

# LUMINAIRE PHOTOMETRIC TEST REPORT

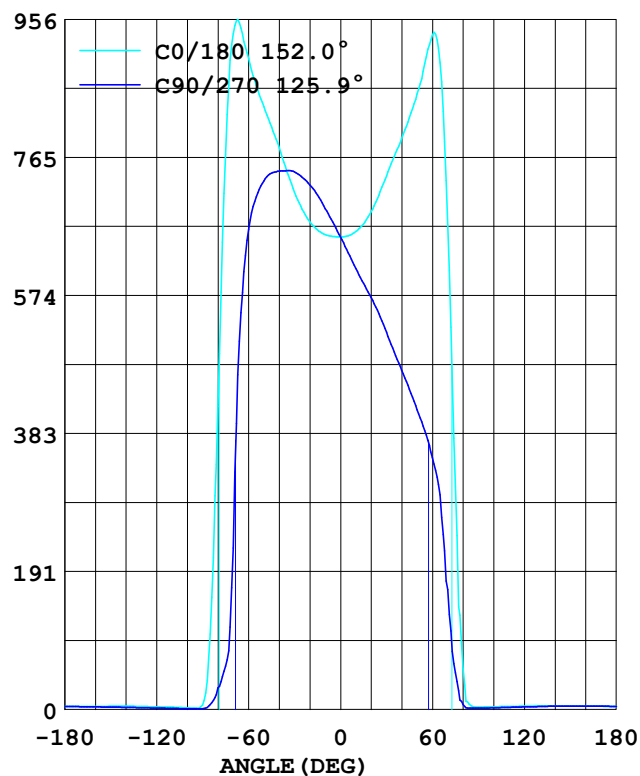
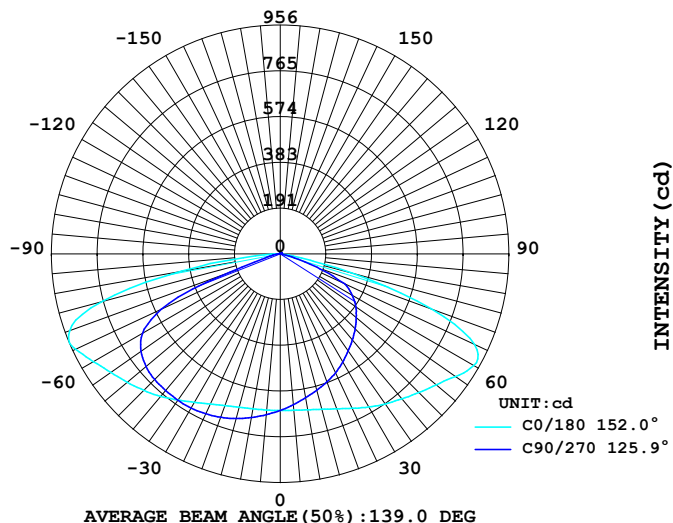
Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D02040-TY3	WEIGHT:
SPECIFICATION: 5050LED 4000K Type III	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax (cd)	1078	S/MH (C0/180)	1.79
MODEL		EFFICIENCY (%)	100.0	S/MH (C90/270)	1.71
NOMINAL POWER (W)	20	TOTAL FLUX (lm)	3075.0	Voltage (V)	230.6
RATED VOLTAGE (V)	230	EFFICIENCY (lm/W)	149.3	Current (A)	0.089
NOMINAL FLUX (lm)	3075.0	$\eta$ up (%)	0.7	Power (W)	20.60
LAMPS QUANTITY	1	$\eta$ down (%)	99.3	Power Factor (PF)	0.996
TEST VOLTAGE (V)	230.7	Effective Flux (lm)	0.0	EEL	0.000

## LUMINOUS INTENSITY DISTRIBUTION

## LUMINOUS INTENSITY DISTRIBUTION



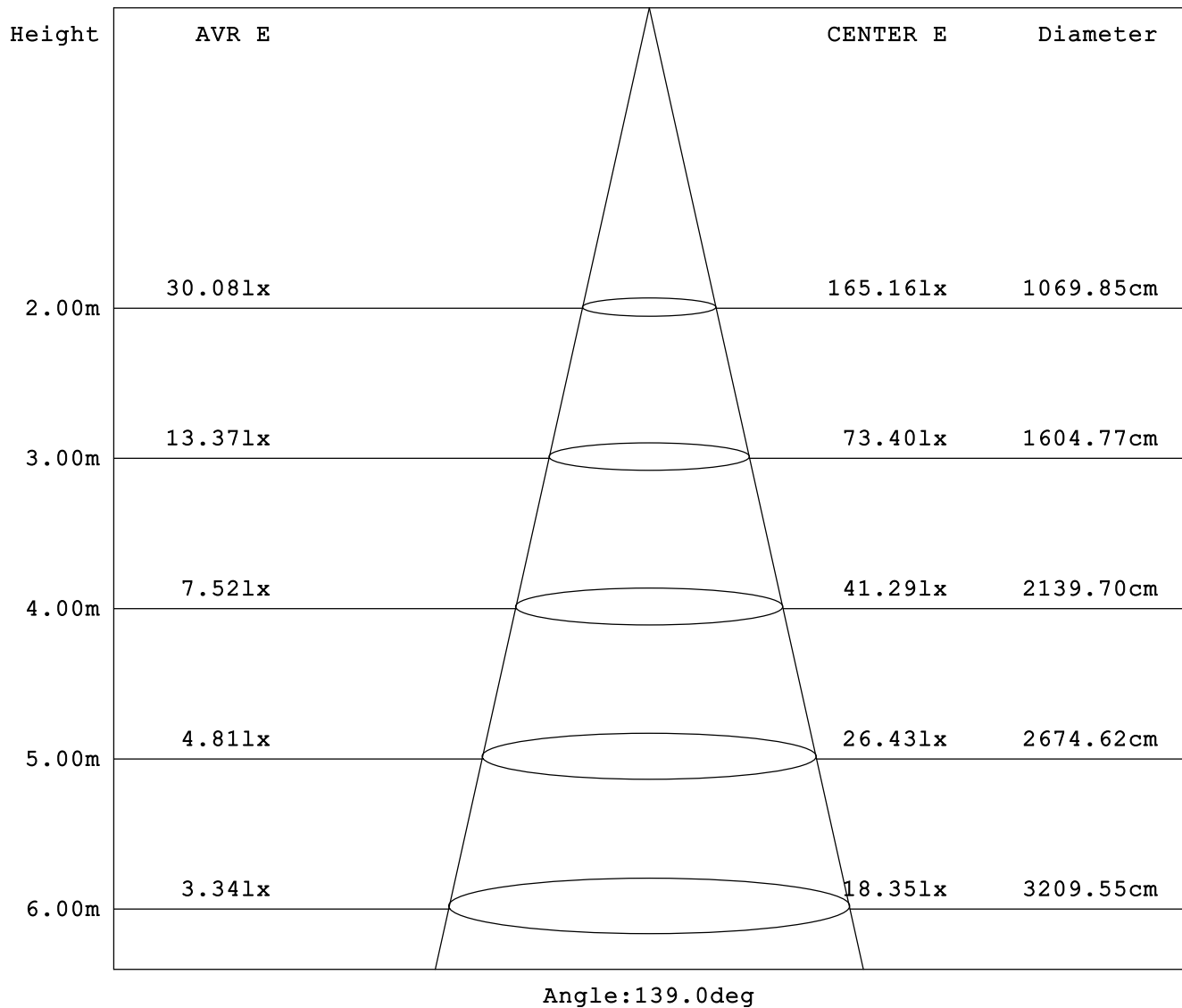
Test System:  
Temperature: 25.3 DEG  
Operators:  
Test Date: 2025.03.23

Test Set: 5.0 deg/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-D02040-TY3	WEIGHT:
SPECIFICATION:5050LED 4000K Type III	DIMENSION:	SERIAL No.:



Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.23

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-D02040-TY3	WEIGHT:
SPECIFICATION:5050LED 4000K Type III	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Zone	total
5.0	655.3	669.9	675.1	669.4	656.3	639.6	632.7	640.1	0- 5	15.65	15.65
10.0	658.0	685.4	694.1	684.0	662.3	624.8	611.0	625.1	5- 10	46.87	62.52
15.0	664.5	702.4	712.9	700.5	672.8	610.5	590.5	610.5	10- 15	77.91	140.4
20.0	675.6	722.6	726.9	718.8	689.9	595.4	570.5	595.2	15- 20	108.7	249.1
25.0	693.0	745.0	737.5	739.1	712.8	580.0	548.6	579.3	20- 25	139.3	388.5
30.0	716.9	770.4	744.8	761.1	739.0	565.1	522.8	564.8	25- 30	169.5	558.0
35.0	746.0	797.4	746.5	783.3	766.3	547.8	495.4	548.3	30- 35	198.9	756.9
40.0	778.3	820.8	745.9	801.6	791.6	528.5	469.8	530.8	35- 40	226.9	983.8
45.0	807.2	839.0	743.0	815.5	819.8	506.3	443.8	510.3	40- 45	252.9	1237
50.0	835.0	853.1	732.5	825.9	852.8	478.5	415.2	484.6	45- 50	276.2	1513
55.0	864.9	863.8	710.3	829.8	894.9	443.3	386.4	451.4	50- 55	295.9	1809
60.0	902.0	866.1	665.0	821.1	934.3	403.5	348.9	413.1	55- 60	310.9	2120
65.0	944.0	852.2	549.6	776.6	896.3	346.2	297.2	362.0	60- 65	316.9	2437
70.0	936.3	788.9	223.8	590.3	671.2	225.4	166.1	266.6	65- 70	292.3	2729
75.0	769.5	447.1	60.08	134.0	308.7	86.14	50.91	122.0	70- 75	199.8	2929
80.0	420.0	80.82	30.04	38.37	56.55	16.17	6.850	36.23	75- 80	93.41	3022
85.0	104.4	22.20	6.712	12.70	5.642	3.190	2.018	5.349	80- 85	26.95	3049
90.0	6.188	4.675	1.314	3.076	3.435	1.704	1.949	1.538	85- 90	4.655	3054
95.0	1.911	2.453	0.980	2.261	3.595	2.142	2.122	1.985	90- 95	1.302	3055
100.0	2.377	2.314	1.084	2.192	3.833	2.568	2.387	2.467	95-100	1.241	3057
105.0	2.810	2.384	1.326	2.272	4.050	2.913	2.721	2.869	100-105	1.349	3058
110.0	3.162	2.533	1.568	2.410	4.220	3.224	3.033	3.214	105-110	1.451	3059
115.0	3.435	2.695	1.799	2.559	4.380	3.489	3.333	3.535	110-115	1.526	3061
120.0	3.686	2.879	2.018	2.709	4.584	3.743	3.598	3.811	115-120	1.575	3063
125.0	3.947	3.075	2.248	2.904	4.812	4.019	3.840	4.063	120-125	1.603	3064
130.0	4.232	3.293	2.502	3.099	4.937	4.318	4.094	4.316	125-130	1.613	3066
135.0	4.459	3.501	2.756	3.294	4.914	4.526	4.382	4.545	130-135	1.589	3067
140.0	4.562	3.662	2.987	3.455	4.812	4.572	4.601	4.626	135-140	1.514	3069
145.0	4.527	3.777	3.171	3.569	4.687	4.537	4.693	4.591	140-145	1.388	3070
150.0	4.448	3.869	3.344	3.673	4.584	4.491	4.693	4.522	145-150	1.233	3071
155.0	4.380	3.950	3.494	3.776	4.505	4.434	4.682	4.465	150-155	1.062	3073
160.0	4.345	4.031	3.655	3.868	4.471	4.399	4.670	4.407	155-160	0.883	3073
165.0	4.334	4.111	3.817	3.960	4.448	4.365	4.624	4.362	160-165	0.697	3074
170.0	4.357	4.192	3.967	4.075	4.436	4.330	4.567	4.304	165-170	0.504	3075
175.0	4.357	4.261	4.117	4.155	4.425	4.272	4.451	4.224	170-175	0.305	3075
180.0	4.402	4.307	4.278	4.235	4.402	4.238	4.324	4.155	175-180	0.102	3075
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.23

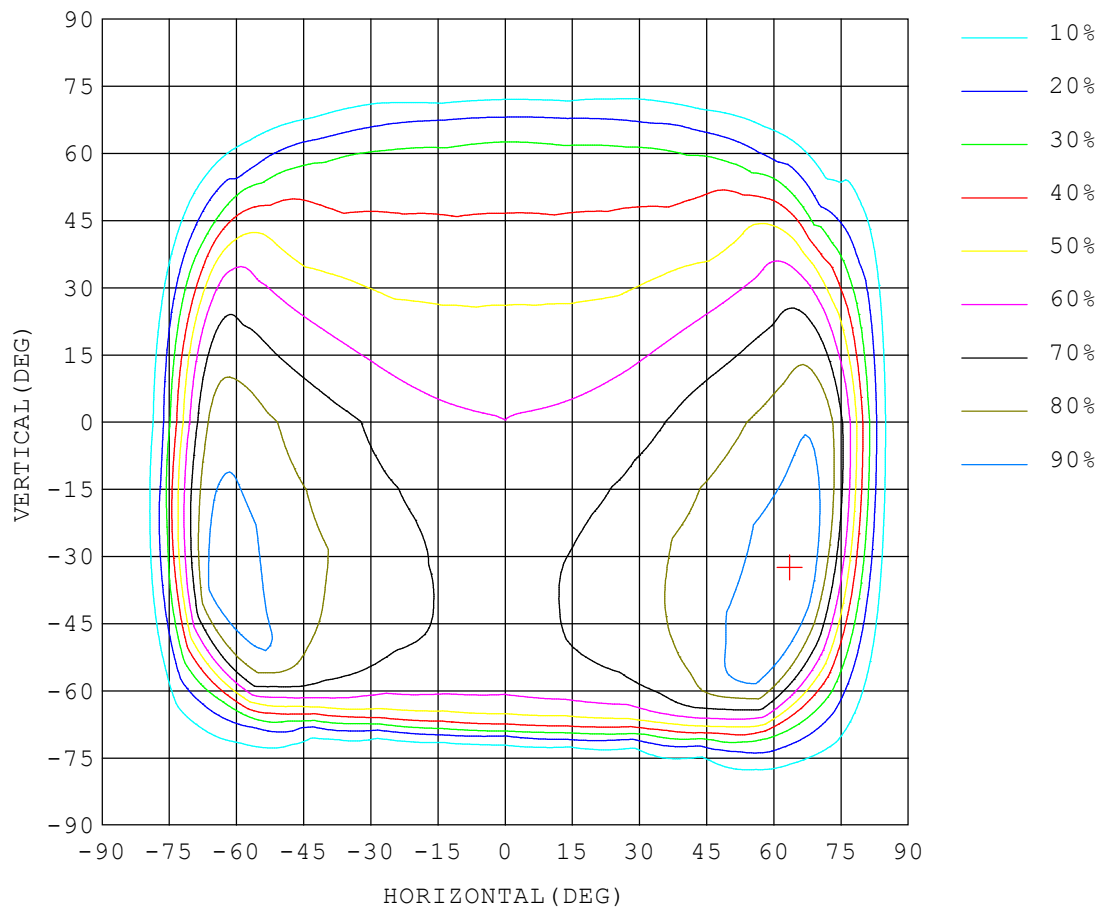
Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:10.000 m  
Remarks:

## ISOCANDELA DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D02040-TY3	WEIGHT:
SPECIFICATION: 5050LED 4000K Type III	DIMENSION:	SERIAL No.:

UNIT: cd



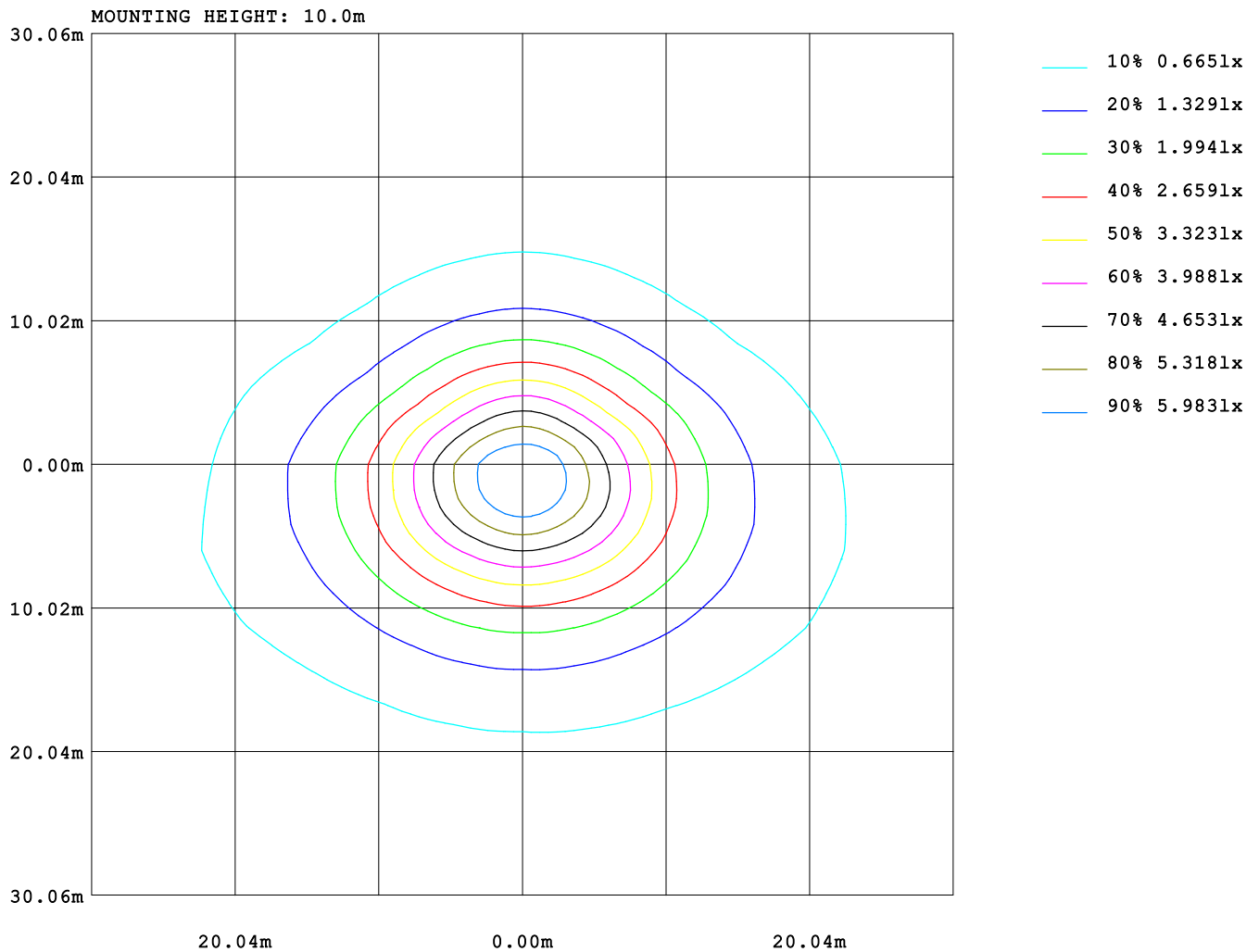
Test System:  
Temperature: 25.3 DEG  
Operators:  
Test Date: 2025.03.23

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-D02040-TY3	WEIGHT:
SPECIFICATION:5050LED 4000K Type III	DIMENSION:	SERIAL No.:



Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.23

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:</b> ILUMEN GMBH	<b>Address:</b>	
<b>NAME:</b> Muller	<b>TYPE:</b> IL-ST11-D02040-TY3	<b>WEIGHT:</b>
<b>SPECIFICATION:</b> 5050LED 4000K Type III	<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	655	655	655	655	655	655	655	655	655	655	655	655	655	655	655
5.0	655	660	665	670	673	675	675	675	672	669	665	660	656	651	645
10.0	658	668	677	685	690	694	694	693	689	684	677	668	662	650	636
15.0	665	680	693	702	709	713	713	712	707	701	692	680	673	652	629
20.0	676	697	713	723	726	728	727	726	722	719	711	699	690	658	623
25.0	693	723	740	745	741	739	738	737	736	739	738	725	713	666	617
30.0	717	754	773	770	757	748	745	744	748	761	768	755	739	678	610
35.0	746	790	806	797	771	753	747	747	758	783	798	788	766	693	601
40.0	778	825	839	821	783	755	746	748	765	802	825	820	792	704	592
45.0	807	858	869	839	790	757	743	748	771	816	851	850	820	713	579
50.0	835	896	901	853	794	754	733	742	773	826	874	888	853	719	560
55.0	865	938	927	864	785	736	710	721	759	830	897	929	895	726	535
60.0	902	986	962	866	758	699	665	680	723	821	924	986	934	725	506
65.0	944	1051	1008	852	689	592	550	556	622	777	965	1052	896	713	456
70.0	936	1064	1052	789	492	332	224	253	346	590	924	1010	671	522	311
75.0	770	885	867	447	107	68.1	60.0	61.2	62.0	134	586	726	309	218	129
80.0	420	462	329	80.8	38.6	33.1	30.0	28.7	29.2	38.3	136	258	56.5	44.0	21.5
85.0	104	107	62.0	22.2	12.1	10.4	6.71	8.71	7.71	12.7	19.0	33.0	5.64	3.83	6.00
90.0	6.18	8.42	4.52	4.67	1.79	2.77	1.31	2.67	1.62	3.07	2.00	4.06	3.43	2.26	3.25
95.0	1.91	3.21	1.54	2.45	1.19	2.04	0.98	1.97	1.13	2.26	1.52	3.01	3.59	2.73	3.38
100.0	2.37	3.11	1.75	2.31	1.18	1.84	1.08	1.82	1.19	2.19	1.70	3.02	3.83	3.15	3.63
105.0	2.81	3.25	2.02	2.38	1.44	1.95	1.32	1.93	1.42	2.27	1.96	3.14	4.05	3.47	3.82
110.0	3.16	3.45	2.33	2.53	1.68	2.10	1.56	2.07	1.66	2.41	2.21	3.30	4.22	3.73	4.00
115.0	3.43	3.62	2.61	2.69	1.92	2.25	1.79	2.23	1.89	2.55	2.45	3.44	4.38	3.97	4.18
120.0	3.68	3.79	2.88	2.87	2.16	2.41	2.01	2.38	2.11	2.70	2.68	3.59	4.58	4.23	4.40
125.0	3.94	3.98	3.14	3.07	2.39	2.59	2.24	2.57	2.34	2.90	2.91	3.76	4.81	4.53	4.67
130.0	4.23	4.20	3.40	3.29	2.66	2.80	2.50	2.77	2.61	3.09	3.15	3.96	4.93	4.73	4.93
135.0	4.45	4.39	3.63	3.50	2.92	3.01	2.75	2.98	2.85	3.29	3.37	4.12	4.91	4.74	4.99
140.0	4.56	4.50	3.79	3.66	3.14	3.22	2.98	3.19	3.05	3.45	3.52	4.19	4.81	4.65	4.91
145.0	4.52	4.50	3.88	3.77	3.31	3.39	3.17	3.36	3.23	3.56	3.60	4.19	4.68	4.53	4.81
150.0	4.44	4.46	3.94	3.86	3.46	3.53	3.34	3.51	3.38	3.67	3.68	4.18	4.58	4.44	4.70
155.0	4.38	4.44	4.00	3.95	3.61	3.67	3.49	3.67	3.53	3.77	3.75	4.17	4.50	4.36	4.60
160.0	4.34	4.42	4.04	4.03	3.74	3.80	3.65	3.81	3.66	3.86	3.83	4.16	4.47	4.31	4.54
165.0	4.33	4.41	4.09	4.11	3.88	3.92	3.81	3.94	3.81	3.96	3.89	4.18	4.44	4.29	4.48
170.0	4.35	4.41	4.16	4.19	4.00	4.06	3.96	4.07	3.94	4.07	3.99	4.20	4.43	4.29	4.44
175.0	4.35	4.39	4.20	4.26	4.10	4.17	4.11	4.16	4.04	4.15	4.05	4.23	4.42	4.28	4.39
180.0	4.40	4.38	4.27	4.30	4.23	4.27	4.27	4.26	4.18	4.23	4.15	4.23	4.40	4.29	4.33

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.23

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-D02040-TY3</b>	<b>WEIGHT:</b>
<b>SPECIFICATION:5050LED 4000K Type III</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	655	655	655	655	655	655	655	655	655
5.0	640	635	634	633	634	636	640	645	651
10.0	625	616	612	611	613	617	625	636	650
15.0	611	598	591	591	593	599	611	628	651
20.0	595	579	572	571	573	580	595	621	655
25.0	580	561	551	549	552	561	579	615	663
30.0	565	542	527	523	528	542	565	608	674
35.0	548	519	500	495	501	518	548	600	691
40.0	529	494	473	470	475	494	531	593	705
45.0	506	468	447	444	448	469	510	583	714
50.0	479	438	418	415	419	440	485	567	718
55.0	443	404	387	386	388	407	451	541	721
60.0	404	367	347	349	351	372	413	511	718
65.0	346	312	293	297	299	322	362	480	714
70.0	225	174	160	166	171	219	267	358	615
75.0	86.1	73.8	45.9	50.9	51.6	96.6	122	168	322
80.0	16.1	13.5	5.76	6.85	6.87	14.2	36.2	43.2	87.1
85.0	3.19	3.95	0.97	2.01	0.90	4.08	5.34	9.26	7.11
90.0	1.70	2.32	1.09	1.94	1.07	2.31	1.53	3.27	2.26
95.0	2.14	2.51	1.46	2.12	1.44	2.46	1.98	3.24	2.47
100.0	2.56	2.78	1.88	2.38	1.86	2.76	2.46	3.52	2.93
105.0	2.91	3.07	2.28	2.72	2.29	3.09	2.86	3.75	3.27
110.0	3.22	3.35	2.66	3.03	2.68	3.39	3.21	3.94	3.53
115.0	3.48	3.57	3.01	3.33	3.05	3.64	3.53	4.15	3.77
120.0	3.74	3.78	3.29	3.59	3.35	3.89	3.81	4.36	3.99
125.0	4.01	4.03	3.57	3.84	3.63	4.11	4.06	4.59	4.26
130.0	4.31	4.29	3.88	4.09	3.90	4.34	4.31	4.85	4.53
135.0	4.52	4.54	4.18	4.38	4.18	4.58	4.54	4.99	4.64
140.0	4.57	4.68	4.42	4.60	4.41	4.73	4.62	4.95	4.60
145.0	4.53	4.70	4.52	4.69	4.50	4.76	4.59	4.83	4.51
150.0	4.49	4.68	4.55	4.69	4.52	4.72	4.52	4.72	4.42
155.0	4.43	4.63	4.54	4.68	4.49	4.68	4.46	4.61	4.35
160.0	4.39	4.58	4.50	4.67	4.47	4.62	4.40	4.53	4.28
165.0	4.36	4.54	4.45	4.62	4.42	4.55	4.36	4.47	4.25
170.0	4.33	4.47	4.39	4.56	4.37	4.48	4.30	4.40	4.22
175.0	4.27	4.38	4.28	4.45	4.26	4.37	4.22	4.31	4.16
180.0	4.23	4.28	4.20	4.32	4.19	4.25	4.15	4.23	4.14

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.03.23

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