
Light Blue USA-Rayhil

Client:

LumCAT: INF-RD-CCT-WH

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 119.990

LampCAT:

Current(A): 0.097

Lamp flux(lm): 776.3

Power (W): 11.400

Number of Lamps: 1

PF: 0.977

Length(mm): -50

Width(mm): -50

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 776.28, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 68.09

Central intensity(cd): 1578.515, Maximum intensity(cd): 1578.515

Angle of maximum intensity: C=30.0 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(%): 0.23%

Down flux rate of lamp(%): 99.77%

Up flux rate of LUM(%): 0.23%

Down flux rate of LUM(%): 99.77%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.748%

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

Zonal flux distribution table

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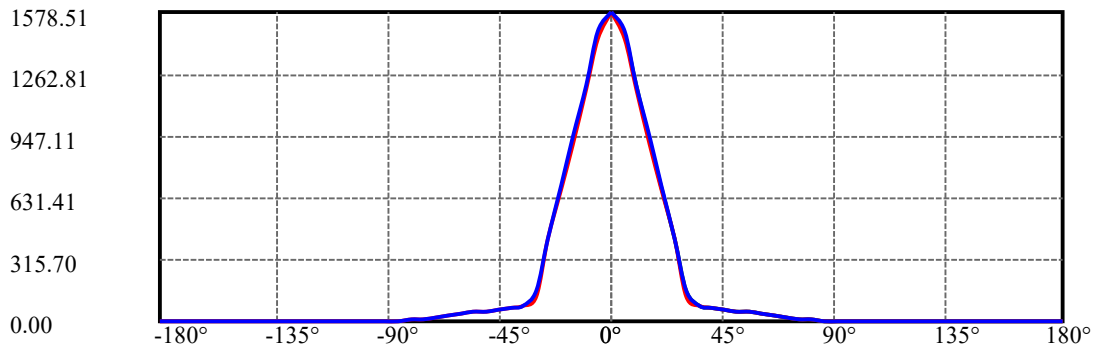
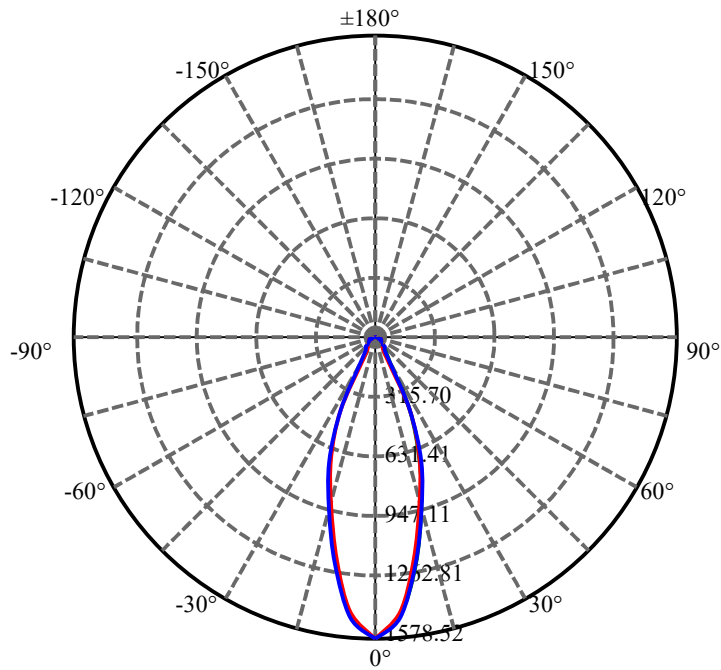
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1578.515	0.000	0	0.00%	0.00%
5.0	1464.404	36.377	36.377	4.69%	4.69%
10.0	1204.922	95.490	131.867	12.30%	16.99%
15.0	932.165	126.771	258.638	16.33%	33.32%
20.0	691.310	133.797	392.435	17.24%	50.55%
25.0	419.980	116.554	508.989	15.01%	65.57%
30.0	150.837	72.237	581.226	9.31%	74.87%
35.0	79.690	33.947	615.173	4.37%	79.25%
40.0	69.754	24.934	640.107	3.21%	82.46%
45.0	60.815	24.176	664.283	3.11%	85.57%
50.0	52.719	22.941	687.224	2.96%	88.53%
55.0	45.360	21.326	708.549	2.75%	91.27%
60.0	37.688	19.196	727.746	2.47%	93.75%
65.0	28.648	16.126	743.872	2.08%	95.83%
70.0	20.436	12.429	756.301	1.60%	97.43%
75.0	13.384	8.840	765.141	1.14%	98.57%
80.0	7.591	5.612	770.753	0.72%	99.29%
85.0	2.992	2.876	773.629	0.37%	99.66%
90.0	0.312	0.905	774.533	0.12%	99.77%
95.0	0.000	0.085	774.619	0.01%	99.79%
100.0	0.000	0.000	774.619	0.00%	99.79%
105.0	0.000	0.000	774.619	0.00%	99.79%
110.0	0.000	0.000	774.619	0.00%	99.79%
115.0	0.000	0.000	774.619	0.00%	99.79%
120.0	0.000	0.000	774.619	0.00%	99.79%
125.0	0.000	0.000	774.619	0.00%	99.79%
130.0	0.000	0.000	774.619	0.00%	99.79%
135.0	0.000	0.000	774.619	0.00%	99.79%
140.0	0.000	0.000	774.619	0.00%	99.79%
145.0	0.000	0.000	774.619	0.00%	99.79%
150.0	0.460	0.068	774.686	0.01%	99.79%
155.0	1.184	0.208	774.894	0.03%	99.82%
160.0	2.223	0.357	775.252	0.05%	99.87%
165.0	2.645	0.401	775.653	0.05%	99.92%
170.0	3.222	0.348	776.001	0.04%	99.96%
175.0	3.064	0.225	776.226	0.03%	99.99%
180.0	1.495	0.055	776.28	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	581.23	74.87%	74.87%
0-40	640.11	82.46%	82.46%
0-60	727.75	93.75%	93.75%
0-90	774.53	99.77%	99.77%
0-120	774.62	99.79%	99.79%
0-180	776.28	100.00%	100.00%
60-90	46.79	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	1.69	0.22%	0.22%
0-36.17	621.02	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	131.87
10-20	260.57
20-30	188.79
30-40	58.88
40-50	47.12
50-60	40.52
60-70	28.56
70-80	14.45
80-90	3.78
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	0.22



C30(Max):

C0/C180:

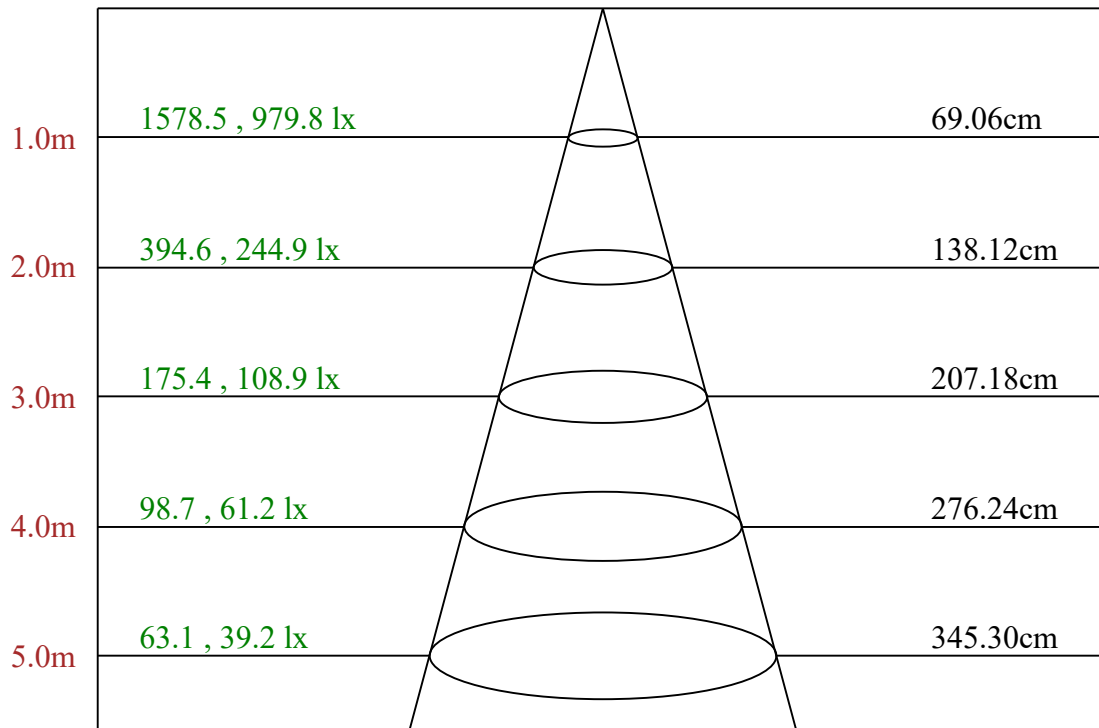
C90/C270:

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

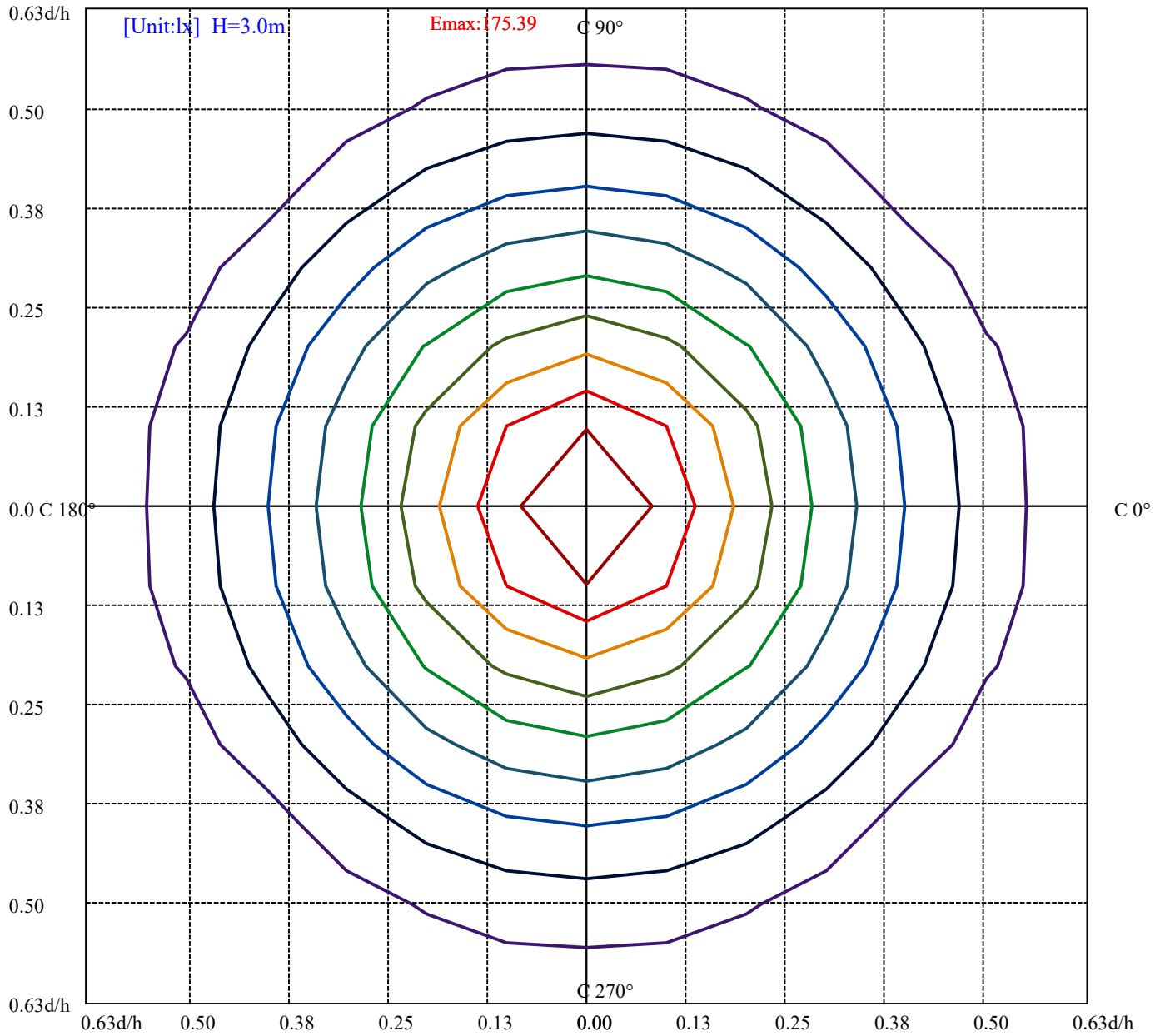
:C90/270Left:30.1 Right:30.1

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

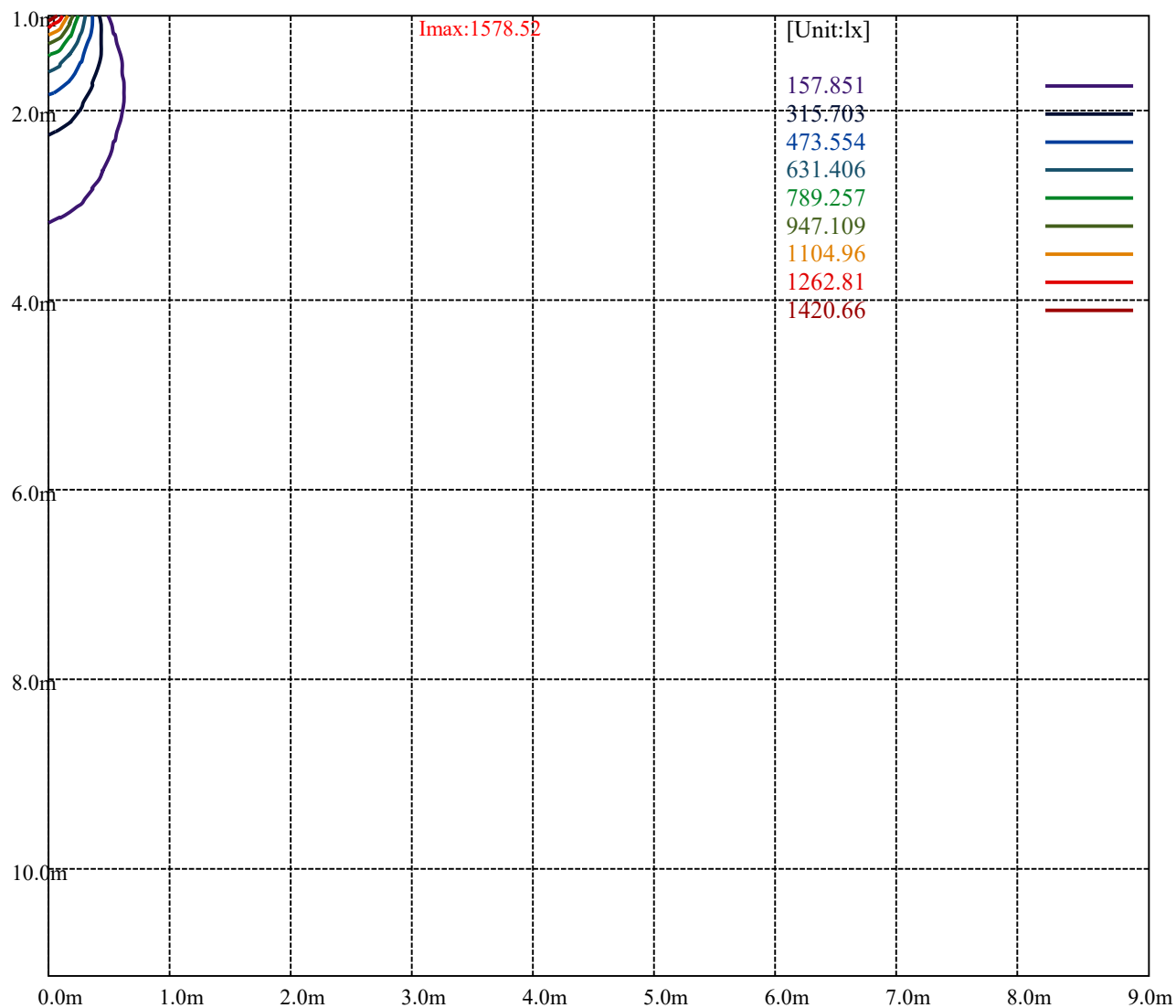
:C90/270Left:18.1 Right:18.1



Max , Ave Beam angle of C30 plane 38.10



(10%Emax)	17.539	
(20%Emax)	35.078	
(30%Emax)	52.617	
(40%Emax)	70.156	
(50%Emax)	87.69511	
(60%Emax)	105.2341	
(70%Emax)	122.7733	
(80%Emax)	140.3122	
(90%Emax)	157.8511	



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

Luminance Limiting Curve(no luminous side)

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Luminance Table

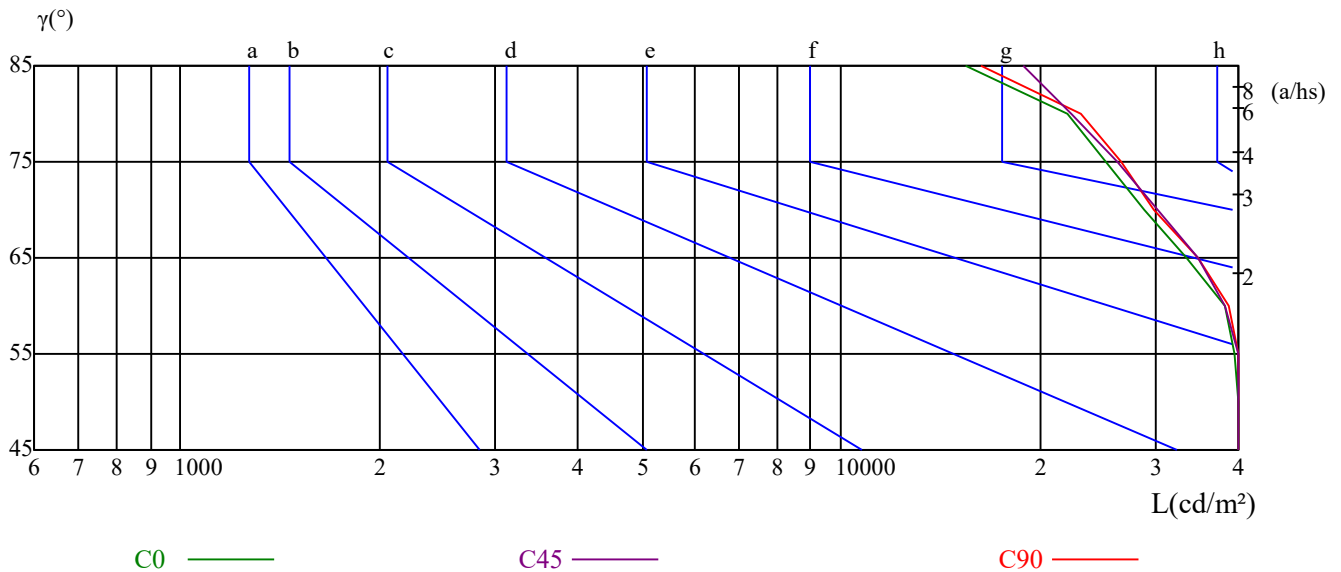
γ	45	50	55	60	65	70	75	80	85
C0	43167	41201	39521	38154	33457	28873	25148	21972	15451
C45	43839	41835	40323	38280	34730	30216	26317	22305	18864
C90	43831	41592	40423	38801	34709	29745	26509	23162	16287

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
33457	34709	34730	25148	26509	26317	15451	16287	18864

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	0.84	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	1578.51	1451.60	1196.89	929.83	713.02	465.36	160.41	80.20	71.39		
15.0	1578.51	1464.94	1205.85	936.99	712.51	472.05	168.59	80.74	70.10		
30.0	1578.51	1480.30	1210.67	938.36	719.62	486.59	178.57	80.35	70.53		
45.0	1578.51	1505.20	1234.57	965.75	748.53	488.76	185.55	82.37	71.50		
60.0	1578.51	1517.66	1260.63	980.90	746.57	504.07	204.35	81.74	71.75		
75.0	1578.51	1558.21	1299.74	1028.34	770.80	525.25	213.24	83.08	72.93		
90.0	1578.51	1586.88	1335.09	1066.59	794.37	539.80	231.34	84.55	74.33		
105.0	1578.51	1604.71	1362.37	1097.57	804.70	553.93	253.57	85.15	73.92		
120.0	1578.51	1620.97	1199.22	1111.47	838.79	573.66	268.90	86.80	75.48		
135.0	1578.51	1620.80	1392.48	1119.99	829.66	566.57	95.84	87.38	75.17		
150.0	1578.51	1636.38	1440.96	1119.38	843.33	583.41	279.84	87.27	74.94		
165.0	1578.51	1642.34	1433.71	1141.26	827.84	587.78	281.98	87.64	76.21		
180.0	1578.51	1436.62	1175.73	882.24	645.16	369.29	99.59	75.80	66.10		
195.0	1578.51	1434.77	1160.59	878.43	637.08	366.46	102.93	75.42	66.55		
210.0	1578.51	1425.84	1156.21	863.36	633.01	367.84	93.75	75.00	65.18		
225.0	1578.51	1403.83	1130.48	860.76	631.77	355.71	95.04	76.03	66.07		
240.0	1578.51	1375.07	1108.05	845.57	627.59	336.96	90.82	74.48	65.39		
255.0	1578.51	1386.51	1106.81	837.26	620.33	321.24	90.46	75.69	67.39		
270.0	1578.51	1364.83	1082.38	818.52	602.05	297.31	88.26	75.26	66.89		
285.0	1578.51	1353.01	1270.67	799.08	595.10	280.71	88.89	75.79	66.43		
300.0	1578.51	1320.93	1052.97	802.94	579.32	277.40	86.80	75.48	66.99		
315.0	1578.51	1320.13	1038.25	787.38	561.88	255.57	86.44	75.17	65.77		
330.0	1578.51	1319.54	1034.95	777.87	554.95	251.39	87.27	74.94	66.40		
345.0	1578.51	1314.64	1028.84	782.11	553.48	252.45	87.64	76.21	66.68		
360.0	1578.51	1451.60	1196.89	929.83	713.02	465.36	160.41	80.20	71.39		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	62.58	53.76	46.71	39.66	29.97	21.15	14.10	8.81	3.53		
15.0	62.11	54.13	47.03	39.93	30.17	22.18	15.08	8.87	3.55		
30.0	61.60	53.57	46.43	40.18	31.25	22.32	15.18	8.93	4.46		
45.0	62.45	54.31	47.97	39.82	31.68	22.63	15.39	9.05	4.53		
60.0	62.67	54.49	47.23	39.96	31.79	22.71	15.44	9.08	4.54		
75.0	63.69	55.39	48.00	41.54	32.31	24.00	15.69	10.15	4.62		
90.0	64.11	55.75	48.31	41.81	33.45	23.23	16.72	10.22	4.65		
105.0	64.56	57.08	48.66	42.11	33.68	24.33	16.84	10.29	5.61		
120.0	65.10	56.61	49.06	41.52	33.97	24.53	16.98	10.38	4.72		
135.0	65.77	57.32	48.86	42.28	33.83	24.43	16.91	10.34	5.64		
150.0	66.40	50.28	49.33	41.74	34.15	24.66	17.08	10.43	5.69		
165.0	65.73	58.11	49.54	41.92	34.29	23.82	17.15	10.48	4.76		
180.0	57.29	50.24	42.31	35.25	25.56	17.63	11.46	6.17	1.76		
195.0	57.67	49.69	42.59	34.60	25.73	17.75	11.53	6.21	1.77		
210.0	58.03	49.11	42.86	34.82	25.00	17.86	11.61	6.25	1.79		
225.0	57.93	49.78	42.54	34.39	25.34	17.20	10.86	6.34	1.81		
240.0	57.22	49.95	42.69	34.51	24.52	22.71	10.90	5.45	1.82		
255.0	58.16	56.31	42.46	34.15	24.00	16.62	10.15	5.54	0.92		
270.0	57.60	49.24	42.74	34.38	24.16	16.72	10.22	5.57	0.93		
285.0	58.01	49.59	43.04	33.68	24.33	16.84	10.29	4.68	0.94		
300.0	57.55	50.01	42.46	33.97	24.53	16.98	10.38	4.72	0.94		
315.0	57.32	49.80	42.28	33.83	24.43	16.91	10.34	4.70	0.94		
330.0	57.87	50.28	42.69	34.15	24.66	16.13	10.43	4.74	0.95		
345.0	58.11	50.49	42.87	34.29	24.77	17.15	10.48	4.76	0.95		
360.0	62.58	53.76	46.71	39.66	29.97	21.15	14.10	8.81	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	0.91	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	0.91	1.81	2.72	3.62	3.62	3.62		
60.0	0.00	0.00	0.00	0.91	1.82	2.72	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	1.86	2.81	3.74	3.74	3.74		
120.0	0.00	0.00	0.00	0.94	1.83	2.83	3.77	3.77	3.77		
135.0	0.00	0.00	0.00	0.94	1.88	2.82	3.76	3.76	3.76		
150.0	0.00	0.00	0.00	0.95	1.90	2.85	3.79	3.79	3.79		
165.0	0.00	0.00	0.00	0.95	1.90	2.86	3.81	3.81	3.81		
180.0	0.00	0.00	0.00	0.00	1.76	2.64	3.53	3.53	3.53		
195.0	0.00	0.00	0.00	0.00	1.77	2.66	3.55	3.55	3.55		
210.0	0.00	0.00	0.00	0.00	1.79	2.68	3.57	3.57	3.57		
225.0	0.00	0.00	0.00	0.00	1.81	2.72	3.62	3.62	3.62		
240.0	0.00	0.00	0.00	0.00	1.82	2.72	3.63	3.63	3.63		
255.0	0.00	0.00	0.00	0.00	1.85	2.77	3.69	3.69	3.69		
270.0	0.00	0.00	0.00	0.00	1.86	2.79	3.72	3.72	3.72		
285.0	0.00	0.00	0.00	0.00	1.87	2.81	3.74	3.74	3.74		
300.0	0.00	0.00	0.00	0.00	1.89	2.83	3.77	3.77	3.77		
315.0	0.00	0.00	0.00	0.00	1.88	2.82	3.76	3.76	3.76		
330.0	0.00	0.00	0.00	0.00	1.90	2.85	3.79	3.79	3.79		
345.0	0.00	0.00	0.00	0.00	1.91	2.86	3.81	3.81	3.81		
360.0	0.00	0.00	0.00	0.88	1.76	2.64	3.53	3.53	3.53		

Intensity data(cd)

C/γ(°)	180.0
0.0	2.64
15.0	3.55
30.0	2.68
45.0	2.72
60.0	3.63
75.0	2.77
90.0	2.79
105.0	3.74
120.0	2.83
135.0	2.82
150.0	2.85
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