

LUMINAIRE PHOTOMETRIC TEST REPORT

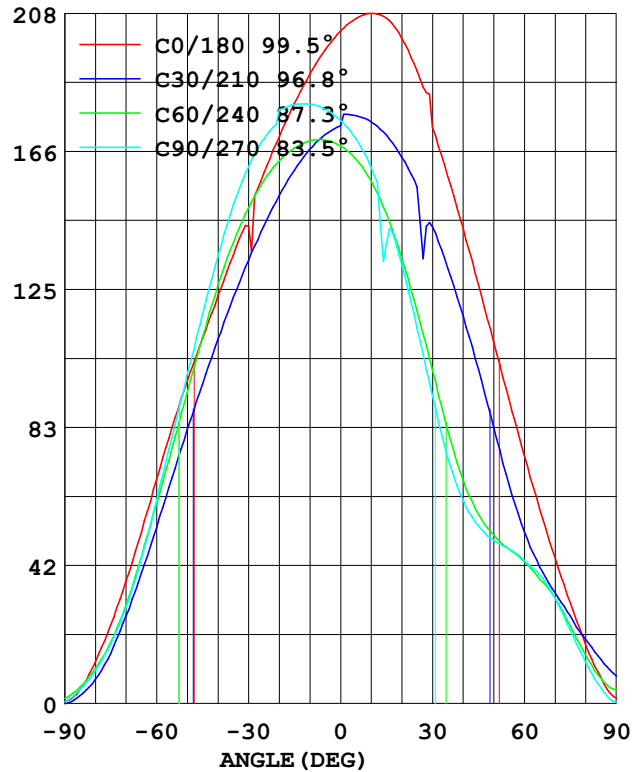
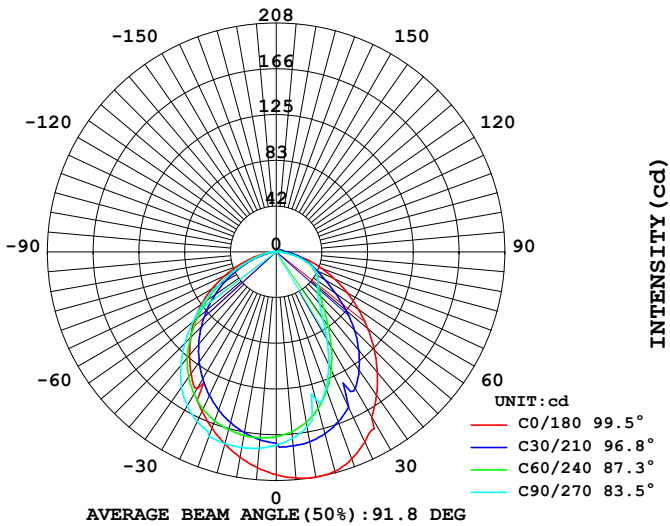
Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :

DATA OF LAMP		Imax (cd)	217.8	S/MH (C0/180)	1.08
MODEL	15W-4000K	EFFICIENCY (%)	100.0	S/MH (C90/270)	1.34
NOMINAL POWER (W)	15	TOTAL FLUX (lm)	438.9	Voltage (V)	23.77
RATED VOLTAGE (V)	24	EFFICIENCY (lm/W)	29.7	Current (A)	0.621
NOMINAL FLUX (lm)	438.9	η up (%)	0.8	Power (W)	14.78
LAMPS QUANTITY	1	η down (%)	99.2	Power Factor (PF)	1.000
TEST VOLTAGE (V)	23.8	Effective Flux (lm)	419.6	EET	0.383

LUMINOUS INTENSITY DISTRIBUTION

LUMINOUS INTENSITY DISTRIBUTION



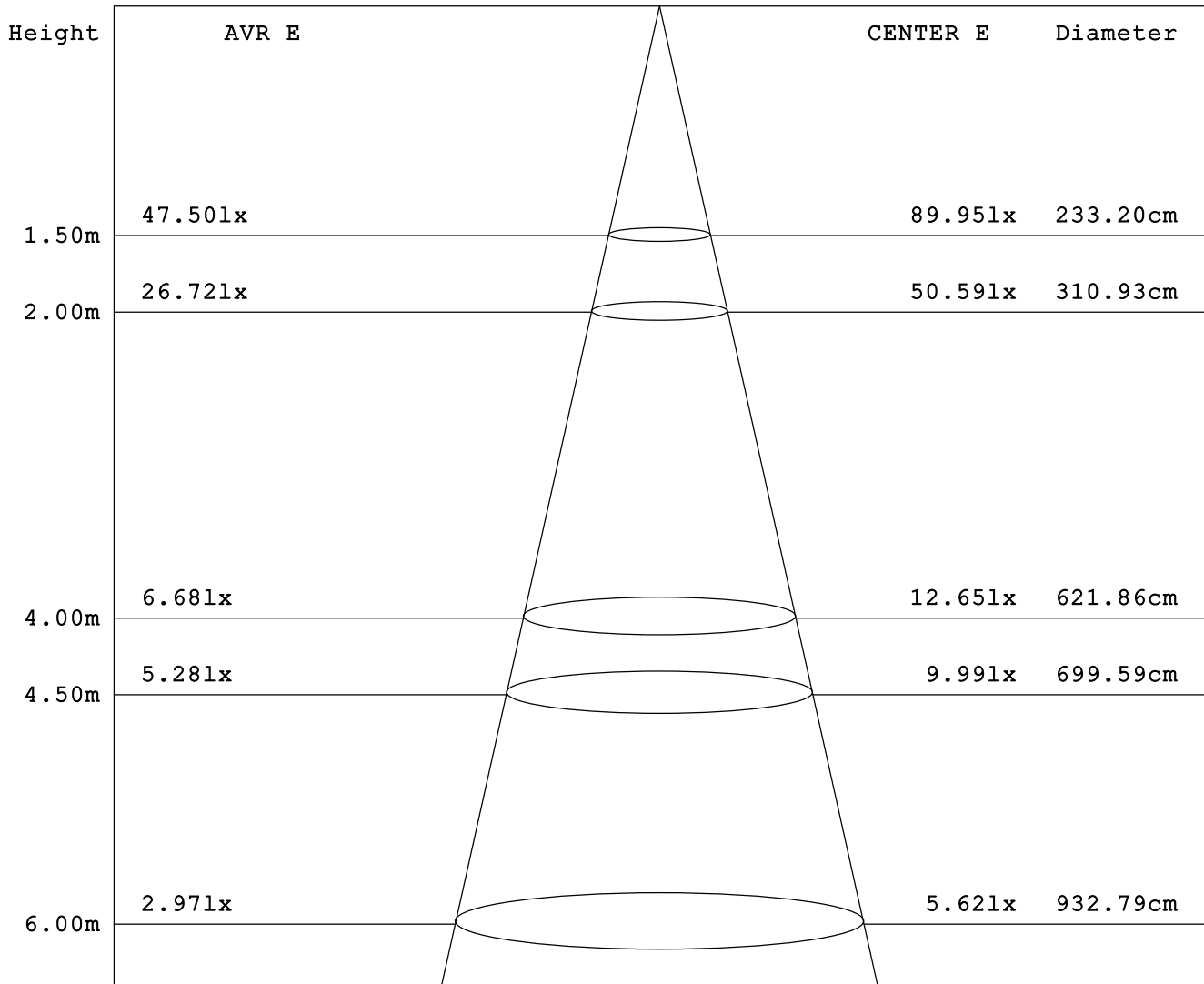
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :



Angle:75.7deg

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
5.0	196.7	170.4	178.8	208.6	206.1	170.3	169.9	198.6	0- 5	4.492	4.492
10.0	189.4	168.0	180.3	209.8	207.6	166.1	161.2	187.3	5- 10	13.27	17.76
15.0	180.6	163.8	180.2	208.4	206.2	159.1	138.6	174.5	10- 15	21.33	39.09
20.0	170.5	158.1	178.8	204.8	200.2	149.1	132.1	158.6	15- 20	28.49	67.58
25.0	159.8	150.6	169.9	198.3	190.4	136.9	112.9	141.0	20- 25	34.14	101.7
30.0	143.5	141.3	161.5	188.6	173.4	121.9	92.73	118.7	25- 30	37.77	139.5
35.0	134.8	130.3	150.0	173.9	158.6	106.5	73.87	102.3	30- 35	40.09	179.6
40.0	122.7	117.7	134.6	159.0	143.1	92.15	61.33	86.00	35- 40	40.48	220.0
45.0	109.9	103.1	117.0	136.2	126.0	78.84	53.49	71.41	40- 45	39.15	259.2
50.0	96.87	88.03	99.01	122.0	108.5	66.75	49.04	58.76	45- 50	37.31	296.5
55.0	83.19	72.46	80.19	101.2	91.69	56.30	46.52	49.11	50- 55	34.08	330.6
60.0	67.60	56.60	61.20	79.32	74.61	47.26	43.08	40.81	55- 60	29.88	360.5
65.0	51.35	41.59	43.73	58.21	58.45	39.24	38.72	33.60	60- 65	24.93	385.4
70.0	36.93	28.07	28.96	39.09	43.95	32.64	31.84	26.85	65- 70	19.61	405.0
75.0	23.65	16.72	17.81	23.26	30.27	24.82	22.08	18.51	70- 75	14.19	419.2
80.0	12.50	8.820	9.931	12.50	17.59	16.87	12.37	11.10	75- 80	9.106	428.3
85.0	4.181	3.659	4.181	5.662	7.840	10.38	4.704	4.900	80- 85	4.901	433.2
90.0	0.741	0.741	0.436	1.437	1.568	6.272	0.436	1.546	85- 90	1.940	435.2
95.0	0.436	0.196	0	0.327	0.174	5.379	0.218	1.001	90- 95	0.803	436.0
100.0	0.348	0.131	0	0.196	0	4.922	0.131	0.741	95-100	0.612	436.6
105.0	0.305	0.087	0	0.131	0	4.377	0.087	0.501	100-105	0.516	437.1
110.0	0.261	0.065	0	0.087	0	3.680	0.087	0.261	105-110	0.419	437.5
115.0	0.261	0.065	0	0.065	0	2.962	0.087	0.109	110-115	0.323	437.8
120.0	0.261	0.044	0	0.044	0	2.221	0.087	0.087	115-120	0.243	438.1
125.0	0.261	0.065	0	0.044	0	1.524	0.131	0.109	120-125	0.175	438.3
130.0	0.305	0.087	0	0.044	0	1.001	0.174	0.109	125-130	0.121	438.4
135.0	0.305	0.065	0	0.044	0	0.632	0.174	0.109	130-135	0.087	438.5
140.0	0.305	0.131	0	0.065	0.044	0.392	0.218	0.109	135-140	0.064	438.5
145.0	0.348	0.152	0	0.065	0.087	0.261	0.261	0.152	140-145	0.054	438.6
150.0	0.348	0.174	0.044	0.087	0.131	0.218	0.218	0.174	145-150	0.048	438.6
155.0	0.348	0.218	0.087	0.109	0.174	0.240	0.261	0.196	150-155	0.046	438.7
160.0	0.348	0.240	0.131	0.152	0.218	0.261	0.261	0.218	155-160	0.043	438.7
165.0	0.348	0.240	0.174	0.196	0.261	0.283	0.305	0.240	160-165	0.039	438.8
170.0	0.392	0.283	0.218	0.218	0.305	0.283	0.348	0.240	165-170	0.031	438.8
175.0	0.392	0.283	0.218	0.240	0.305	0.348	0.348	0.261	170-175	0.020	438.8
180.0	0.348	0.327	0.261	0.261	0.348	0.305	0.305	0.261	175-180	0.007	438.8
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

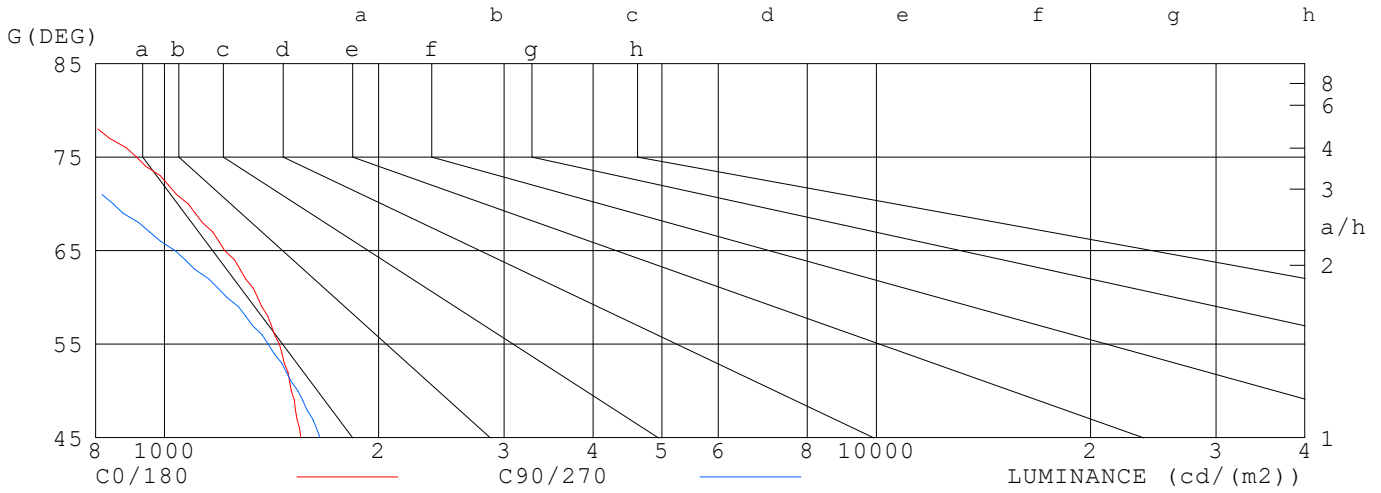
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



LUMINANCE cd/m2		
G (DEG)	C0/180	C90/270
85	480	480
80	720	572
75	914	688
70	1080	847
65	1215	1035
60	1352	1224
55	1451	1398
50	1507	1540
45	1554	1655

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

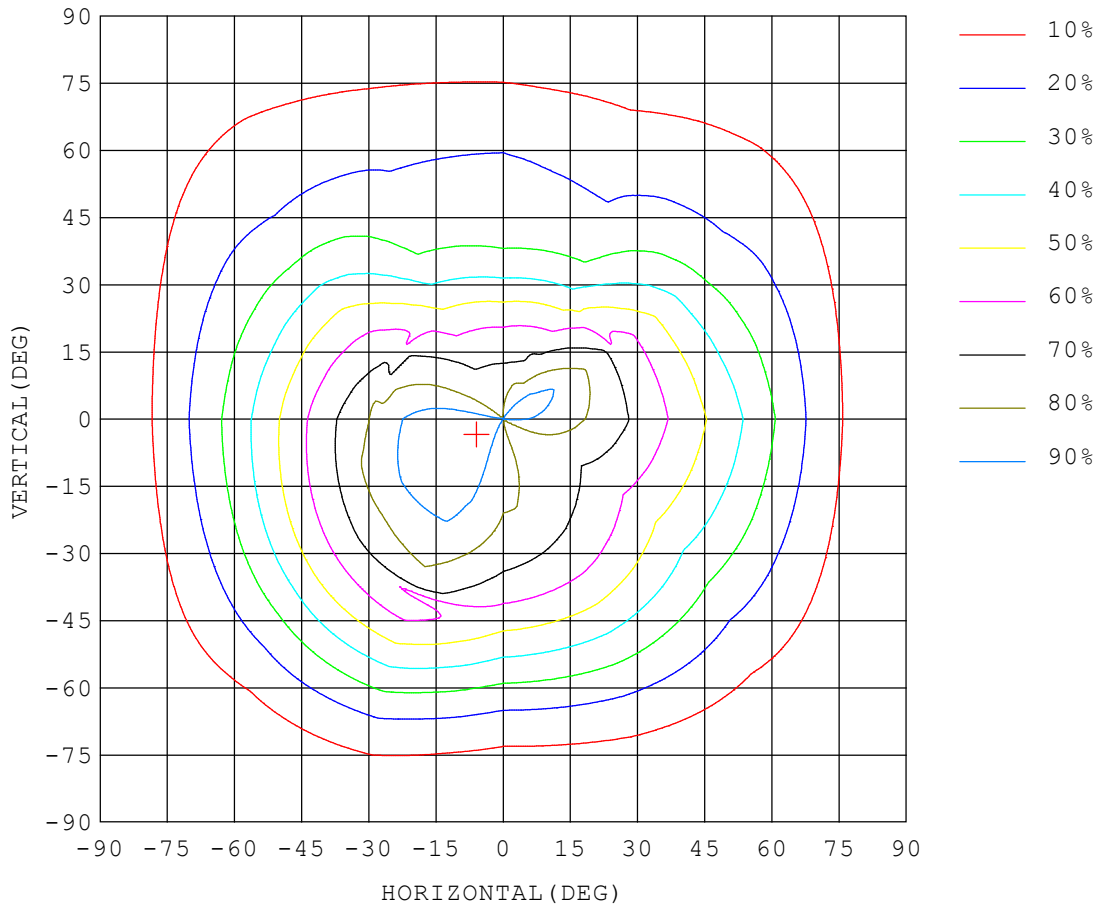
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :

UNIT: cd



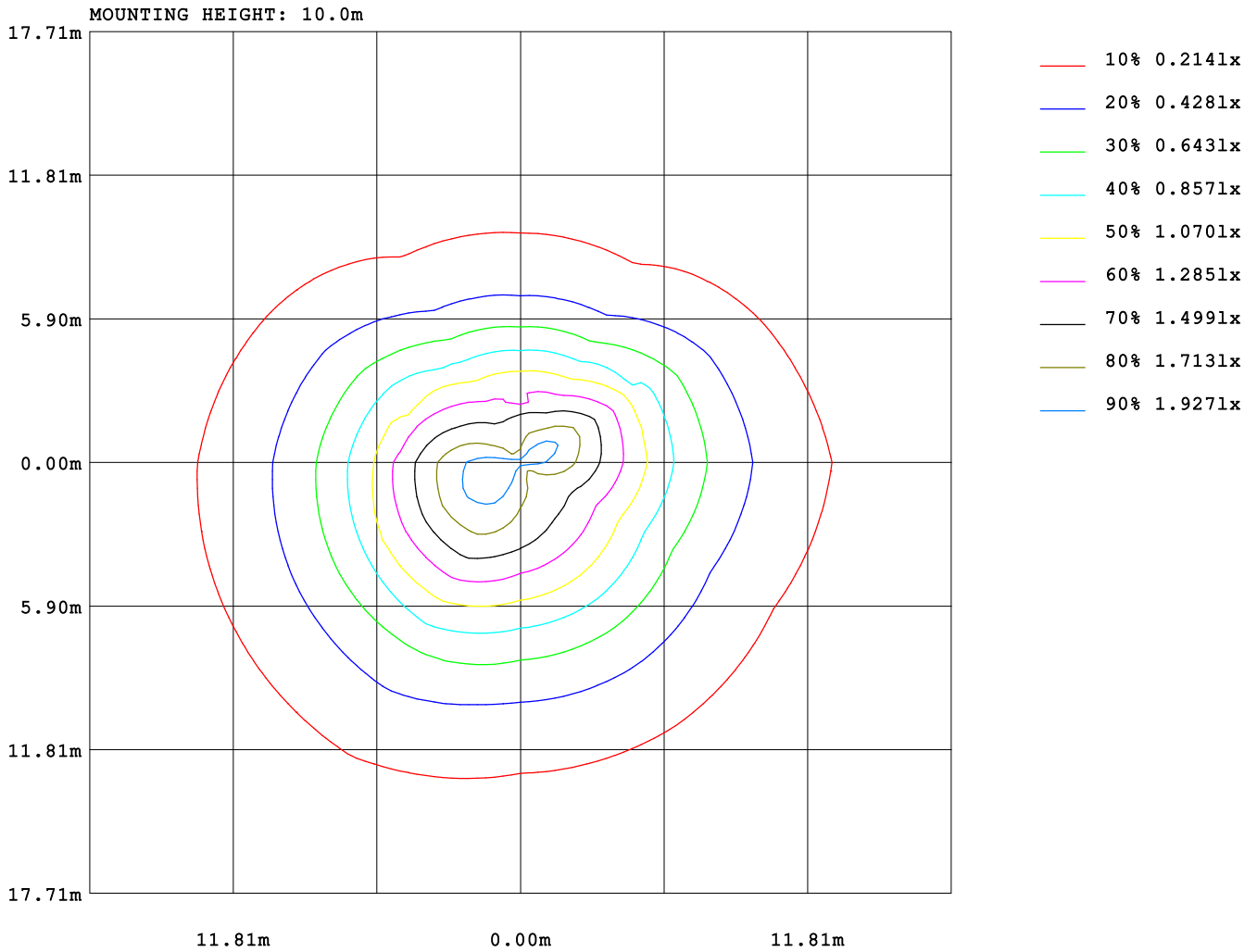
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:Lightrail																			
Address:																			
NAME: BL15.4K+Cove101 Profile										TYPE:					WEIGHT:				
SPECIFICATION:					CCT (K) : 4000					DIMENSION:					SERIAL No. :				

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm	Φ t	Φ a
	0.01	0.05	0.12	0.18	0.19	0.20	0.19	0.19	0.17	0.14	0.11	0.07	0.06	0.08	0.09	0.06	0.02	0.00	1.91	0.00	
90	0.01	0.05	0.12	0.18	0.19	0.20	0.19	0.19	0.17	0.14	0.11	0.07	0.06	0.08	0.09	0.06	0.02	0.00	1.91	0.00	
80	0.01	0.07	0.18	0.29	0.39	0.48	0.57	0.64	0.67	0.63	0.53	0.40	0.31	0.26	0.20	0.12	0.04	0.01	5.79	1.92	
70	0.01	0.10	0.25	0.43	0.62	0.81	0.96	1.08	1.15	1.11	0.97	0.79	0.64	0.49	0.34	0.19	0.06	0.01	10.0	8.84	
60	0.02	0.13	0.33	0.57	0.83	1.07	1.21	1.33	1.40	1.36	1.24	1.06	0.92	0.71	0.49	0.27	0.09	0.01	13.0	12.6	
50	0.02	0.16	0.42	0.72	1.08	1.41	1.50	1.57	1.65	1.61	1.48	1.35	1.23	0.94	0.63	0.35	0.12	0.01	16.3	16.0	
40	0.02	0.19	0.51	0.93	1.45	1.96	2.12	2.15	2.30	2.26	2.04	1.96	1.74	1.26	0.82	0.43	0.14	0.01	22.3	22.1	
30	0.03	0.21	0.60	1.15	1.91	2.67	3.07	3.18	3.40	3.41	3.15	2.96	2.45	1.67	1.02	0.52	0.17	0.02	31.6	31.5	
	0.03	0.23	0.68	1.37	2.30	3.28	3.96	4.30	4.35	4.52	4.56	3.93	3.01	2.03	1.22	0.60	0.19	0.02	40.6	40.5	
	0.03	0.25	0.75	1.54	2.60	3.76	4.83	5.39	5.24	5.73	5.39	4.32	3.29	2.28	1.39	0.66	0.20	0.02	47.7	47.5	
	0.03	0.25	0.76	1.60	2.73	4.00	5.28	6.13	6.20	5.26	4.91	4.17	3.26	2.30	1.41	0.66	0.19	0.02	49.2	49.1	
	0.03	0.23	0.72	1.55	2.67	3.92	5.21	5.96	5.87	5.19	4.57	3.79	2.97	2.11	1.29	0.60	0.18	0.02	46.9	46.8	
-30	0.02	0.20	0.64	1.41	2.47	3.63	4.80	5.56	5.43	4.96	4.38	3.55	2.63	1.83	1.11	0.52	0.16	0.02	43.3	43.2	
-40	0.02	0.17	0.53	1.18	2.13	3.17	4.06	4.81	4.74	4.39	3.90	3.15	2.29	1.50	0.90	0.42	0.13	0.01	37.5	37.3	
-50	0.02	0.13	0.41	0.90	1.65	2.56	3.40	3.68	3.66	3.46	3.10	2.52	1.83	1.17	0.66	0.31	0.10	0.01	29.6	29.3	
-60	0.01	0.09	0.27	0.60	1.13	1.79	2.40	2.62	2.55	2.38	2.15	1.77	1.28	0.82	0.44	0.21	0.07	0.01	20.6	20.0	
-70	0.01	0.06	0.16	0.33	0.65	1.04	1.38	1.48	1.42	1.32	1.21	1.01	0.74	0.47	0.25	0.12	0.04	0.00	11.7	10.5	
-80	0.01	0.03	0.07	0.15	0.29	0.48	0.62	0.64	0.60	0.56	0.52	0.45	0.33	0.21	0.11	0.05	0.02	0.00	5.15	1.82	
-90	0.00	0.01	0.02	0.04	0.09	0.16	0.20	0.18	0.16	0.14	0.14	0.13	0.10	0.06	0.03	0.01	0.01	0.00	1.48	0.00	
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)	20	30	40	50	60	70	80	90				
Φ t	0.34	2.56	7.40	14.9	25.2	36.4	45.8	50.9	51.0	48.5	44.4	37.4	29.1	20.2	12.4	6.08	1.91	0.20	439		
Φ a	0.00	1.53	6.47	14.0	24.2	35.5	44.9	50.0	50.1	47.6	43.5	36.5	28.2	19.2	11.4	5.09	0.81	0.00		420	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

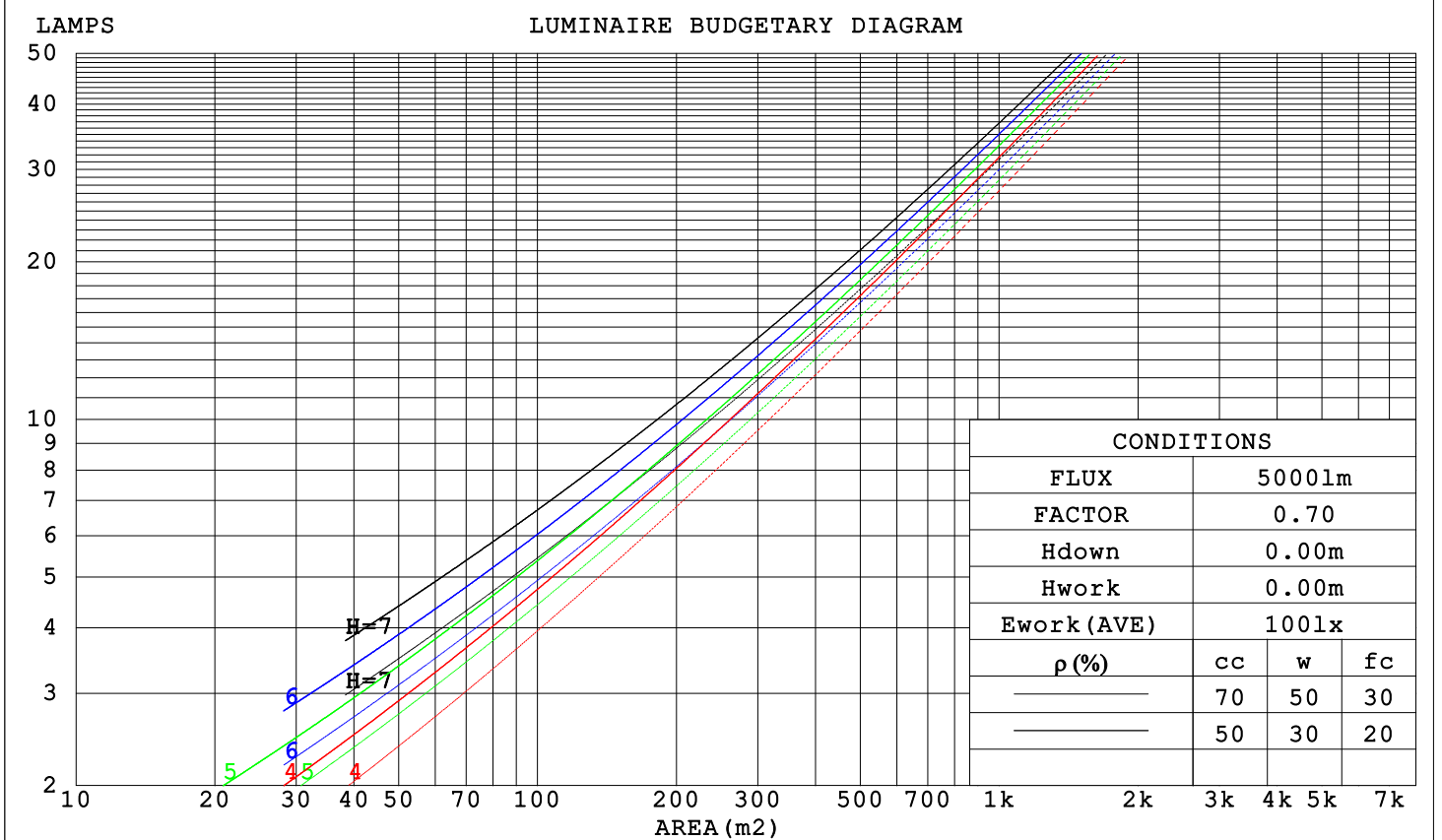
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:Lightrail															
Address:															
NAME: BL15.4K+Cove101 Profile										TYPE:			WEIGHT:		
SPECIFICATION:					CCT (K) : 4000					DIMENSION:			SERIAL No. :		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	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	.99
1.0	1.05	1.01	.97	1.02	.99	.96	.98	.95	.92	.94	.92	.89	.90	.88	.87	.84
2.0	.92	.86	.80	.90	.84	.79	.87	.82	.77	.83	.79	.76	.80	.77	.74	.72
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.74	.69	.65	.72	.67	.63	.61
4.0	.73	.64	.58	.71	.64	.58	.69	.62	.57	.67	.61	.56	.64	.59	.55	.53
5.0	.65	.57	.51	.64	.56	.50	.62	.55	.50	.60	.54	.49	.58	.53	.48	.46
6.0	.59	.51	.45	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.47	.43	.41
7.0	.54	.46	.40	.53	.45	.39	.52	.44	.39	.50	.44	.39	.49	.43	.38	.37
8.0	.49	.41	.36	.49	.41	.35	.47	.40	.35	.46	.40	.35	.45	.39	.35	.33
9.0	.46	.38	.32	.45	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.31	.30
10.0	.42	.34	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.29	.27



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 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

MANUFACTURER:Lightrail															
Address:															
NAME: BL15.4K+Cove101 Profile										TYPE:			WEIGHT:		
SPECIFICATION:					CCT (K) : 4000					DIMENSION:			SERIAL No. :		

ρ _{cc}	80%			70%			50%			30%			10%			0
ρ _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.288	.164	.052	.281	.160	.051	.267	.153	.049	.255	.147	.047	.243	.141	.045	
2.0	.273	.150	.046	.266	.147	.045	.254	.141	.044	.243	.137	.043	.233	.132	.042	
3.0	.254	.135	.040	.248	.133	.040	.238	.129	.039	.228	.125	.038	.219	.121	.038	
4.0	.236	.123	.036	.231	.121	.036	.221	.117	.035	.213	.114	.034	.205	.111	.034	
5.0	.219	.112	.032	.215	.110	.032	.206	.107	.032	.199	.105	.031	.191	.102	.031	
6.0	.204	.102	.029	.200	.101	.029	.193	.099	.029	.186	.096	.028	.179	.094	.028	
7.0	.191	.094	.027	.187	.093	.027	.180	.091	.026	.174	.089	.026	.168	.087	.026	
8.0	.179	.087	.025	.175	.086	.024	.169	.085	.024	.164	.083	.024	.159	.081	.024	
9.0	.168	.081	.023	.165	.080	.023	.160	.079	.022	.155	.077	.022	.150	.076	.022	
10.0	.158	.076	.021	.156	.075	.021	.151	.074	.021	.146	.073	.021	.142	.071	.020	

ρ _{cc}	80%			70%			50%			30%			10%			0
ρ _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.185	.163	.142	.158	.140	.123	.108	.096	.085	.062	.056	.049	.020	.018	.016	
2.0	.176	.138	.107	.151	.119	.092	.103	.082	.064	.060	.048	.038	.019	.016	.012	
3.0	.168	.121	.083	.144	.104	.072	.099	.072	.050	.057	.042	.030	.018	.014	.010	
4.0	.160	.107	.067	.137	.093	.058	.094	.065	.041	.055	.038	.024	.018	.012	.008	
5.0	.153	.097	.055	.131	.084	.048	.090	.058	.034	.052	.034	.020	.017	.011	.007	
6.0	.146	.088	.047	.125	.076	.041	.086	.053	.029	.050	.031	.017	.016	.010	.006	
7.0	.139	.081	.041	.119	.070	.036	.083	.049	.025	.048	.029	.015	.015	.010	.005	
8.0	.133	.075	.036	.114	.065	.032	.079	.046	.022	.046	.027	.013	.015	.009	.004	
9.0	.127	.070	.033	.109	.061	.028	.076	.043	.020	.044	.025	.012	.014	.008	.004	
10.0	.121	.066	.030	.104	.057	.026	.072	.040	.018	.042	.024	.011	.014	.008	.004	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR Table

Report number:

MANUFACTURER:Lightrail										
Address:										
NAME: BL15.4K+Cove101 Profile					TYPE:			WEIGHT:		
SPECIFICATION:		CCT(K): 4000			DIMENSION:			SERIAL No.:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	13.5	14.9	13.8	15.2	15.4	13.8	15.2	14.1	15.4	15.7
3H	14.7	16.0	15.0	16.3	16.5	14.7	16.0	15.0	16.2	16.5
4H	15.1	16.4	15.4	16.6	16.9	14.9	16.2	15.3	16.5	16.7
6H	15.3	16.5	15.7	16.8	17.1	15.1	16.3	15.4	16.6	16.9
8H	15.4	16.5	15.7	16.8	17.1	15.1	16.3	15.5	16.6	16.9
12H	15.4	16.5	15.8	16.8	17.1	15.1	16.2	15.5	16.6	16.9
4H 2H	13.9	15.1	14.2	15.4	15.7	14.1	15.4	14.4	15.6	15.9
3H	15.1	16.2	15.5	16.5	16.9	15.2	16.3	15.5	16.6	16.9
4H	15.6	16.6	16.0	16.9	17.3	15.6	16.6	15.9	16.9	17.2
6H	15.9	16.8	16.3	17.2	17.6	15.8	16.7	16.2	17.1	17.4
8H	16.0	16.8	16.4	17.2	17.6	15.9	16.7	16.3	17.1	17.5
12H	16.1	16.8	16.5	17.2	17.6	15.9	16.7	16.4	17.1	17.5
8H 4H	15.7	16.5	16.1	16.9	17.3	15.6	16.5	16.1	16.8	17.2
6H	16.1	16.7	16.5	17.2	17.6	16.0	16.7	16.4	17.1	17.5
8H	16.2	16.8	16.6	17.2	17.7	16.1	16.7	16.6	17.2	17.7
12H	16.2	16.8	16.7	17.2	17.7	16.2	16.8	16.7	17.2	17.7
12H 4H	15.7	16.4	16.1	16.8	17.2	15.6	16.4	16.0	16.8	17.2
6H	16.1	16.7	16.5	17.1	17.6	16.0	16.6	16.5	17.0	17.5
8H	16.2	16.7	16.7	17.2	17.7	16.2	16.7	16.7	17.1	17.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.3 / - 0.3				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.6 / - 0.9					+ 0.6 / - 0.6				

CIE Pub.117 Corrected 438.8 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.9)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :

REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	61	50	43	60	49	43	59	49	43	37
0.80	71	60	53	70	59	53	68	58	52	46
1.00	79	68	61	78	68	61	75	69	61	54
1.25	86	76	69	84	75	69	81	74	68	61
1.50	90	81	75	89	80	74	86	78	73	66
2.00	97	89	83	95	88	82	91	85	80	73
2.50	100	93	87	98	92	86	94	89	85	76
3.00	103	97	92	101	95	91	97	92	88	80
4.00	107	102	97	105	100	96	100	97	93	84
5.00	109	105	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

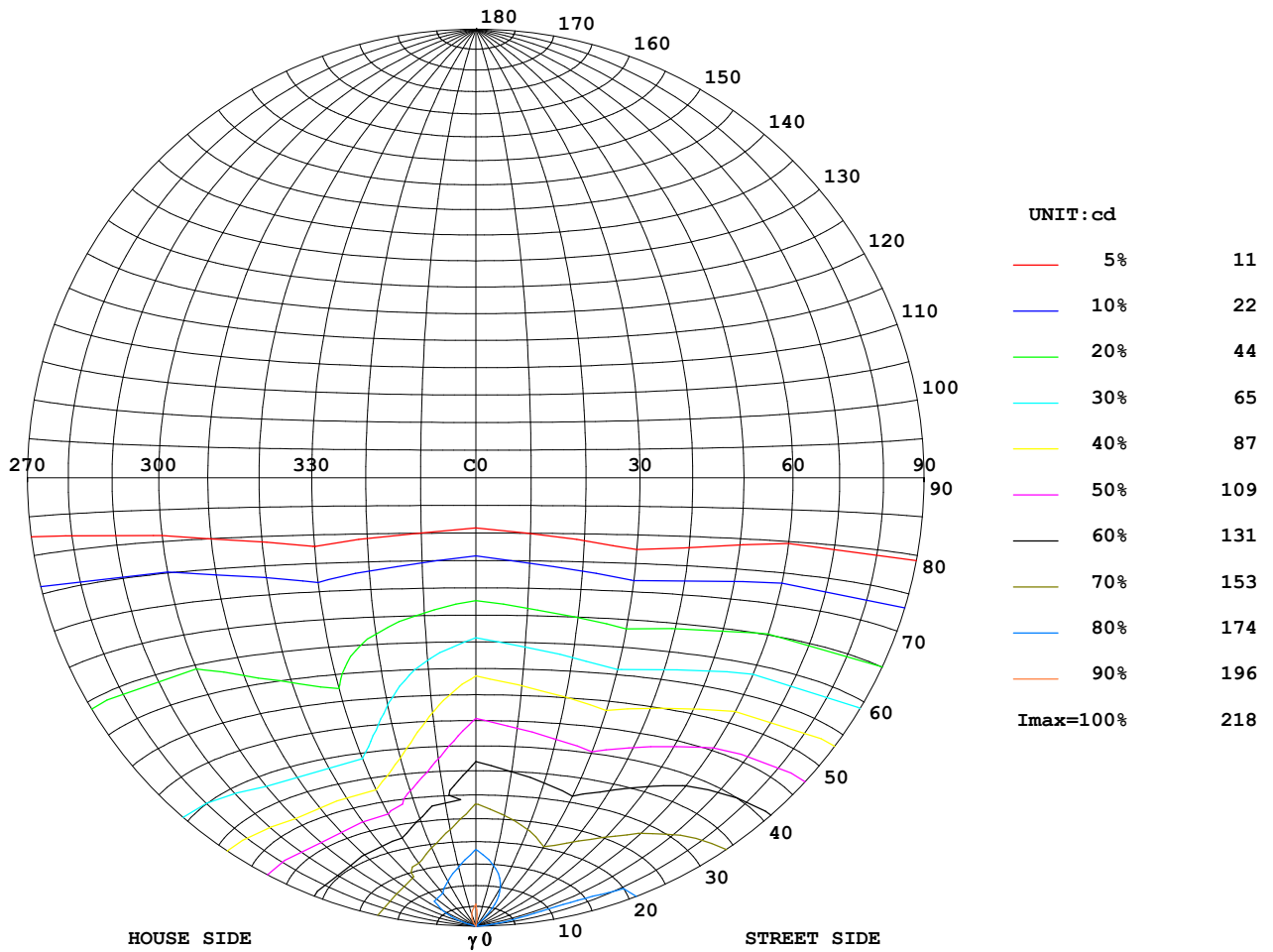
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

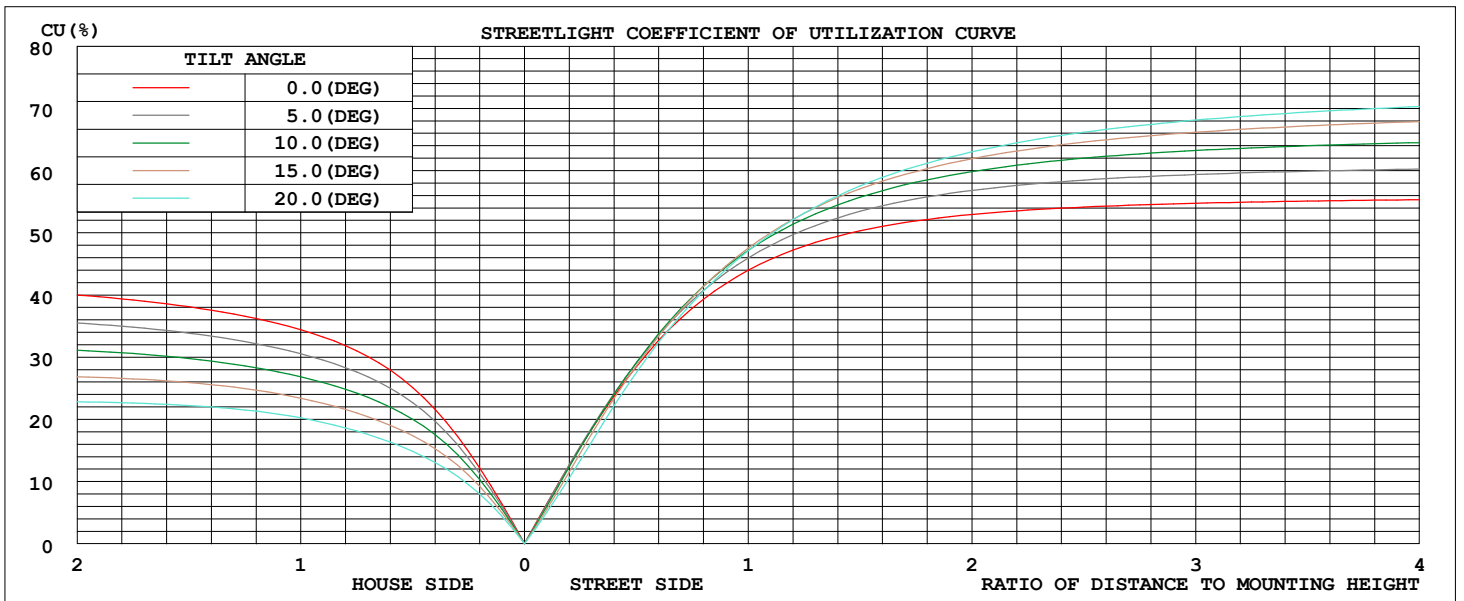
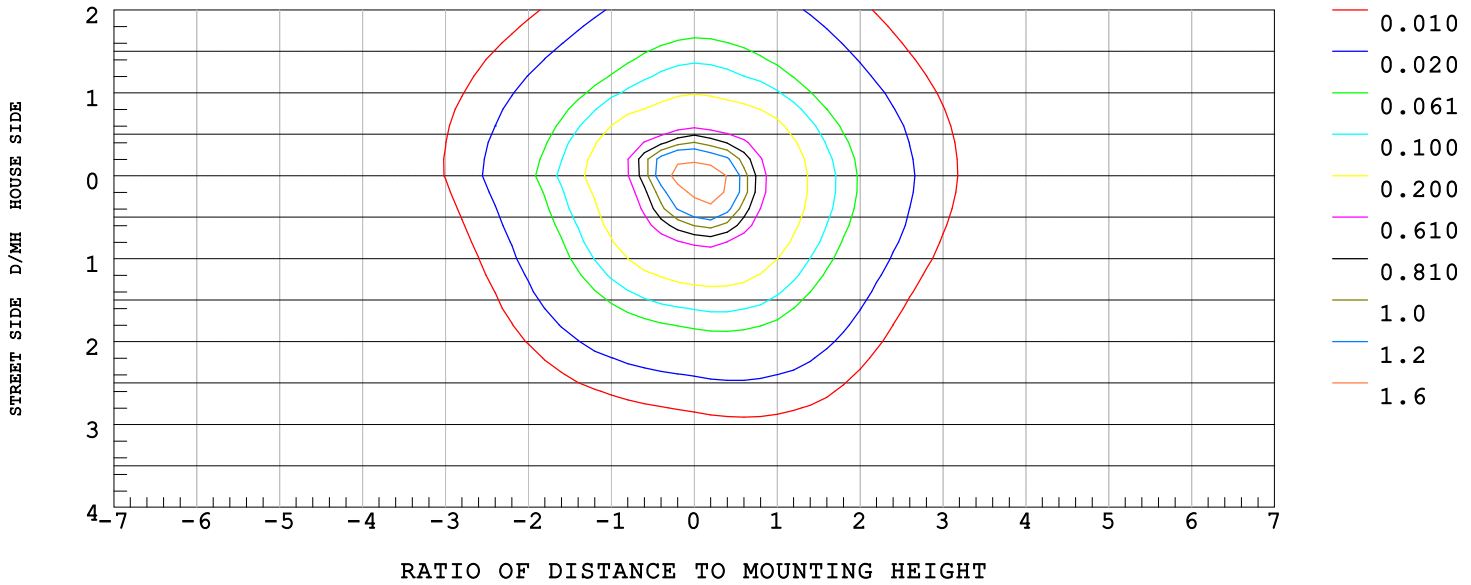
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :

ILLUMINANCE AT MH=10 m, Enadir = 2.02 lx



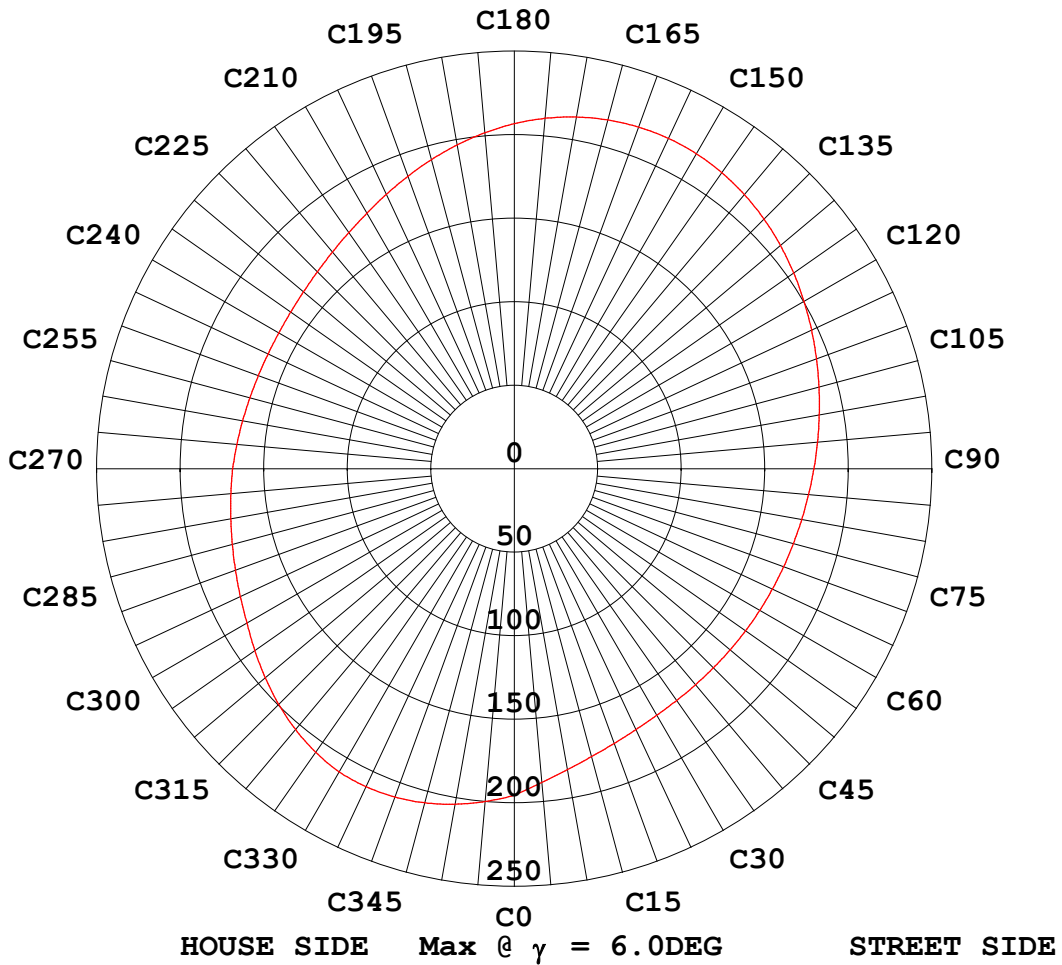
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 4000	DIMENSION:	SERIAL No. :



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2024-07-08

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.600 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER: Lightrail			
Address:			
NAME: BL15.4K+Cove101 Profile		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K): 4000	DIMENSION:	SERIAL No.:

UNIT: cd

γ (DEG)	C (DEG)											
	0	30	60	90	120	150	180	210	240	270	300	330
0.0	202	174	168	176	194	216	202	174	168	176	194	216
5.0	197	171	170	179	200	218	206	177	164	170	186	211
10.0	189	167	169	180	203	217	208	175	157	161	172	203
15.0	181	161	167	180	204	213	206	171	147	139	157	192
20.0	171	153	163	179	202	208	200	164	134	132	139	178
25.0	160	144	157	170	197	199	190	156	118	113	120	162
30.0	144	133	149	162	190	188	173	144	100	92.7	97.9	140
35.0	135	122	139	150	179	169	159	131	82.1	73.8	77.4	127
40.0	123	110	126	135	165	153	143	117	67.4	61.3	62.5	109
45.0	110	96.0	110	117	137	136	126	101	57.0	53.4	52.3	90.5
50.0	96.8	82.5	93.5	99.0	126	118	109	82.8	50.6	49.0	45.7	71.7
55.0	83.1	67.9	76.9	80.1	105	97.3	91.6	66.0	46.5	46.5	41.4	56.7
60.0	67.6	53.0	60.1	61.2	83.3	75.3	74.6	51.7	42.7	43.0	36.7	44.9
65.0	51.3	39.2	43.9	43.7	61.5	54.8	58.4	41.1	37.3	38.7	31.1	36.0
70.0	36.9	26.3	29.8	28.9	42.3	35.8	43.9	33.4	31.8	31.8	24.6	29.0
75.0	23.6	15.0	18.4	17.8	26.7	19.7	30.2	26.3	23.3	22.0	15.8	21.2
80.0	12.5	7.23	10.4	9.93	15.6	9.36	17.5	19.2	14.5	12.3	7.66	14.5
85.0	4.18	2.39	4.92	4.18	8.05	3.26	7.84	13.2	7.53	4.70	1.74	8.05
90.0	0.74	0.00	1.48	0.44	2.87	0.00	1.56	8.27	4.26	0.44	0.00	3.09
95.0	0.44	0.00	0.39	0.00	0.65	0.00	0.17	6.70	4.05	0.22	0.00	2.00
100.0	0.35	0.00	0.26	0.00	0.39	0.00	0.00	6.05	3.78	0.13	0.00	1.48
105.0	0.30	0.00	0.17	0.00	0.26	0.00	0.00	5.31	3.44	0.09	0.00	1.00
110.0	0.26	0.00	0.13	0.00	0.17	0.00	0.00	4.35	3.00	0.09	0.00	0.52
115.0	0.26	0.00	0.13	0.00	0.13	0.00	0.00	3.44	2.48	0.09	0.00	0.22
120.0	0.26	0.00	0.09	0.00	0.09	0.00	0.00	2.43	2.00	0.09	0.00	0.17
125.0	0.26	0.04	0.09	0.00	0.09	0.00	0.00	1.52	1.52	0.13	0.00	0.22
130.0	0.30	0.04	0.13	0.00	0.09	0.00	0.00	0.91	1.08	0.17	0.00	0.22
135.0	0.30	0.04	0.09	0.00	0.09	0.00	0.00	0.57	0.70	0.17	0.00	0.22
140.0	0.30	0.13	0.13	0.00	0.13	0.00	0.04	0.39	0.39	0.22	0.04	0.17
145.0	0.35	0.13	0.17	0.00	0.13	0.00	0.09	0.30	0.22	0.26	0.09	0.22
150.0	0.35	0.17	0.17	0.04	0.13	0.04	0.13	0.26	0.17	0.22	0.13	0.22
155.0	0.35	0.22	0.22	0.09	0.17	0.04	0.17	0.30	0.17	0.26	0.13	0.26
160.0	0.35	0.22	0.26	0.13	0.22	0.09	0.22	0.30	0.22	0.26	0.17	0.26
165.0	0.35	0.22	0.26	0.17	0.26	0.13	0.26	0.30	0.26	0.30	0.17	0.30
170.0	0.39	0.26	0.30	0.22	0.26	0.17	0.30	0.35	0.22	0.35	0.22	0.26
175.0	0.39	0.26	0.30	0.22	0.30	0.17	0.30	0.39	0.30	0.35	0.22	0.30
180.0	0.35	0.30	0.35	0.26	0.30	0.22	0.35	0.35	0.26	0.30	0.22	0.30

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
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Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
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 Remarks: