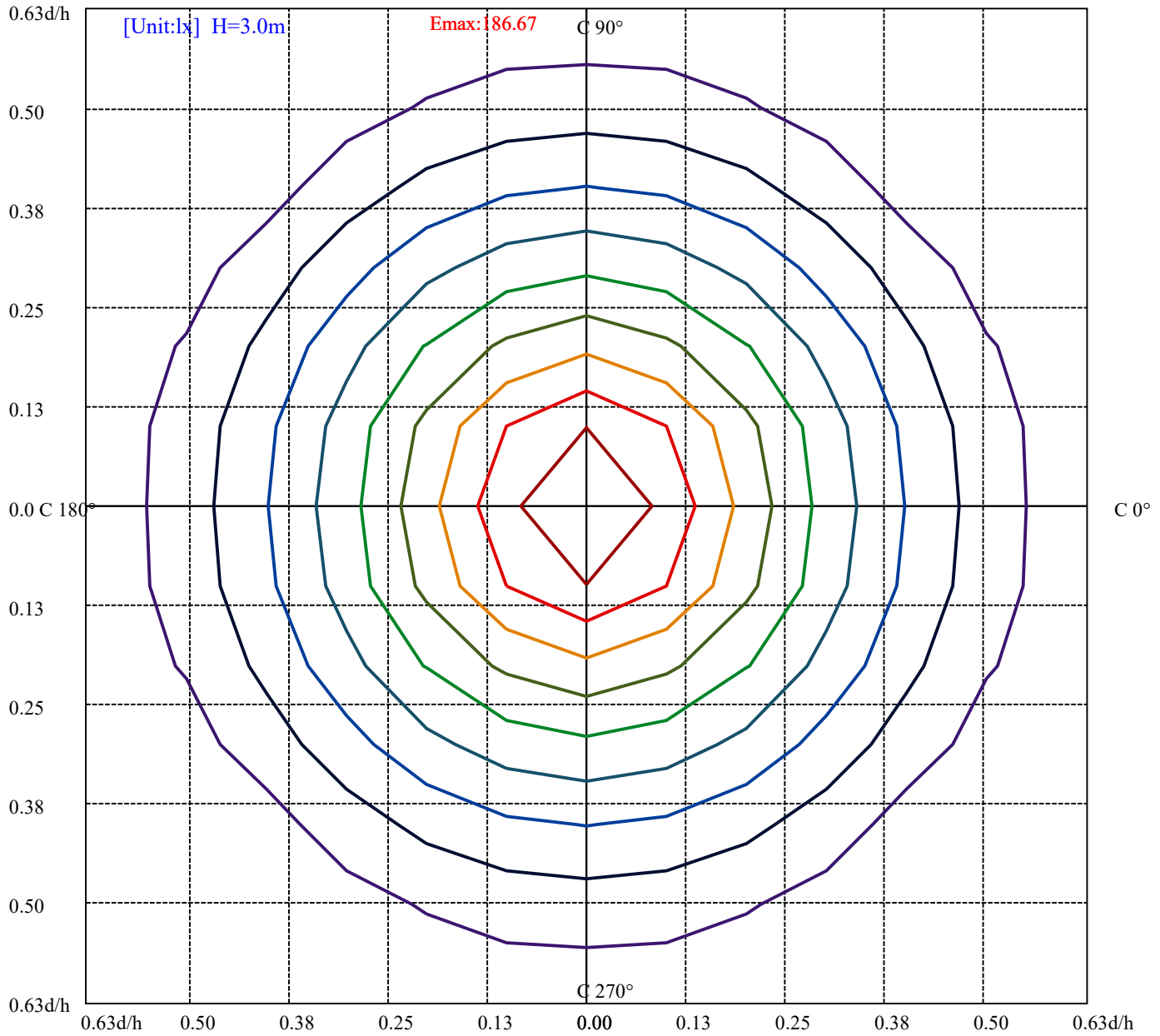
:C90/270Left:30.1 Right:30.1

Beam Angle(50%Imax):C0/180Left:17.6 Right:17.6

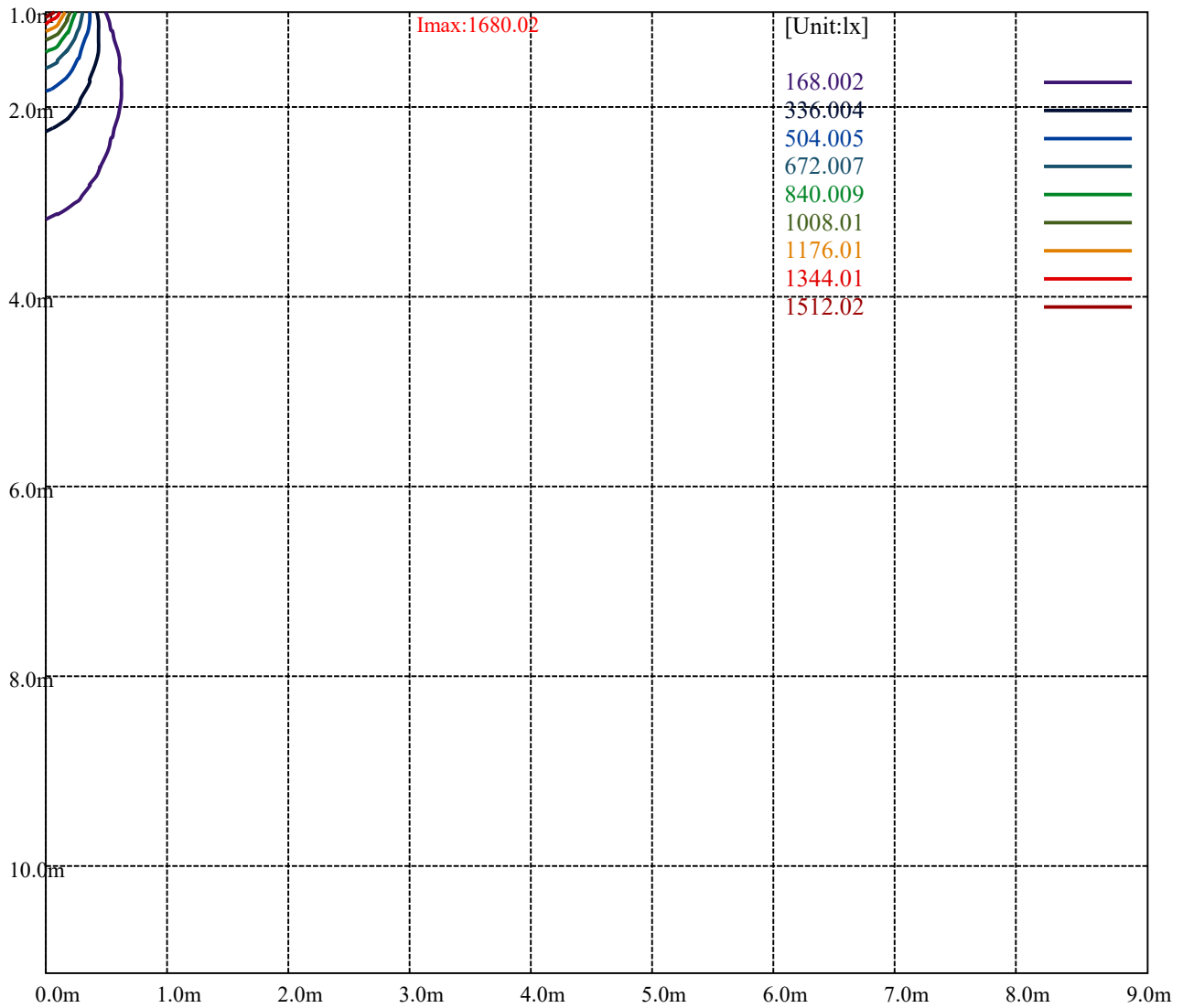
:C90/270Left:18.1 Right:18.1



Max , Ave Beam angle of C45 plane 38.40



(10%Emax)	18.66678	
(20%Emax)	37.33366	
(30%Emax)	56.00044	
(40%Emax)	74.66733	
(50%Emax)	93.33411	
(60%Emax)	112.0011	
(70%Emax)	130.6678	
(80%Emax)	149.3344	
(90%Emax)	168.0011	



Light Blue USA-Rayhil INF-RD-CCT-WH

Luminance Limiting Curve(no luminous side)

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Luminance Table

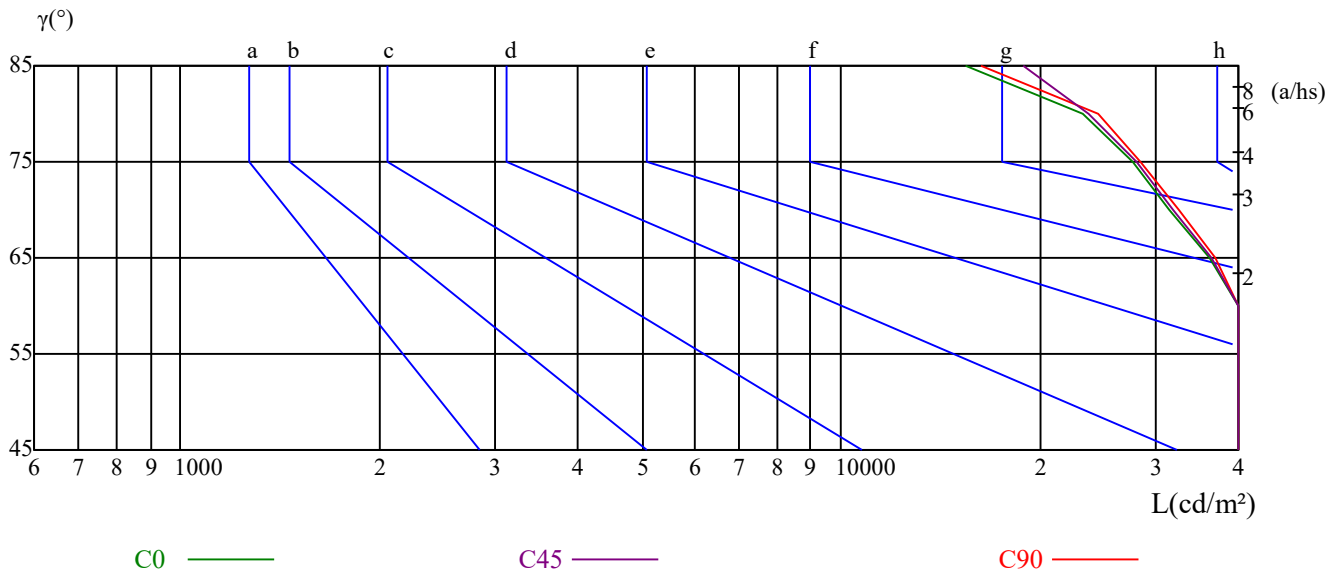
γ	45	50	55	60	65	70	75	80	85
C0	46027	43649	42263	40851	36115	31501	27751	23267	15452
C45	46819	44748	42771	40850	36389	31932	28126	23652	18860
C90	46849	44542	42904	40699	36953	32516	28341	24528	16290

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
36115	36953	36389	27751	28341	28126	15452	16290	18860

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	1.00
1	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	1.00	1.00	0.98	0.97	0.96	0.95	0.94	0.92
2	1.02	0.97	0.94	1.00	0.96	0.93	0.97	0.93	0.91	0.94	0.91	0.89	0.91	0.89	0.87	0.85
3	0.95	0.90	0.85	0.93	0.89	0.85	0.91	0.87	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.79
4	0.89	0.83	0.79	0.88	0.82	0.78	0.85	0.81	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.74
5	0.83	0.78	0.73	0.83	0.77	0.73	0.81	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.69
6	0.79	0.73	0.69	0.78	0.72	0.68	0.77	0.72	0.68	0.75	0.71	0.67	0.74	0.70	0.67	0.66
7	0.75	0.69	0.65	0.74	0.69	0.65	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.62
8	0.71	0.65	0.61	0.71	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.59
9	0.68	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.56
10	0.65	0.59	0.56	0.64	0.59	0.56	0.64	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.54

Light Blue USA-Rayhil INF-RD-CCT-WH

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	1680.02	1545.16	1273.68	988.97	758.92	494.49	171.00	85.50	75.80		
15.0	1680.02	1559.32	1283.31	997.54	758.80	502.32	179.27	86.09	74.55		
30.0	1680.02	1574.68	1289.03	998.91	765.02	517.75	189.25	85.70	74.98		
45.0	1680.02	1600.40	1312.71	1027.73	795.23	520.20	198.13	87.76	75.99		
60.0	1680.02	1615.51	1342.02	1044.90	794.12	536.99	218.07	87.23	76.32		
75.0	1680.02	1658.79	1382.78	1093.86	820.62	558.47	227.08	88.62	77.54		
90.0	1680.02	1689.31	1421.70	1134.57	845.58	574.25	247.17	90.13	78.98		
105.0	1680.02	1707.14	1449.90	1167.41	855.91	588.38	270.34	90.74	78.58		
120.0	1680.02	1725.32	1276.06	1183.56	893.81	610.66	286.92	92.50	80.23		
135.0	1680.02	1725.12	1482.70	1191.42	882.29	603.23	101.48	93.02	79.87		
150.0	1680.02	1740.70	1532.12	1190.80	896.89	621.00	297.70	92.91	79.64		
165.0	1680.02	1748.63	1525.64	1214.99	881.46	626.08	300.17	93.39	81.00		
180.0	1680.02	1529.29	1251.64	938.73	686.64	393.12	106.65	80.21	70.51		
195.0	1680.02	1527.37	1235.39	935.41	678.93	389.61	109.16	80.76	71.00		
210.0	1680.02	1517.55	1231.00	919.46	673.08	391.89	99.09	79.45	69.63		
225.0	1680.02	1493.65	1202.34	916.46	672.19	378.16	101.33	80.52	70.57		
240.0	1680.02	1464.68	1180.28	900.43	668.74	358.90	96.31	79.05	69.96		
255.0	1680.02	1475.09	1178.78	891.70	660.01	341.54	96.00	80.31	71.08		
270.0	1680.02	1453.29	1152.22	871.60	641.16	315.93	93.85	79.91	70.62		
285.0	1680.02	1439.61	1352.62	850.30	633.28	298.40	94.48	80.45	71.09		
300.0	1680.02	1406.31	1120.33	855.11	617.26	295.42	93.44	80.23	71.73		
315.0	1680.02	1404.71	1105.92	838.13	597.59	271.55	92.08	79.87	70.47		
330.0	1680.02	1404.12	1100.73	826.74	590.66	267.36	92.91	79.64	71.11		
345.0	1680.02	1399.86	1095.87	832.86	588.91	268.73	93.39	81.00	71.47		
360.0	1680.02	1545.16	1273.68	988.97	758.92	494.49	171.00	85.50	75.80		

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	66.99	57.29	50.24	42.31	31.73	22.92	15.87	9.70	3.53		
15.0	66.56	56.80	49.70	42.60	32.84	23.07	15.97	9.76	3.55		
30.0	66.06	57.13	49.99	41.96	33.03	23.21	16.07	9.82	4.46		
45.0	66.95	57.90	50.66	42.52	33.47	23.52	16.28	9.95	4.52		
60.0	67.24	58.15	50.88	42.70	34.53	23.62	17.26	10.90	4.54		
75.0	68.31	59.08	51.69	43.39	35.08	24.92	17.54	11.08	4.62		
90.0	68.76	59.47	52.04	43.67	35.31	25.09	17.66	11.15	4.65		
105.0	69.22	60.80	52.38	43.96	35.55	25.26	17.77	11.23	5.61		
120.0	69.84	60.41	52.85	44.36	36.81	25.48	17.93	11.33	5.66		
135.0	70.47	61.07	52.62	44.16	35.71	26.31	17.85	11.28	5.64		
150.0	71.11	54.04	53.09	44.56	36.03	25.60	18.01	12.33	5.69		
165.0	70.52	61.94	53.36	44.79	36.21	24.78	18.11	11.44	5.72		
180.0	60.82	52.89	44.95	37.90	28.21	19.39	12.34	6.17	1.76		
195.0	61.24	53.25	44.37	37.27	26.62	18.64	12.42	6.21	1.77		
210.0	61.59	52.67	44.63	36.60	25.89	18.75	12.50	6.25	1.79		
225.0	61.52	53.38	45.23	37.09	26.24	18.09	11.76	6.33	1.81		
240.0	60.88	53.61	44.52	36.34	26.35	23.62	11.81	5.45	1.82		
255.0	61.85	59.08	45.23	36.92	25.85	18.46	11.08	5.54	0.92		
270.0	61.33	52.97	44.60	36.24	26.02	18.58	11.15	5.58	0.93		
285.0	61.74	53.32	44.90	36.48	25.26	17.77	11.23	5.61	0.94		
300.0	61.35	53.80	45.30	36.81	25.48	17.93	11.33	5.66	0.94		
315.0	61.07	53.56	44.16	36.64	25.37	17.85	11.28	4.70	0.94		
330.0	61.63	54.04	45.51	36.98	25.60	18.01	11.38	5.69	0.95		
345.0	61.94	54.32	45.74	37.16	25.73	18.11	11.44	5.72	0.95		
360.0	66.99	57.29	50.24	42.31	31.73	22.92	15.87	9.70	3.53		

Light Blue USA-Rayhil INF-RD-CCT-WH

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
75.0	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
90.0	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
105.0	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120.0	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
135.0	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
150.0	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
165.0	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
195.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
210.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
225.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
240.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
255.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
285.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
330.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
345.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	0.00	0.00	0.00	0.88	1.76	2.64	3.53	3.53	3.53		
15.0	0.00	0.00	0.00	0.89	1.77	2.66	3.55	3.55	3.55		
30.0	0.00	0.00	0.00	0.89	1.79	2.68	3.57	3.57	3.57		
45.0	0.00	0.00	0.00	0.90	1.81	2.71	3.62	3.62	3.62		
60.0	0.00	0.00	0.00	0.91	1.82	2.73	3.63	3.63	3.63		
75.0	0.00	0.00	0.00	0.92	1.85	2.77	3.69	3.69	3.69		
90.0	0.00	0.00	0.00	0.93	1.86	2.79	3.72	3.72	3.72		
105.0	0.00	0.00	0.00	0.94	0.94	2.81	2.81	3.74	3.74		
120.0	0.00	0.00	0.00	0.94	0.94	2.83	2.83	3.78	3.78		
135.0	0.00	0.00	0.00	0.94	0.94	1.88	2.82	3.76	3.76		
150.0	0.00	0.00	0.00	0.95	0.95	1.90	2.84	3.79	3.79		
165.0	0.00	0.00	0.00	0.95	0.95	2.86	2.86	3.81	3.81		
180.0	0.00	0.00	0.00	0.00	0.88	1.76	1.76	2.64	2.64		
195.0	0.00	0.00	0.00	0.00	0.89	1.77	1.77	2.66	2.66		
210.0	0.00	0.00	0.00	0.00	0.89	1.79	1.79	2.68	2.68		
225.0	0.00	0.00	0.00	0.00	0.90	1.81	1.81	2.71	2.71		
240.0	0.00	0.00	0.00	0.00	0.91	1.82	1.82	2.73	2.73		
255.0	0.00	0.00	0.00	0.00	0.92	1.85	1.85	2.77	2.77		
270.0	0.00	0.00	0.00	0.00	0.93	1.86	1.86	2.79	2.79		
285.0	0.00	0.00	0.00	0.00	0.94	1.87	1.87	2.81	2.81		
300.0	0.00	0.00	0.00	0.00	0.94	1.89	1.89	2.83	2.83		
315.0	0.00	0.00	0.00	0.00	0.94	1.88	2.82	2.82	2.82		
330.0	0.00	0.00	0.00	0.00	0.95	1.90	2.84	2.84	2.84		
345.0	0.00	0.00	0.00	0.00	0.95	1.91	2.86	2.86	2.86		
360.0	0.00	0.00	0.00	0.88	1.76	2.64	3.53	3.53	3.53		

Light Blue USA-Rayhil INF-RD-CCT-WH

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Intensity data(cd)

C/γ(°)	180.0
0.0	2.64
15.0	3.55
30.0	3.57
45.0	3.62
60.0	3.63
75.0	3.69
90.0	3.72
105.0	3.74
120.0	3.78
135.0	3.76
150.0	3.79
165.0	2.86
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	2.64