

# LUMINAIRE PHOTOMETRIC TEST REPORT

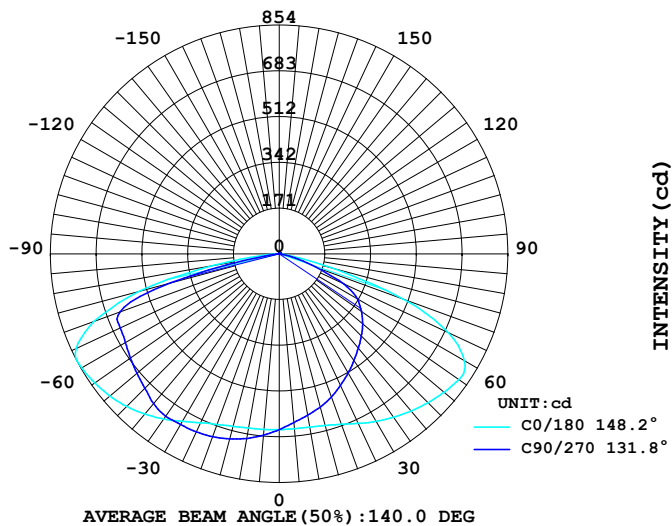
Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D02040-TY4	WEIGHT:
SPECIFICATION: 5050LED 4000K Type IV	DIMENSION:	SERIAL No.:

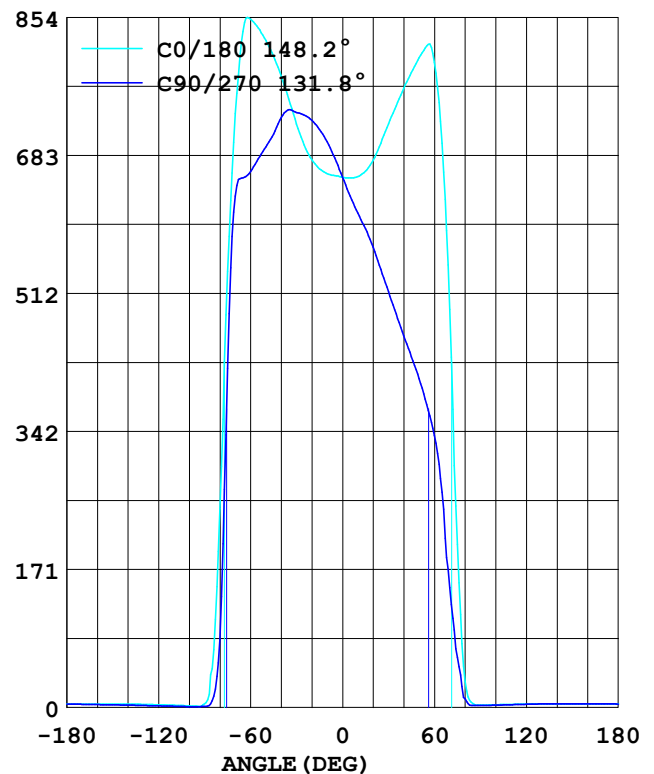
DATA OF LAMP		Imax(cd)	912.1	S/MH (C0/180)	1.79
MODEL		EFFICIENCY (%)	100.0	S/MH (C90/270)	1.68
NOMINAL POWER(W)	20	TOTAL FLUX(lm)	3095.1	Voltage(V)	230.1
RATED VOLTAGE (V)	230	EFFICIENCY (lm/W)	150.3	Current(A)	0.094
NOMINAL FLUX(lm)	3095.2	$\eta$ up (%)	0.7	Power(W)	20.60
LAMPS QUANTITY	1	$\eta$ down (%)	99.3	Power Factor (PF)	0.996
TEST VOLTAGE (V)	230.2	Effective Flux(lm)	3095.2	EEI	0.100

## LUMINOUS INTENSITY DISTRIBUTION

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INTENSITY (cd)



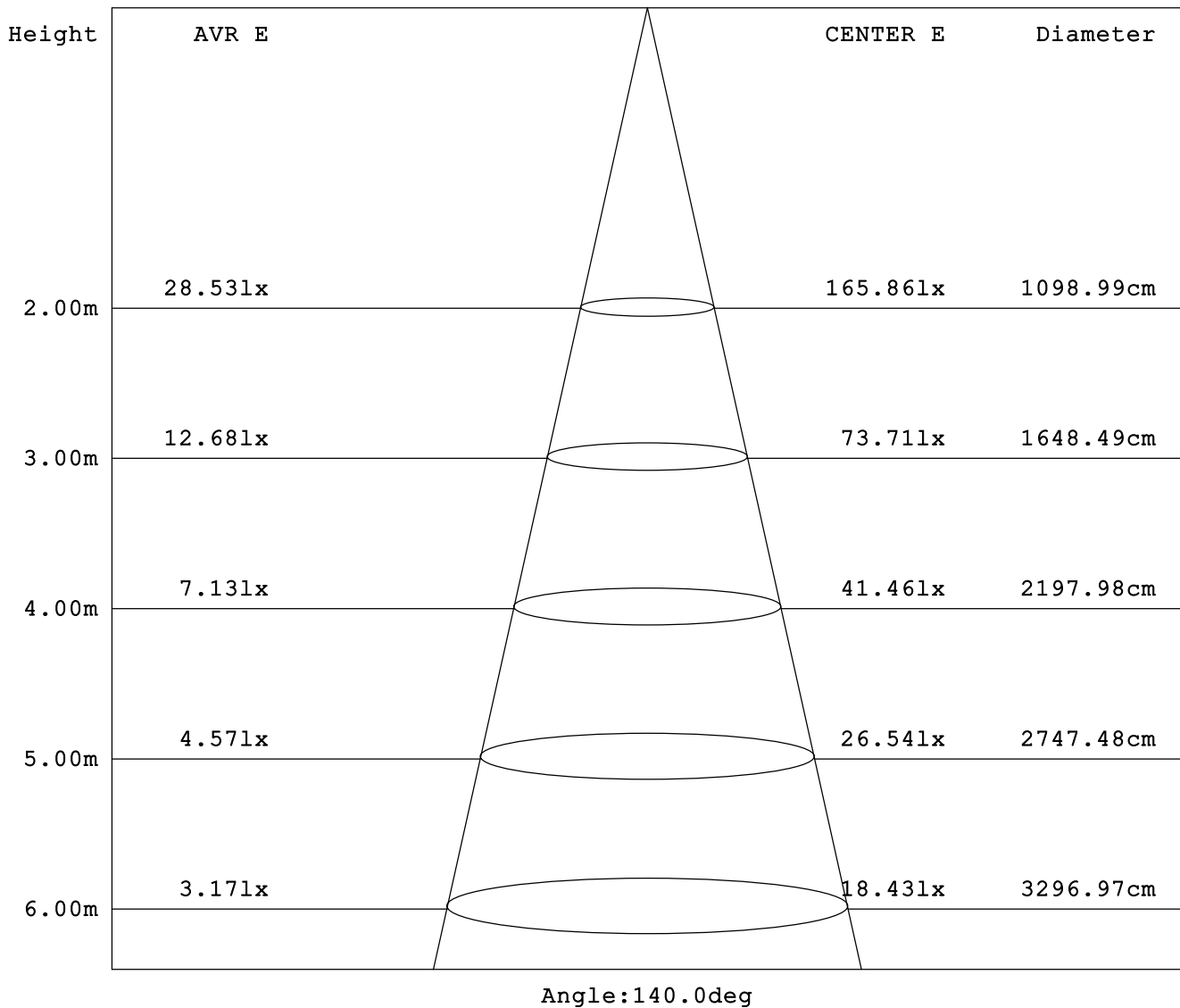
Test System:  
Temperature: 25.3 DEG  
Operators:  
Test Date: 2025.03.24

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

## AVERAGE AND CENTER E Figure

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## ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE:IL-ST11-D02040-TY4	WEIGHT:
SPECIFICATION:5050LED 4000K Type IV	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Zone	total
5.0	658.1	674.2	679.7	671.5	655.3	637.4	632.5	639.4	0- 5	15.68	15.68
10.0	660.6	690.6	700.0	684.6	656.9	621.1	611.9	624.6	5- 10	46.94	62.62
15.0	666.5	707.1	715.2	697.2	663.7	606.8	592.3	611.9	10- 15	77.92	140.5
20.0	678.0	725.3	726.6	710.5	677.0	590.4	569.4	596.7	15- 20	108.4	249.0
25.0	696.0	745.6	733.1	725.5	698.1	577.2	542.2	584.0	20- 25	138.5	387.6
30.0	721.8	767.3	736.1	741.3	722.3	562.9	514.2	570.4	25- 30	168.2	555.8
35.0	752.8	790.1	739.5	756.0	744.3	548.6	486.9	556.7	30- 35	197.2	753.1
40.0	780.9	811.9	730.1	769.3	765.9	534.2	460.0	543.1	35- 40	224.8	978.0
45.0	805.5	831.9	709.7	781.5	785.8	517.7	433.8	528.6	40- 45	250.0	1228
50.0	825.4	848.1	693.6	790.5	803.7	500.5	407.1	511.9	45- 50	272.4	1501
55.0	840.8	857.8	679.1	793.2	818.6	481.1	374.8	492.2	50- 55	291.6	1792
60.0	851.4	859.7	663.3	792.1	797.9	455.6	336.5	467.1	55- 60	306.3	2099
65.0	836.4	850.5	655.3	781.1	698.1	416.5	266.3	431.0	60- 65	312.2	2411
70.0	735.0	812.0	632.7	746.9	492.7	318.7	148.3	342.3	65- 70	295.8	2707
75.0	539.5	610.0	419.5	535.5	201.8	138.4	61.84	160.3	70- 75	231.5	2938
80.0	245.7	199.5	84.03	122.1	32.28	24.14	10.83	38.28	75- 80	112.0	3050
85.0	48.30	23.64	8.463	13.42	5.067	4.048	2.525	5.731	80- 85	20.80	3071
90.0	4.432	3.864	1.383	3.358	2.981	1.794	2.478	1.696	85- 90	3.119	3074
95.0	1.643	2.622	0.934	2.510	3.151	2.254	2.663	2.120	90- 95	1.315	3076
100.0	2.040	2.495	1.083	2.407	3.412	2.679	2.940	2.544	95-100	1.275	3077
105.0	2.460	2.564	1.325	2.487	3.673	3.013	3.216	2.888	100-105	1.379	3078
110.0	2.834	2.691	1.568	2.601	3.877	3.312	3.482	3.186	105-110	1.474	3080
115.0	3.117	2.829	1.798	2.727	4.070	3.565	3.724	3.450	110-115	1.541	3081
120.0	3.367	3.001	2.017	2.876	4.262	3.830	3.966	3.725	115-120	1.582	3083
125.0	3.628	3.185	2.248	3.048	4.478	4.129	4.231	4.034	120-125	1.608	3084
130.0	3.888	3.392	2.490	3.255	4.637	4.405	4.496	4.321	125-130	1.620	3086
135.0	4.126	3.588	2.744	3.438	4.716	4.531	4.635	4.470	130-135	1.590	3088
140.0	4.274	3.726	2.963	3.576	4.693	4.543	4.658	4.493	135-140	1.503	3089
145.0	4.319	3.818	3.147	3.667	4.637	4.508	4.658	4.458	140-145	1.374	3090
150.0	4.308	3.887	3.320	3.748	4.557	4.462	4.635	4.412	145-150	1.221	3092
155.0	4.274	3.956	3.482	3.816	4.500	4.416	4.623	4.367	150-155	1.053	3093
160.0	4.262	4.014	3.620	3.897	4.455	4.382	4.612	4.332	155-160	0.876	3094
165.0	4.262	4.094	3.781	3.977	4.444	4.347	4.589	4.298	160-165	0.692	3094
170.0	4.296	4.163	3.943	4.069	4.421	4.313	4.542	4.263	165-170	0.501	3095
175.0	4.308	4.232	4.081	4.137	4.387	4.255	4.416	4.183	170-175	0.303	3095
180.0	4.364	4.290	4.243	4.206	4.364	4.209	4.289	4.126	175-180	0.101	3095
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

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

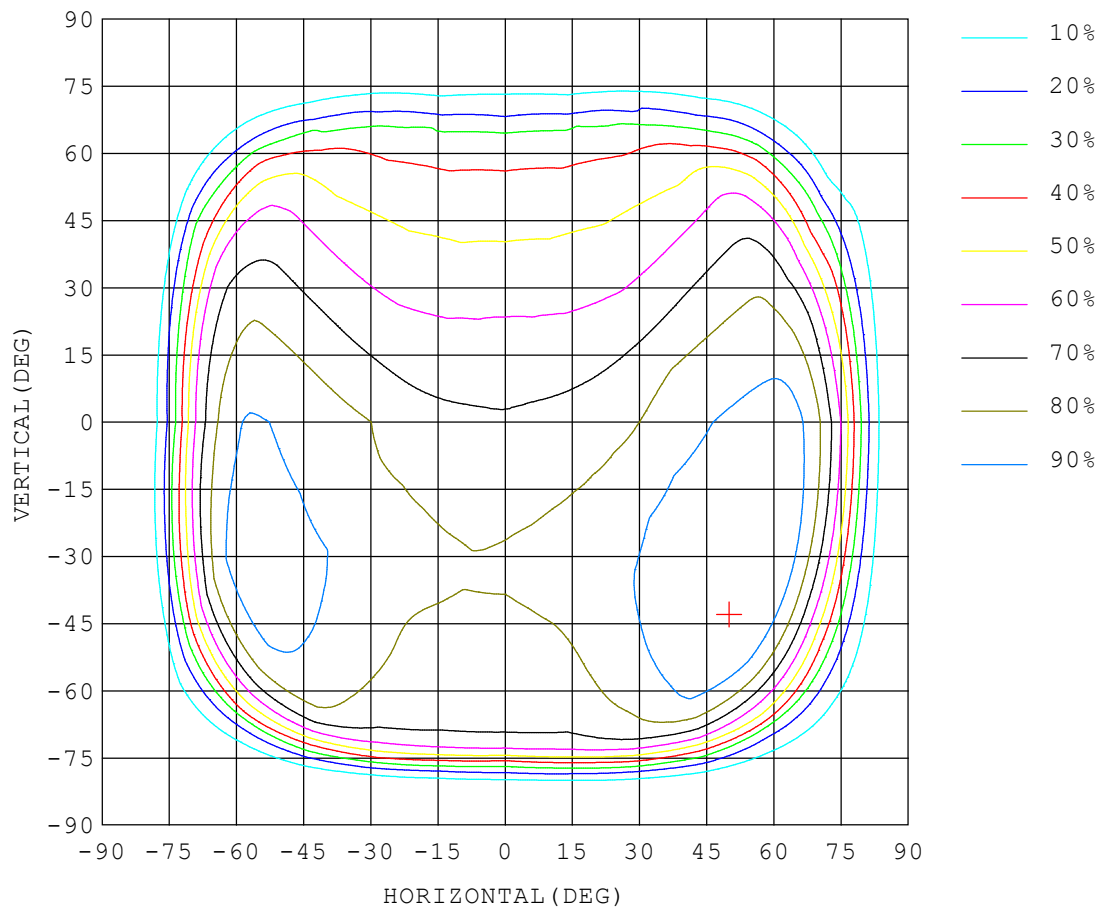
Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:10.000 m  
Remarks:

## ISOCANDELA DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D02040-TY4	WEIGHT:
SPECIFICATION: 5050LED 4000K Type IV	DIMENSION:	SERIAL No.:

UNIT: cd



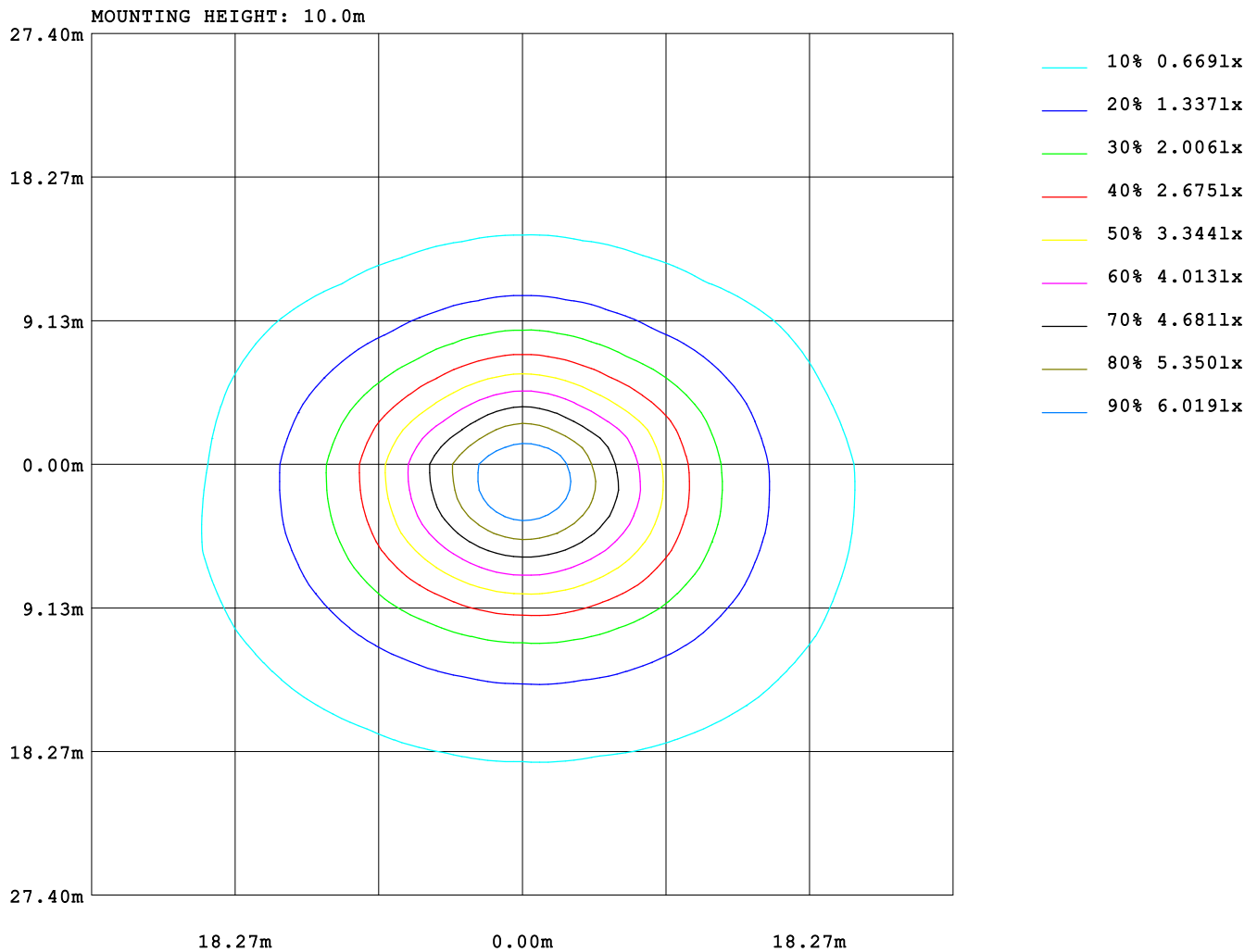
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## ISOLUX DIAGRAM

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NAME: Muller	TYPE: IL-ST11-D02040-TY4	WEIGHT:
SPECIFICATION: 5050LED 4000K Type IV	DIMENSION:	SERIAL No.:



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Report number:

<b>MANUFACTURER:</b> ILUMEN GMBH	<b>Address:</b>	
<b>NAME:</b> Muller	<b>TYPE:</b> IL-ST11-D02040-TY4	<b>WEIGHT:</b>
<b>SPECIFICATION:</b> 5050LED 4000K Type IV	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: cd

$\gamma$ \ C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210
0.0	656	656	656	656	656	656	656	656	656	656	656	656	656	656	656
5.0	658	664	670	674	678	679	680	678	676	672	666	660	655	649	643
10.0	661	672	683	691	696	699	700	697	692	685	676	666	657	644	631
15.0	667	684	698	707	712	715	715	711	705	697	687	673	664	643	622
20.0	678	702	717	725	728	728	727	722	717	711	701	686	677	646	615
25.0	696	725	742	746	742	736	733	729	727	726	720	705	698	656	610
30.0	722	757	771	767	755	743	736	734	737	741	742	730	722	671	608
35.0	753	791	803	790	767	750	740	739	743	756	767	758	744	686	607
40.0	781	821	832	812	775	748	730	730	746	769	788	780	766	700	608
45.0	806	848	859	832	776	738	710	716	738	782	809	802	786	713	608
50.0	825	871	883	848	775	722	694	698	731	791	827	824	804	722	606
55.0	841	890	900	858	776	707	679	683	727	793	840	845	819	726	600
60.0	851	903	911	860	770	691	663	670	716	792	849	861	798	716	591
65.0	836	887	906	851	753	671	655	659	694	781	842	838	698	653	560
70.0	735	773	812	812	713	642	633	635	654	747	753	717	493	515	449
75.0	540	527	578	610	560	480	420	446	496	536	509	448	202	281	215
80.0	246	202	178	200	152	104	84.0	87.4	104	122	113	124	32.2	46.8	34.2
85.0	48.3	32.2	36.7	23.6	12.6	11.9	8.46	11.2	9.43	13.4	15.2	13.7	5.06	3.93	6.56
90.0	4.43	5.77	3.17	3.86	1.63	3.04	1.38	2.98	1.64	3.35	2.00	3.66	2.98	2.20	3.44
95.0	1.64	2.90	1.63	2.62	1.22	2.14	0.93	2.07	1.14	2.51	1.64	2.84	3.15	2.32	3.24
100.0	2.04	2.86	1.82	2.49	1.30	1.99	1.08	1.95	1.25	2.40	1.82	2.89	3.41	2.78	3.51
105.0	2.46	3.02	2.08	2.56	1.56	2.08	1.32	2.03	1.50	2.48	2.08	3.04	3.67	3.17	3.75
110.0	2.83	3.20	2.36	2.69	1.80	2.20	1.56	2.16	1.74	2.60	2.34	3.22	3.87	3.47	3.95
115.0	3.11	3.37	2.60	2.82	2.03	2.35	1.79	2.30	1.95	2.72	2.55	3.37	4.07	3.72	4.13
120.0	3.36	3.55	2.84	3.00	2.26	2.50	2.01	2.44	2.17	2.87	2.77	3.53	4.26	3.96	4.33
125.0	3.62	3.75	3.10	3.18	2.52	2.67	2.24	2.60	2.40	3.04	3.01	3.72	4.47	4.22	4.56
130.0	3.88	3.98	3.38	3.39	2.76	2.87	2.49	2.81	2.65	3.25	3.25	3.92	4.63	4.42	4.77
135.0	4.12	4.19	3.62	3.58	2.99	3.06	2.74	3.00	2.89	3.43	3.47	4.09	4.71	4.52	4.85
140.0	4.27	4.31	3.77	3.72	3.20	3.25	2.96	3.20	3.09	3.57	3.60	4.18	4.69	4.53	4.83
145.0	4.31	4.35	3.85	3.81	3.34	3.40	3.14	3.36	3.25	3.66	3.68	4.21	4.63	4.48	4.76
150.0	4.30	4.35	3.91	3.88	3.47	3.54	3.32	3.52	3.39	3.74	3.75	4.21	4.55	4.42	4.67
155.0	4.27	4.34	3.96	3.95	3.60	3.67	3.48	3.66	3.52	3.81	3.80	4.19	4.50	4.35	4.60
160.0	4.26	4.34	4.01	4.01	3.73	3.79	3.62	3.80	3.66	3.89	3.85	4.18	4.45	4.31	4.53
165.0	4.26	4.34	4.05	4.09	3.85	3.92	3.78	3.92	3.80	3.97	3.91	4.18	4.44	4.28	4.48
170.0	4.29	4.34	4.12	4.16	3.97	4.04	3.94	4.04	3.93	4.06	3.99	4.19	4.42	4.27	4.43
175.0	4.30	4.34	4.17	4.23	4.08	4.15	4.08	4.14	4.02	4.13	4.05	4.21	4.38	4.25	4.37
180.0	4.36	4.33	4.25	4.29	4.20	4.24	4.24	4.22	4.16	4.20	4.14	4.21	4.36	4.25	4.32

Test System:  
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 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>	
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<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	656	656	656	656	656	656	656	656	656
5.0	637	635	632	633	633	636	639	646	652
10.0	621	615	612	612	613	618	625	637	650
15.0	607	597	592	592	594	600	612	629	652
20.0	590	578	569	569	571	581	597	625	659
25.0	577	556	544	542	546	560	584	623	672
30.0	563	533	517	514	519	537	570	623	692
35.0	549	511	490	487	492	515	557	625	712
40.0	534	488	464	460	467	493	543	628	729
45.0	518	466	439	434	442	471	529	631	742
50.0	501	443	411	407	414	448	512	631	750
55.0	481	415	381	375	385	422	492	625	754
60.0	456	382	344	337	348	389	467	615	749
65.0	417	339	284	266	289	347	431	596	681
70.0	319	240	163	148	168	249	342	479	561
75.0	138	105	60.2	61.8	62.6	114	160	267	315
80.0	24.1	22.4	9.95	10.8	11.3	26.4	38.2	58.3	75.5
85.0	4.04	5.44	1.61	2.52	1.53	5.30	5.73	8.74	5.90
90.0	1.79	2.90	1.59	2.47	1.54	2.84	1.69	3.36	2.19
95.0	2.25	2.96	1.99	2.66	1.94	2.88	2.12	3.13	2.16
100.0	2.67	3.20	2.38	2.94	2.35	3.12	2.54	3.37	2.59
105.0	3.01	3.42	2.75	3.21	2.70	3.35	2.88	3.60	2.96
110.0	3.31	3.64	3.07	3.48	3.04	3.58	3.18	3.79	3.26
115.0	3.56	3.84	3.35	3.72	3.34	3.81	3.45	3.96	3.50
120.0	3.83	4.07	3.63	3.96	3.62	4.04	3.72	4.14	3.70
125.0	4.12	4.35	3.94	4.23	3.93	4.30	4.03	4.38	3.94
130.0	4.40	4.63	4.23	4.49	4.21	4.58	4.32	4.63	4.18
135.0	4.53	4.72	4.39	4.63	4.36	4.70	4.47	4.74	4.33
140.0	4.54	4.72	4.45	4.65	4.41	4.68	4.49	4.74	4.38
145.0	4.50	4.70	4.48	4.65	4.42	4.66	4.45	4.68	4.36
150.0	4.46	4.66	4.48	4.63	4.41	4.61	4.41	4.60	4.32
155.0	4.41	4.61	4.47	4.62	4.40	4.57	4.36	4.53	4.26
160.0	4.38	4.58	4.46	4.61	4.38	4.53	4.33	4.47	4.23
165.0	4.34	4.53	4.42	4.58	4.36	4.49	4.29	4.41	4.19
170.0	4.31	4.46	4.36	4.54	4.33	4.43	4.26	4.36	4.16
175.0	4.25	4.36	4.25	4.41	4.22	4.33	4.18	4.28	4.13
180.0	4.20	4.26	4.17	4.28	4.15	4.21	4.12	4.21	4.13

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