

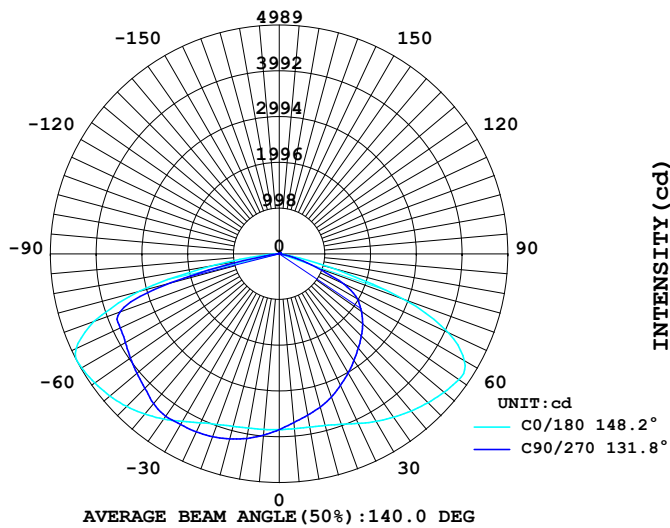
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

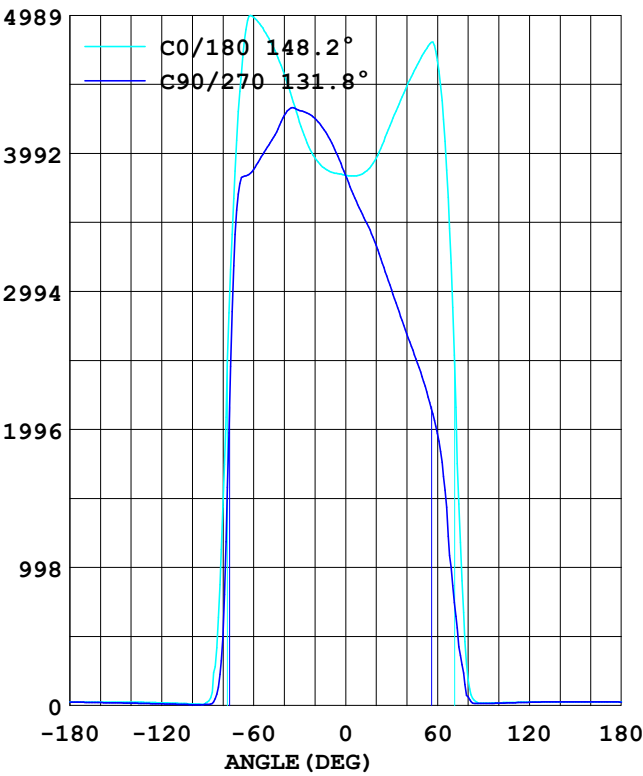
MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE:IL-ST11-D12040-TY4	WEIGHT:
SPECIFICATION:5050LED 4000K Type IV	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax(cd)	5329	S/MH (C0/180)	1.79
MODEL		EFFICIENCY (%)	100.0	S/MH (C90/270)	1.68
NOMINAL POWER(W)	120	TOTAL FLUX(lm)	18083	Voltage(V)	230.3
RATED VOLTAGE (V)	230	EFFICIENCY (lm/W)	150.2	Current(A)	0.524
NOMINAL FLUX(lm)	18083.4	$\eta$ up (%)	0.7	Power(W)	120.4
LAMPS QUANTITY	1	$\eta$ down (%)	99.3	Power Factor (PF)	0.996
TEST VOLTAGE (V)	230.3	Effective Flux(lm)	18083.4	EEI	0.100

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



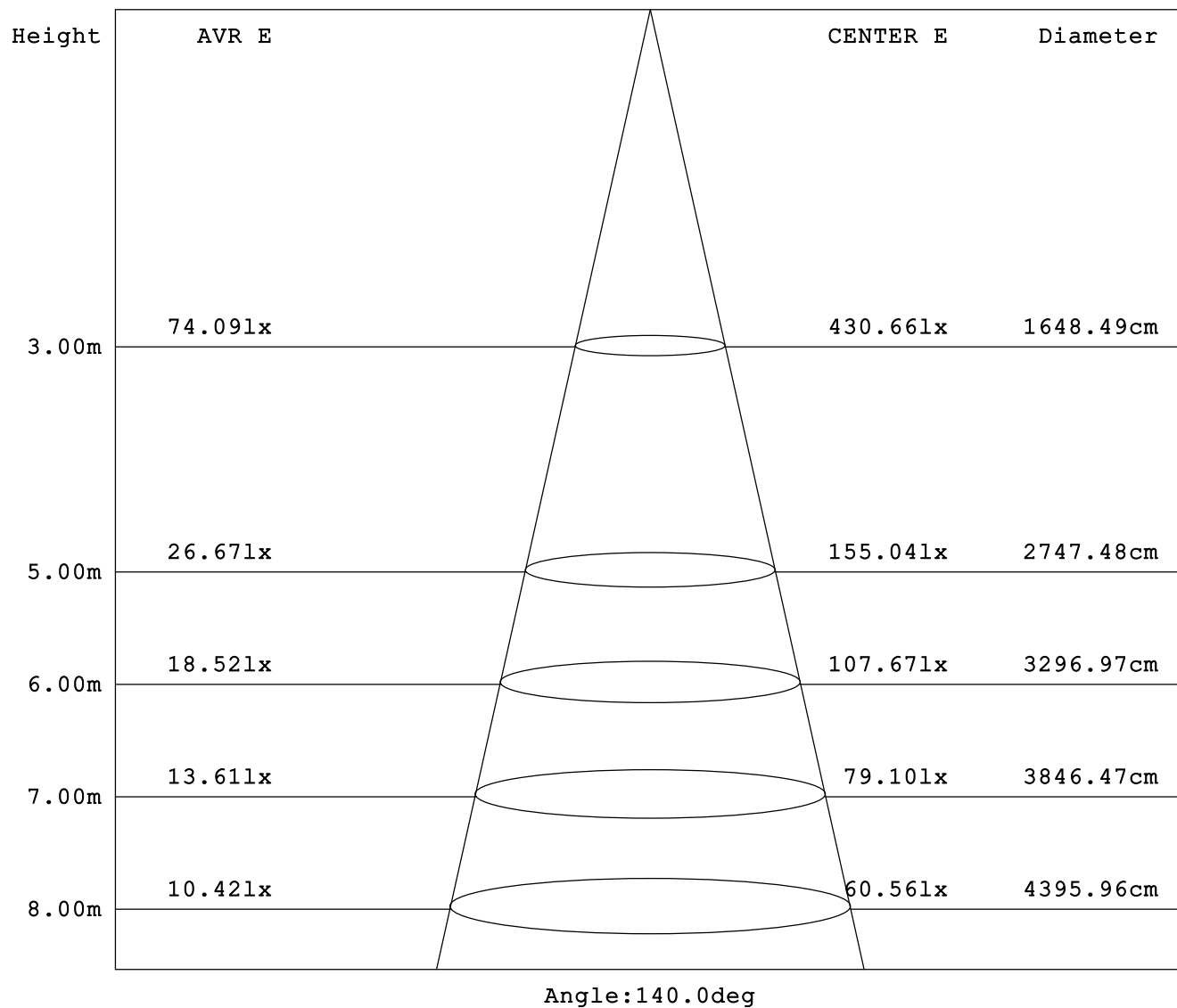
Test System:  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025.03.24

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

## AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE:IL-ST11-D12040-TY4	WEIGHT:
SPECIFICATION:5050LED 4000K Type IV	DIMENSION:	SERIAL No.:



Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.24

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:10.000 m  
Remarks:

## ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D12040-TY4	WEIGHT:
SPECIFICATION: 5050LED 4000K Type IV	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Zone	total
5.0	3845	3939	3971	3923	3829	3724	3696	3736	0- 5	91.64	91.64
10.0	3860	4035	4090	4000	3838	3629	3575	3649	5- 10	274.2	365.8
15.0	3894	4131	4179	4073	3878	3546	3460	3575	10- 15	455.2	821.1
20.0	3961	4238	4245	4152	3956	3450	3327	3486	15- 20	633.8	1455
25.0	4067	4356	4283	4239	4079	3372	3168	3412	20- 25	809.6	2265
30.0	4217	4483	4301	4331	4220	3289	3005	3333	25- 30	982.8	3247
35.0	4399	4616	4321	4417	4349	3206	2845	3253	30- 35	1153	4400
40.0	4563	4744	4266	4495	4475	3121	2688	3174	35- 40	1314	5714
45.0	4707	4861	4147	4566	4591	3025	2535	3089	40- 45	1461	7175
50.0	4823	4955	4053	4619	4696	2924	2378	2991	45- 50	1592	8767
55.0	4913	5012	3968	4634	4783	2811	2190	2876	50- 55	1704	10471
60.0	4975	5023	3876	4628	4662	2662	1966	2729	55- 60	1790	12261
65.0	4887	4969	3829	4564	4079	2434	1556	2518	60- 65	1824	14085
70.0	4295	4744	3697	4364	2879	1862	866.6	2000	65- 70	1729	15813
75.0	3152	3564	2451	3129	1179	808.7	361.3	936.5	70- 75	1353	17166
80.0	1436	1166	490.9	713.5	188.6	141.0	63.32	223.6	75- 80	654.8	17821
85.0	282.2	138.1	49.44	78.41	29.60	23.65	14.75	33.48	80- 85	121.5	17942
90.0	25.89	22.57	8.083	19.62	17.42	10.48	14.48	9.911	85- 90	18.22	17961
95.0	9.604	15.32	5.456	14.66	18.41	13.17	15.56	12.38	90- 95	7.687	17968
100.0	11.92	14.58	6.332	14.06	19.93	15.65	17.17	14.86	95-100	7.452	17976
105.0	14.37	14.98	7.746	14.53	21.46	17.60	18.79	16.87	100-105	8.058	17984
110.0	16.55	15.72	9.161	15.20	22.65	19.35	20.34	18.61	105-110	8.611	17992
115.0	18.21	16.53	10.50	15.93	23.77	20.83	21.75	20.15	110-115	9.006	18001
120.0	19.67	17.53	11.78	16.80	24.90	22.37	23.17	21.76	115-120	9.243	18011
125.0	21.19	18.61	13.13	17.81	26.16	24.12	24.72	23.57	120-125	9.398	18020
130.0	22.71	19.82	14.55	19.01	27.09	25.73	26.27	25.24	125-130	9.466	18030
135.0	24.11	20.96	16.03	20.08	27.55	26.47	27.08	26.11	130-135	9.291	18039
140.0	24.97	21.77	17.31	20.89	27.42	26.54	27.21	26.25	135-140	8.782	18048
145.0	25.23	22.30	18.39	21.42	27.09	26.34	27.21	26.04	140-145	8.033	18056
150.0	25.17	22.71	19.40	21.89	26.62	26.07	27.08	25.78	145-150	7.136	18063
155.0	24.97	23.11	20.34	22.29	26.29	25.80	27.01	25.51	150-155	6.156	18069
160.0	24.90	23.45	21.15	22.76	26.03	25.60	26.94	25.31	155-160	5.120	18074
165.0	24.90	23.92	22.09	23.23	25.96	25.40	26.81	25.11	160-165	4.043	18078
170.0	25.10	24.32	23.03	23.77	25.83	25.19	26.54	24.91	165-170	2.924	18081
175.0	25.17	24.72	23.84	24.17	25.63	24.86	25.80	24.44	170-175	1.769	18083
180.0	25.50	25.06	24.78	24.57	25.50	24.59	25.05	24.10	175-180	0.590	18083
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.24

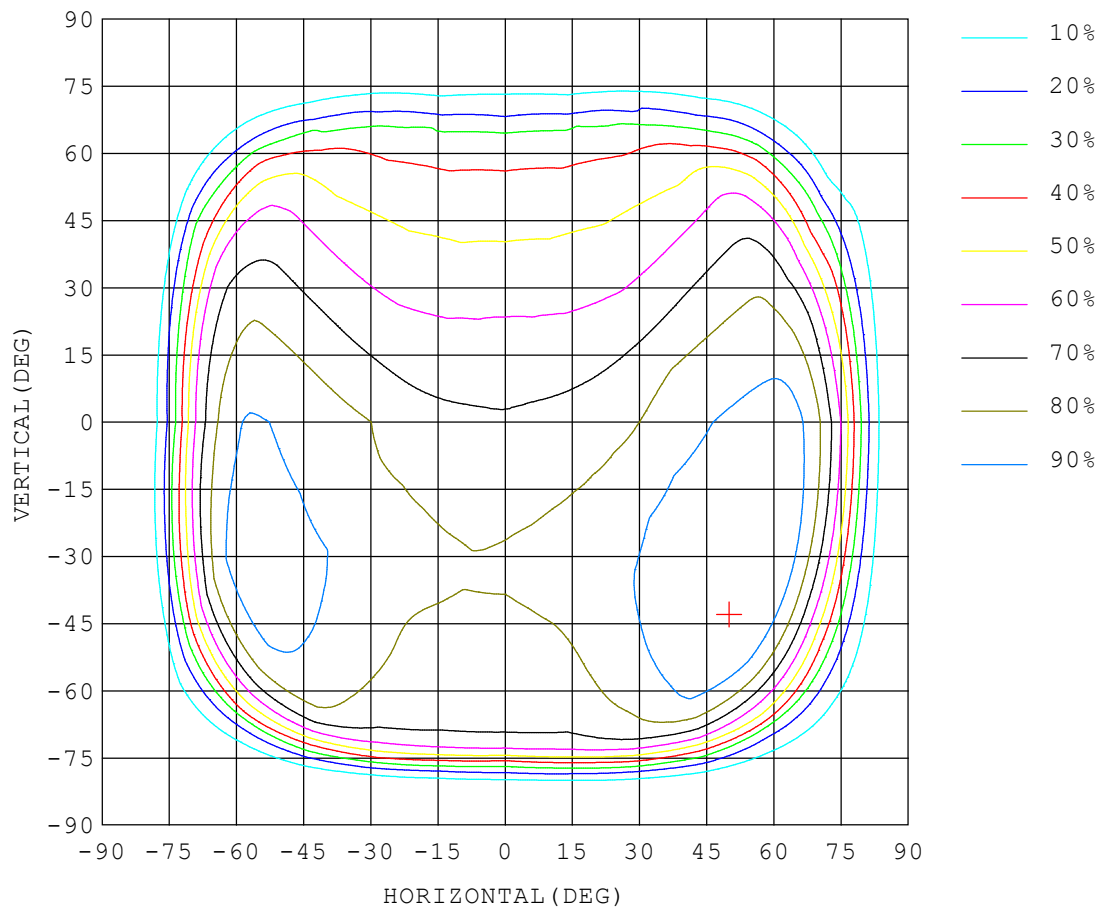
Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:10.000 m  
Remarks:

## ISOCANDELA DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D12040-TY4	WEIGHT:
SPECIFICATION: 5050LED 4000K Type IV	DIMENSION:	SERIAL No.:

UNIT: cd



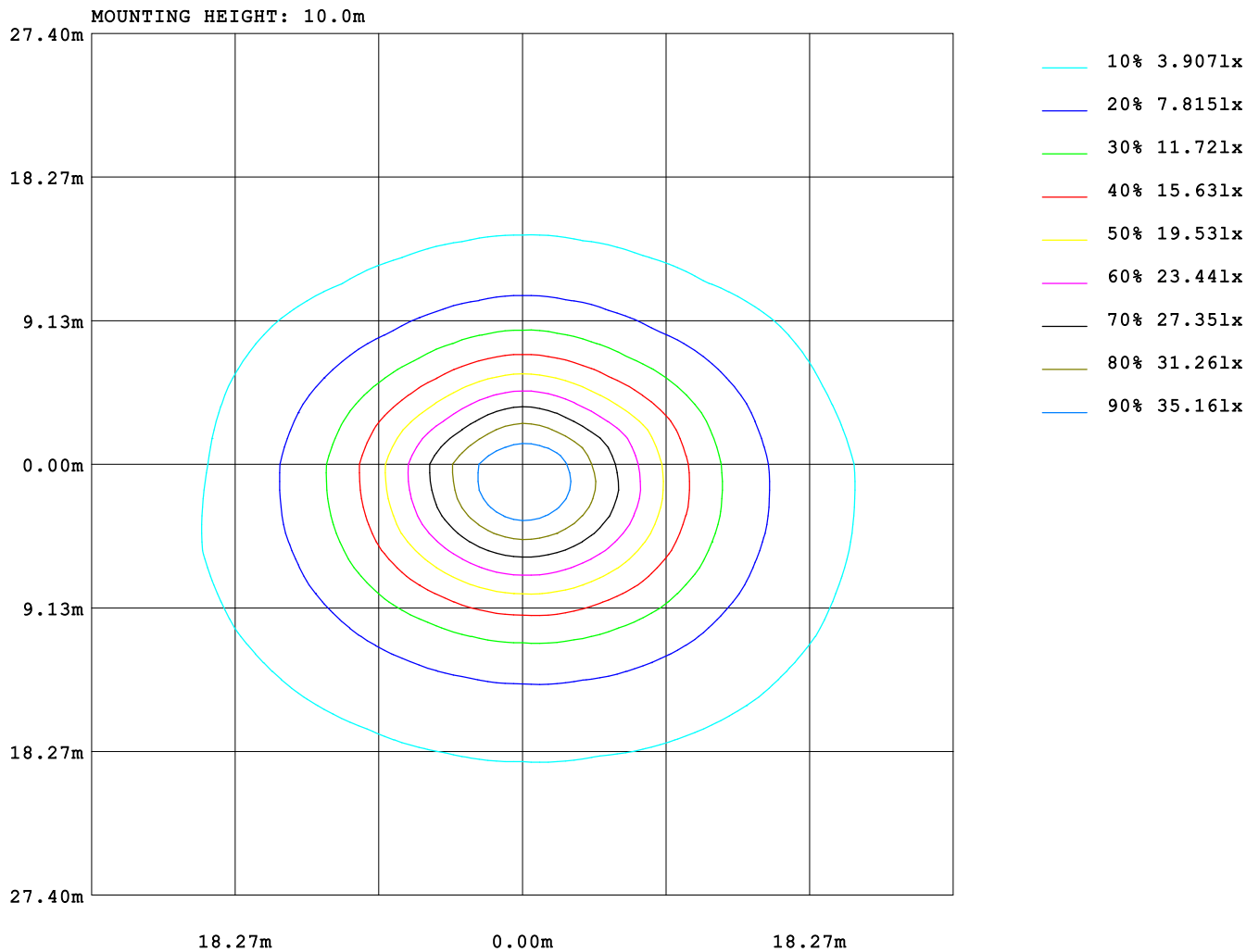
Test System:  
Temperature: 25.3 DEG  
Operators:  
Test Date: 2025.03.24

Test Set: 5.0 deg/s C-Gamma (TYPE C)  
Humidity: 65.0%  
Test Distance: 10.000 m  
Remarks:

## ISOLUX DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D12040-TY4	WEIGHT:
SPECIFICATION: 5050LED 4000K Type IV	DIMENSION:	SERIAL No.:



Test System:  
Temperature: 25.3DEG  
Operators:  
Test Date: 2025.03.24

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity: 65.0%  
Test Distance: 10.000 m  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

<b>MANUFACTURER: ILUMEN GMBH</b>	<b>Address:</b>	
<b>NAME: Muller</b>	<b>TYPE:IL-ST11-D12040-TY4</b>	<b>WEIGHT:</b>
<b>SPECIFICATION:5050LED 4000K Type IV</b>	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210
0.0	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833
5.0	3845	3879	3912	3939	3959	3969	3971	3963	3947	3923	3893	3858	3829	3791	3757
10.0	3860	3928	3991	4035	4069	4086	4090	4071	4043	4000	3951	3890	3838	3763	3689
15.0	3894	3997	4078	4131	4161	4178	4179	4156	4119	4073	4012	3931	3878	3755	3632
20.0	3961	4100	4191	4238	4251	4253	4245	4220	4187	4152	4093	4007	3956	3773	3595
25.0	4067	4238	4334	4356	4334	4302	4283	4260	4248	4239	4204	4119	4079	3830	3564
30.0	4217	4421	4505	4483	4412	4341	4301	4288	4303	4331	4335	4266	4220	3921	3550
35.0	4399	4624	4691	4616	4479	4385	4321	4316	4339	4417	4479	4427	4349	4008	3548
40.0	4563	4797	4863	4744	4529	4368	4266	4267	4356	4495	4606	4556	4475	4090	3551
45.0	4707	4956	5018	4861	4534	4310	4147	4184	4310	4566	4726	4684	4591	4164	3554
50.0	4823	5088	5156	4955	4529	4220	4053	4080	4270	4619	4830	4815	4696	4215	3541
55.0	4913	5199	5260	5012	4531	4133	3968	3992	4246	4634	4906	4937	4783	4242	3508
60.0	4975	5274	5324	5023	4500	4037	3876	3912	4185	4628	4961	5028	4662	4185	3452
65.0	4887	5183	5295	4969	4400	3921	3829	3852	4055	4564	4917	4898	4079	3812	3272
70.0	4295	4518	4743	4744	4164	3751	3697	3711	3822	4364	4402	4187	2879	3010	2622
75.0	3152	3081	3377	3564	3272	2804	2451	2608	2900	3129	2972	2616	1179	1640	1258
80.0	1436	1180	1040	1166	887	609	491	511	610	714	659	723	189	273	200
85.0	282	189	215	138	74.0	70.0	49.4	65.9	55.1	78.4	88.9	80.2	29.6	22.9	38.3
90.0	25.8	33.7	18.5	22.5	9.55	17.7	8.08	17.4	9.60	19.6	11.7	21.4	17.4	12.8	20.1
95.0	9.60	16.9	9.57	15.3	7.13	12.5	5.45	12.1	6.71	14.6	9.60	16.6	18.4	13.5	18.9
100.0	11.9	16.7	10.6	14.5	7.60	11.6	6.33	11.4	7.31	14.0	10.6	16.8	19.9	16.2	20.5
105.0	14.3	17.6	12.1	14.9	9.15	12.1	7.74	11.9	8.79	14.5	12.2	17.8	21.4	18.5	21.9
110.0	16.5	18.7	13.7	15.7	10.5	12.8	9.16	12.6	10.2	15.2	13.6	18.8	22.6	20.3	23.0
115.0	18.2	19.7	15.1	16.5	11.9	13.7	10.5	13.4	11.4	15.9	14.9	19.7	23.7	21.7	24.1
120.0	19.6	20.7	16.6	17.5	13.2	14.6	11.7	14.2	12.6	16.8	16.2	20.6	24.9	23.1	25.3
125.0	21.1	21.9	18.1	18.6	14.7	15.6	13.1	15.2	14.0	17.8	17.6	21.7	26.1	24.6	26.6
130.0	22.7	23.2	19.7	19.8	16.1	16.7	14.5	16.4	15.5	19.0	19.0	22.9	27.0	25.8	27.9
135.0	24.1	24.5	21.1	20.9	17.4	17.9	16.0	17.5	16.9	20.0	20.2	23.9	27.5	26.4	28.3
140.0	24.9	25.1	22.0	21.7	18.7	19.0	17.3	18.7	18.0	20.8	21.0	24.4	27.4	26.5	28.2
145.0	25.2	25.4	22.4	22.3	19.5	19.8	18.3	19.6	19.0	21.4	21.5	24.5	27.0	26.1	27.8
150.0	25.1	25.4	22.8	22.7	20.3	20.6	19.4	20.5	19.8	21.8	21.9	24.5	26.6	25.8	27.3
155.0	24.9	25.3	23.1	23.1	21.0	21.4	20.3	21.4	20.6	22.2	22.2	24.5	26.2	25.4	26.9
160.0	24.9	25.3	23.4	23.4	21.8	22.1	21.1	22.2	21.4	22.7	22.5	24.4	26.0	25.1	26.5
165.0	24.9	25.3	23.7	23.9	22.5	22.9	22.0	22.9	22.2	23.2	22.8	24.4	25.9	25.0	26.1
170.0	25.1	25.3	24.1	24.3	23.2	23.6	23.0	23.6	22.9	23.7	23.3	24.5	25.8	24.9	25.9
175.0	25.1	25.3	24.3	24.7	23.8	24.2	23.8	24.2	23.4	24.1	23.6	24.5	25.6	24.8	25.5
180.0	25.5	25.3	24.8	25.0	24.5	24.8	24.7	24.7	24.3	24.5	24.2	24.5	25.5	24.8	25.2

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.24

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:10.000 m  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

<b>MANUFACTURER: ILUMEN GMBH</b>	<b>Address:</b>	
<b>NAME: Muller</b>	<b>TYPE:IL-ST11-D12040-TY4</b>	<b>WEIGHT:</b>
<b>SPECIFICATION:5050LED 4000K Type IV</b>	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: cd

C (DEG) γ (DEG)	225	240	255	270	285	300	315	330	345
0.0	3833	3833	3833	3833	3833	3833	3833	3833	3833
5.0	3724	3708	3694	3696	3696	3714	3736	3773	3809
10.0	3629	3595	3576	3575	3582	3608	3649	3719	3800
15.0	3546	3486	3459	3460	3469	3504	3575	3677	3812
20.0	3450	3375	3327	3327	3338	3395	3486	3653	3849
25.0	3372	3248	3178	3168	3189	3271	3412	3638	3923
30.0	3289	3114	3021	3005	3031	3137	3333	3638	4041
35.0	3206	2984	2864	2845	2876	3008	3253	3650	4160
40.0	3121	2853	2712	2688	2731	2883	3174	3670	4259
45.0	3025	2723	2562	2535	2584	2755	3089	3687	4336
50.0	2924	2588	2402	2378	2421	2620	2991	3685	4383
55.0	2811	2423	2225	2190	2248	2463	2876	3654	4405
60.0	2662	2229	2007	1966	2034	2273	2729	3592	4377
65.0	2434	1982	1661	1556	1689	2030	2518	3481	3979
70.0	1862	1400	955	867	981	1458	2000	2800	3280
75.0	809	613	352	361	366	668	937	1562	1843
80.0	141	131	58.1	63.3	66.1	155	224	341	442
85.0	23.6	31.8	9.43	14.7	8.95	31.0	33.4	51.0	34.5
90.0	10.4	16.9	9.30	14.4	9.01	16.6	9.91	19.6	12.8
95.0	13.1	17.2	11.6	15.5	11.3	16.8	12.3	18.3	12.6
100.0	15.6	18.7	13.9	17.1	13.7	18.2	14.8	19.7	15.1
105.0	17.6	19.9	16.1	18.7	15.8	19.6	16.8	21.0	17.3
110.0	19.3	21.2	17.9	20.3	17.7	20.9	18.6	22.1	19.0
115.0	20.8	22.4	19.6	21.7	19.5	22.2	20.1	23.1	20.4
120.0	22.3	23.8	21.2	23.1	21.2	23.6	21.7	24.2	21.6
125.0	24.1	25.4	23.0	24.7	23.0	25.1	23.5	25.6	23.0
130.0	25.7	27.0	24.7	26.2	24.6	26.7	25.2	27.0	24.4
135.0	26.4	27.5	25.6	27.0	25.5	27.4	26.1	27.7	25.3
140.0	26.5	27.5	26.0	27.2	25.7	27.3	26.2	27.7	25.5
145.0	26.3	27.4	26.2	27.2	25.8	27.2	26.0	27.3	25.5
150.0	26.0	27.2	26.2	27.0	25.7	26.9	25.7	26.8	25.2
155.0	25.8	26.9	26.1	27.0	25.7	26.7	25.5	26.4	24.9
160.0	25.6	26.7	26.0	26.9	25.6	26.5	25.3	26.1	24.7
165.0	25.4	26.5	25.8	26.8	25.5	26.2	25.1	25.8	24.5
170.0	25.1	26.1	25.4	26.5	25.3	25.9	24.9	25.4	24.3
175.0	24.8	25.5	24.8	25.8	24.7	25.3	24.4	25.0	24.1
180.0	24.5	24.9	24.3	25.0	24.2	24.6	24.1	24.6	24.1

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.24

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:10.000 m  
Remarks: