

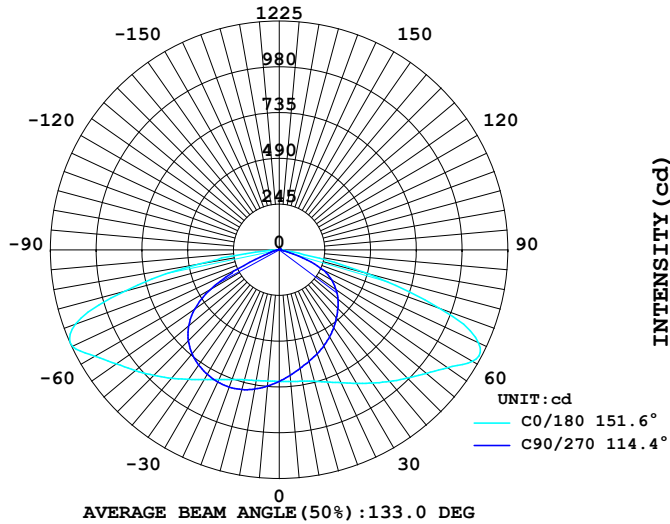
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

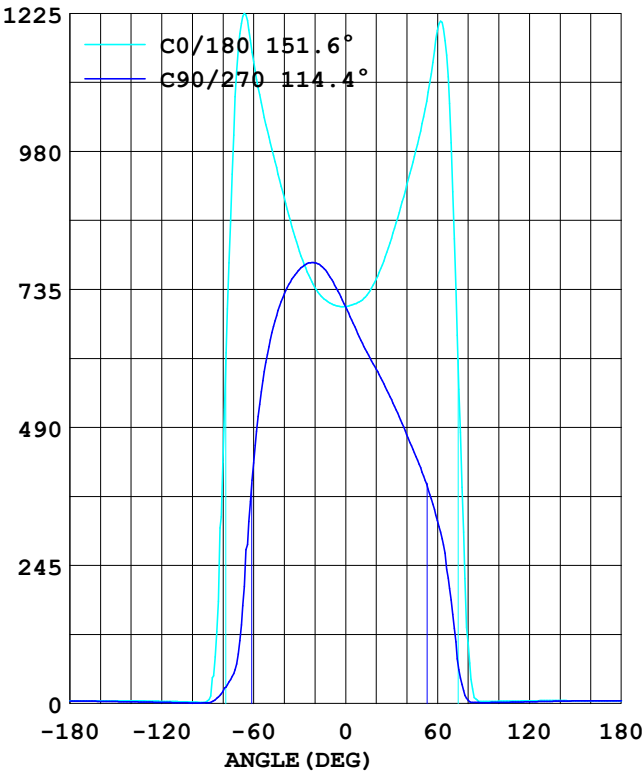
MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE:IL-ST11-D02040-TY2	WEIGHT:
SPECIFICATION:5050LED 4000K Type II	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax(cd)	1225	S/MH (C0/180)	1.92
MODEL		EFFICIENCY (%)	100.0	S/MH (C90/270)	1.60
NOMINAL POWER(W)	20	TOTAL FLUX(lm)	3016.0	Voltage(V)	230.8
RATED VOLTAGE (V)	230	EFFICIENCY (lm/W)	147.8	Current(A)	0.088
NOMINAL FLUX(lm)	3016.0	η up (%)	0.7	Power(W)	20.40
LAMPS QUANTITY	1	η down (%)	99.3	Power Factor (PF)	0.996
TEST VOLTAGE (V)	230.8	Effective Flux(lm)	3016.0	EEI	0.101

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



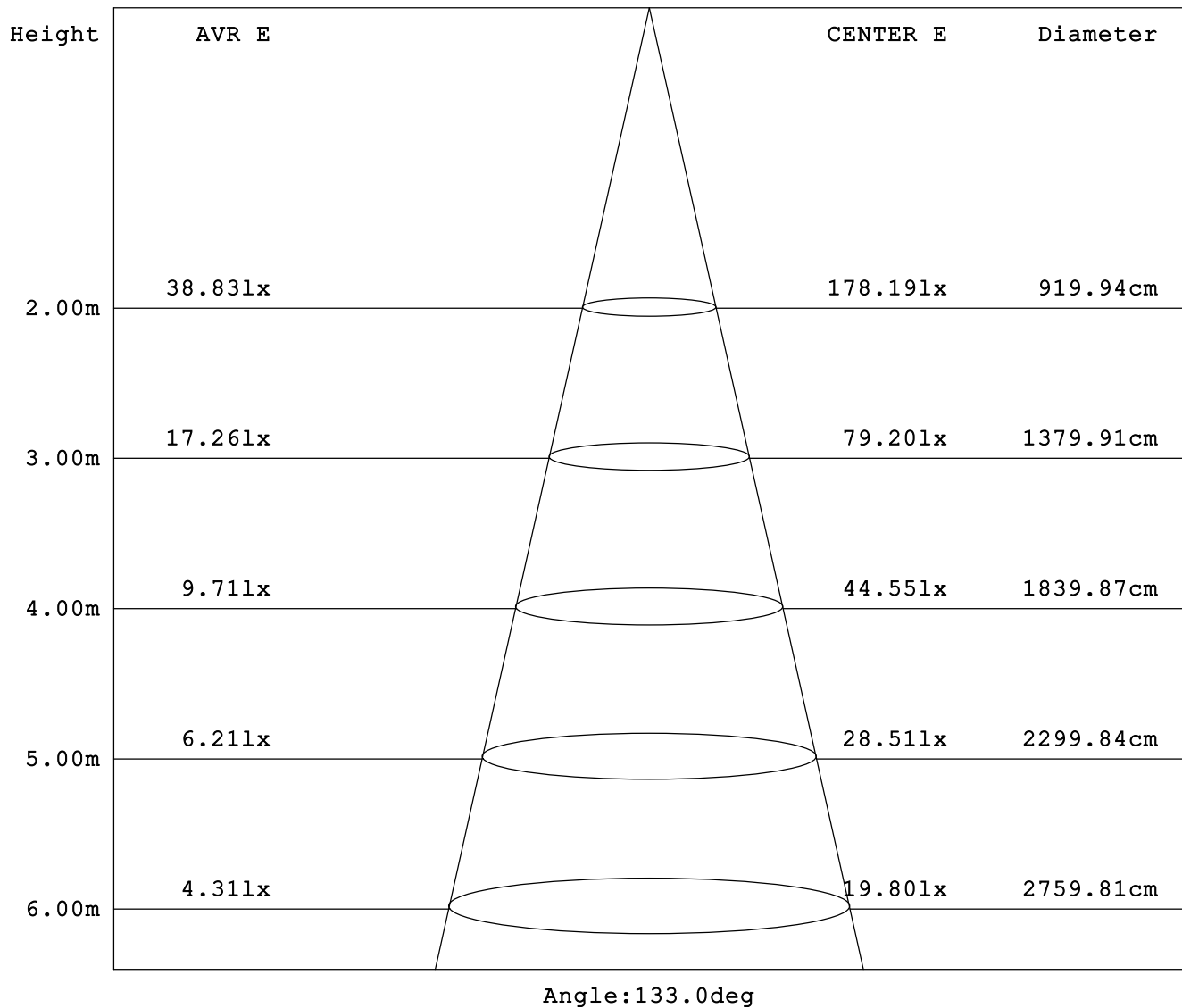
Test System:
 Temperature:25.3DEG
 Operators:
 Test Date:2025.03.22

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-D02040-TY2	WEIGHT:
SPECIFICATION:5050LED 4000K Type II	DIMENSION:	SERIAL No.:



Test System:
Temperature:25.3DEG
Operators:
Test Date:2025.03.22

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-TY2	WEIGHT:
SPECIFICATION:5050LED 4000K Type II	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Zone	total
5.0	705.5	725.6	732.3	724.3	708.1	685.5	674.7	686.7	0- 5	16.85	16.85
10.0	710.5	745.3	756.7	742.6	714.5	667.0	644.6	669.5	5- 10	50.51	67.37
15.0	720.5	763.8	774.8	758.1	728.6	648.9	618.4	651.7	10- 15	83.92	151.2
20.0	738.6	782.4	782.2	771.2	753.2	632.5	593.6	634.8	15- 20	116.9	268.2
25.0	766.4	799.7	780.8	780.5	785.5	616.7	567.3	618.5	20- 25	149.5	417.8
30.0	802.4	812.9	770.4	787.1	825.7	599.2	539.4	599.1	25- 30	181.3	599.1
35.0	846.7	823.0	753.0	789.0	871.3	581.1	509.0	579.6	30- 35	211.8	810.9
40.0	897.3	825.3	726.7	785.9	920.3	558.4	476.7	556.1	35- 40	240.3	1051
45.0	951.3	817.2	688.2	775.1	970.9	529.4	445.1	527.1	40- 45	265.6	1317
50.0	1005	794.4	633.4	747.8	1029	494.2	410.7	491.4	45- 50	286.1	1603
55.0	1066	746.5	553.3	691.0	1101	451.5	371.4	444.4	50- 55	299.5	1903
60.0	1140	657.9	427.0	598.5	1194	397.4	324.7	387.2	55- 60	303.7	2206
65.0	1222	496.5	272.8	431.7	1176	322.4	267.0	309.1	60- 65	292.8	2499
70.0	1160	218.7	87.68	184.3	908.1	207.6	158.0	196.4	65- 70	245.2	2744
75.0	854.9	63.51	42.59	58.85	481.5	84.98	45.30	76.56	70- 75	156.9	2901
80.0	428.4	35.28	21.09	31.56	107.7	18.03	5.824	17.31	75- 80	69.93	2971
85.0	82.68	13.58	6.787	12.94	8.262	4.016	1.824	3.769	80- 85	20.43	2992
90.0	4.610	3.371	1.280	3.207	3.619	1.097	1.654	1.046	85- 90	3.687	2995
95.0	2.171	2.217	0.952	2.070	3.763	1.459	1.711	1.429	90- 95	1.153	2997
100.0	2.661	2.195	1.031	2.003	4.008	1.878	1.892	1.879	95-100	1.131	2998
105.0	3.095	2.353	1.269	2.126	4.242	2.274	2.141	2.318	100-105	1.247	2999
110.0	3.441	2.579	1.518	2.306	4.420	2.647	2.447	2.712	105-110	1.366	3000
115.0	3.697	2.817	1.756	2.509	4.565	2.975	2.753	3.083	110-115	1.458	3002
120.0	3.931	3.043	2.005	2.712	4.766	3.258	3.059	3.387	115-120	1.524	3003
125.0	4.198	3.281	2.254	2.914	5.055	3.519	3.354	3.668	120-125	1.566	3005
130.0	4.532	3.519	2.515	3.139	5.278	3.813	3.637	3.938	125-130	1.585	3006
135.0	4.821	3.734	2.787	3.353	5.345	4.096	3.932	4.175	130-135	1.574	3008
140.0	4.944	3.903	3.036	3.556	5.245	4.345	4.237	4.400	135-140	1.520	3010
145.0	4.899	4.039	3.263	3.713	5.100	4.492	4.475	4.523	140-145	1.416	3011
150.0	4.799	4.130	3.478	3.837	4.955	4.548	4.623	4.557	145-150	1.274	3012
155.0	4.699	4.209	3.671	3.961	4.855	4.582	4.725	4.568	150-155	1.108	3013
160.0	4.632	4.288	3.864	4.073	4.788	4.594	4.793	4.557	155-160	0.927	3014
165.0	4.610	4.367	4.056	4.175	4.755	4.594	4.827	4.546	160-165	0.734	3015
170.0	4.621	4.458	4.237	4.287	4.721	4.582	4.804	4.523	165-170	0.533	3016
175.0	4.621	4.514	4.385	4.377	4.688	4.537	4.713	4.456	170-175	0.323	3016
180.0	4.665	4.571	4.543	4.456	4.665	4.503	4.600	4.377	175-180	0.108	3016
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:
Temperature:25.3DEG
Operators:
Test Date:2025.03.22

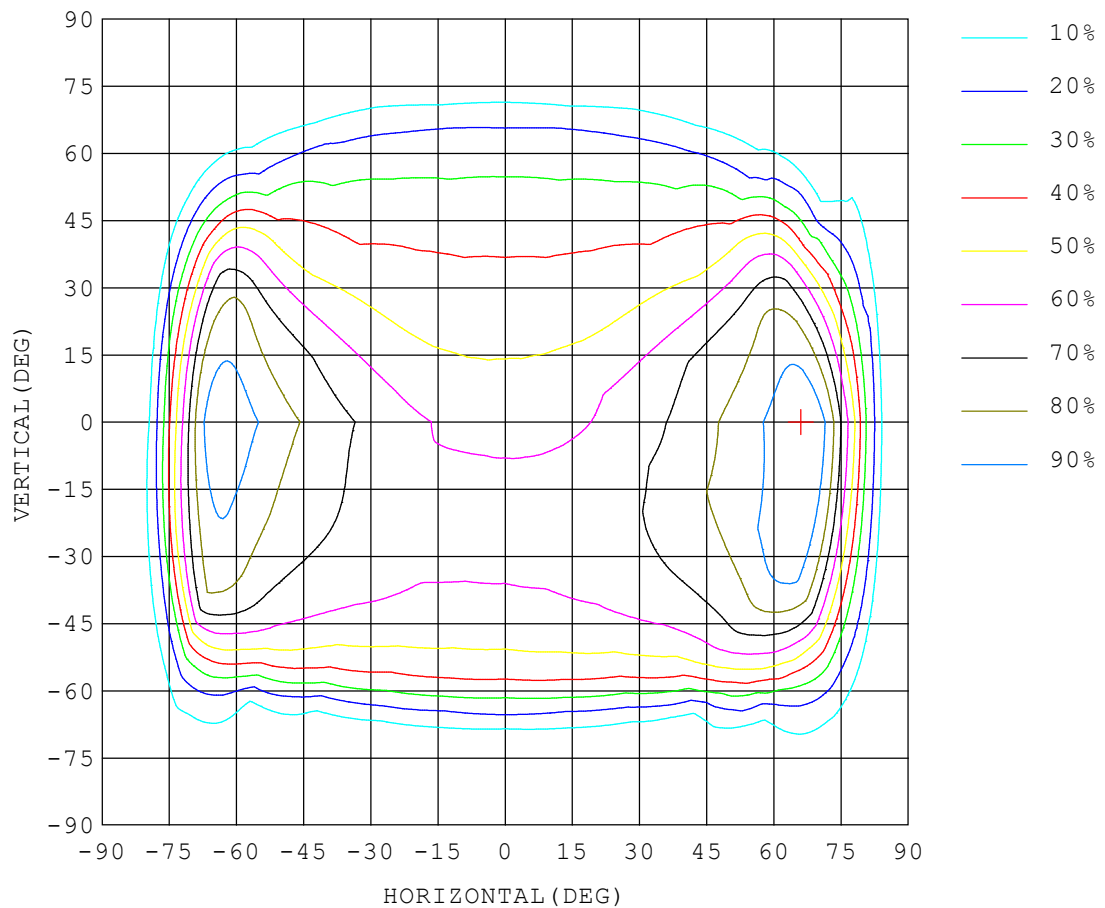
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:10.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE:IL-ST11-D02040-TY2	WEIGHT:
SPECIFICATION:5050LED 4000K Type II	DIMENSION:	SERIAL No.:

UNIT: cd



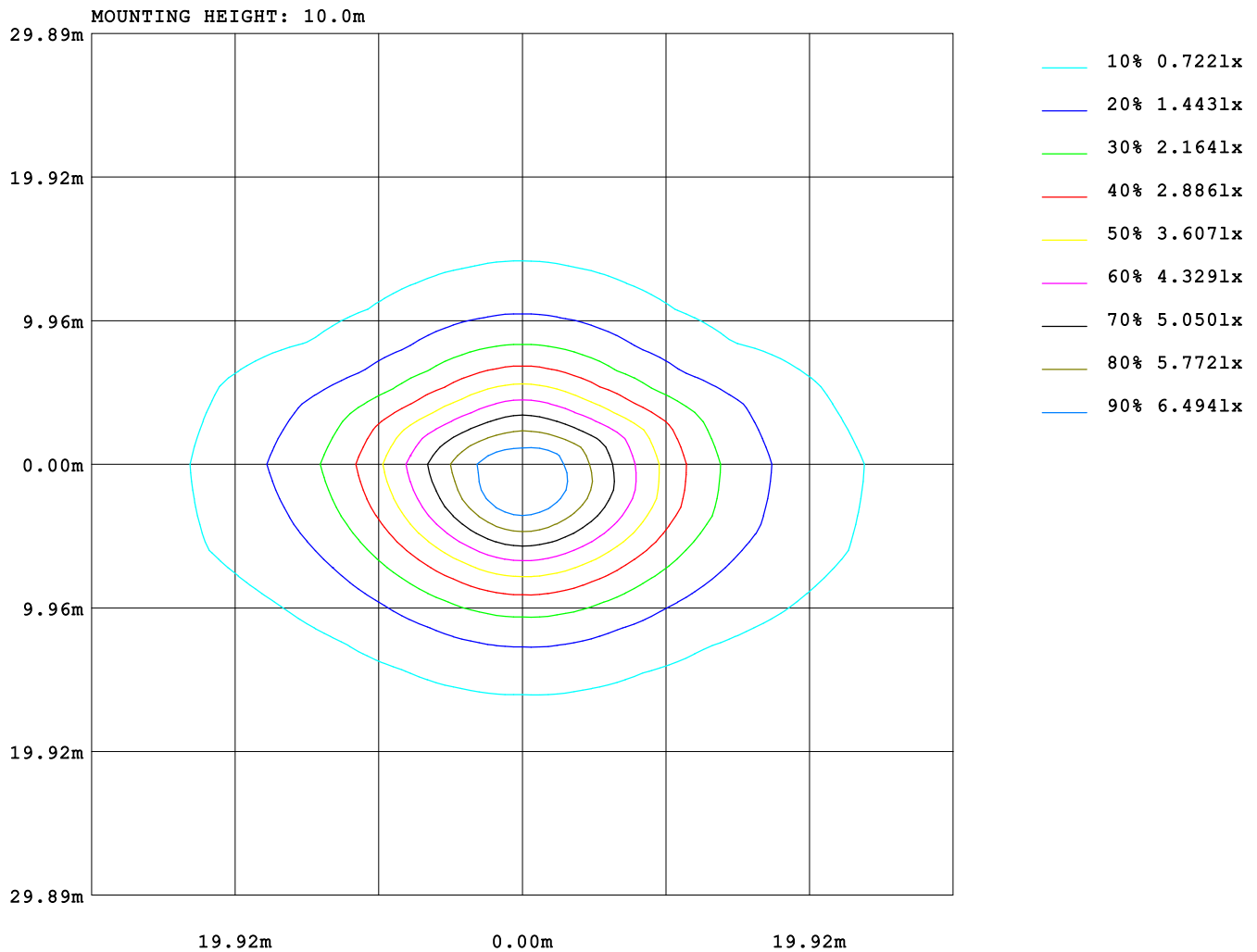
Test System:
Temperature:25.3DEG
Operators:
Test Date:2025.03.22

Test Set: 5.0deg/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-TY2	WEIGHT:
SPECIFICATION: 5050LED 4000K Type II	DIMENSION:	SERIAL No.:



Test System:
Temperature: 25.3DEG
Operators:
Test Date: 2025.03.22

Test Set: 5.0deg/s C-Gamma (TYPE C)
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Test Distance: 10.000 m
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LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE: IL-ST11-D02040-TY2	WEIGHT:
SPECIFICATION: 5050LED 4000K Type II	DIMENSION:	SERIAL No.:

UNIT: cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210
0.0	705	705	705	705	705	705	705	705	705	705	705	705	705	705	705
5.0	706	713	719	726	729	733	732	732	728	724	718	712	708	701	693
10.0	711	724	735	745	752	757	757	756	750	743	732	721	715	700	683
15.0	721	739	753	764	770	775	775	773	766	758	746	732	729	705	676
20.0	739	762	776	782	782	784	782	781	775	771	763	750	753	718	672
25.0	766	795	804	800	789	785	781	781	778	781	783	778	786	737	670
30.0	802	832	833	813	790	778	770	772	773	787	803	809	826	764	671
35.0	847	877	860	823	784	763	753	755	762	789	822	846	871	795	670
40.0	897	923	886	825	771	741	727	731	744	786	839	882	920	829	665
45.0	951	969	905	817	747	709	688	696	718	775	847	916	971	863	653
50.0	1005	1012	911	794	702	657	633	643	675	748	845	947	1029	896	632
55.0	1066	1059	909	747	629	577	553	565	603	691	829	981	1101	930	599
60.0	1140	1115	898	658	510	456	427	445	485	599	793	1021	1194	976	548
65.0	1222	1185	865	497	330	269	273	261	308	432	713	1074	1176	973	457
70.0	1160	1115	669	219	117	96.6	87.6	95.4	110	184	485	1040	908	736	281
75.0	855	812	318	63.5	49.8	47.9	42.5	46.7	47.4	58.8	136	766	482	316	115
80.0	428	342	63.3	35.2	27.7	25.2	21.0	24.7	27.3	31.5	38.4	274	108	44.2	24.9
85.0	82.6	62.7	18.7	13.5	8.73	9.13	6.78	9.14	8.74	12.9	14.6	54.0	8.26	5.42	7.12
90.0	4.61	6.26	2.87	3.37	1.50	2.54	1.28	2.44	1.38	3.20	2.50	5.56	3.61	2.18	2.85
95.0	2.17	3.32	1.68	2.21	1.13	1.91	0.95	1.83	1.08	2.07	1.51	3.16	3.76	2.56	2.88
100.0	2.66	3.40	1.96	2.19	1.15	1.72	1.03	1.71	1.09	2.00	1.73	3.21	4.00	3.01	3.15
105.0	3.09	3.63	2.34	2.35	1.40	1.84	1.26	1.82	1.34	2.12	2.04	3.40	4.24	3.36	3.41
110.0	3.44	3.85	2.70	2.57	1.67	2.01	1.51	1.98	1.59	2.30	2.36	3.61	4.42	3.64	3.64
115.0	3.69	4.04	3.03	2.81	1.93	2.18	1.75	2.15	1.82	2.50	2.65	3.76	4.56	3.87	3.84
120.0	3.93	4.22	3.33	3.04	2.20	2.37	2.00	2.33	2.07	2.71	2.90	3.89	4.76	4.13	4.05
125.0	4.19	4.42	3.60	3.28	2.48	2.57	2.25	2.52	2.32	2.91	3.13	4.05	5.05	4.43	4.28
130.0	4.53	4.66	3.86	3.51	2.76	2.79	2.51	2.75	2.59	3.13	3.38	4.27	5.27	4.72	4.54
135.0	4.82	4.86	4.07	3.73	3.04	3.03	2.78	2.99	2.86	3.35	3.61	4.48	5.34	4.90	4.76
140.0	4.94	4.96	4.22	3.90	3.28	3.25	3.03	3.21	3.11	3.55	3.79	4.60	5.24	4.90	4.87
145.0	4.89	4.94	4.27	4.03	3.48	3.46	3.26	3.42	3.31	3.71	3.90	4.61	5.10	4.82	4.88
150.0	4.79	4.86	4.31	4.13	3.68	3.65	3.47	3.62	3.52	3.83	3.97	4.57	4.95	4.74	4.85
155.0	4.69	4.79	4.34	4.20	3.84	3.83	3.67	3.81	3.68	3.96	4.03	4.52	4.85	4.66	4.80
160.0	4.63	4.75	4.36	4.28	3.98	4.00	3.86	3.98	3.85	4.07	4.08	4.48	4.78	4.61	4.76
165.0	4.61	4.71	4.40	4.36	4.13	4.16	4.05	4.14	4.02	4.17	4.15	4.46	4.75	4.58	4.72
170.0	4.62	4.68	4.44	4.45	4.27	4.32	4.23	4.30	4.17	4.28	4.23	4.47	4.72	4.58	4.69
175.0	4.62	4.66	4.49	4.51	4.38	4.44	4.38	4.42	4.28	4.37	4.31	4.48	4.68	4.54	4.64
180.0	4.66	4.65	4.54	4.57	4.49	4.53	4.54	4.51	4.42	4.45	4.37	4.47	4.66	4.56	4.60

Test System:
Temperature:25.3DEG
Operators:
Test Date:2025.03.22

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

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Muller	TYPE:IL-ST11-D02040-TY2	WEIGHT:
SPECIFICATION:5050LED 4000K Type II	DIMENSION:	SERIAL No.:

UNIT: cd

C (DEG) γ (DEG)	225	240	255	270	285	300	315	330	345
0.0	705	705	705	705	705	705	705	705	705
5.0	686	679	676	675	677	680	687	694	702
10.0	667	654	647	645	648	656	670	686	704
15.0	649	630	621	618	621	631	652	681	711
20.0	633	607	597	594	596	608	635	678	725
25.0	617	585	572	567	571	584	619	676	746
30.0	599	562	545	539	544	561	599	676	774
35.0	581	537	516	509	515	535	580	675	807
40.0	558	512	485	477	484	509	556	669	842
45.0	529	483	454	445	452	480	527	654	874
50.0	494	447	418	411	416	443	491	628	905
55.0	452	404	376	371	373	398	444	591	933
60.0	397	353	327	325	324	344	387	534	970
65.0	322	287	267	267	262	277	309	435	931
70.0	208	181	164	158	159	178	196	258	669
75.0	84.9	79.3	46.2	45.3	43.2	72.7	76.5	106	308
80.0	18.0	14.1	6.04	5.82	4.80	13.6	17.3	24.4	41.0
85.0	4.01	4.21	0.75	1.82	0.65	3.30	3.76	7.14	5.23
90.0	1.09	1.84	0.75	1.65	0.74	1.78	1.04	2.83	2.30
95.0	1.45	1.89	1.00	1.71	0.99	1.83	1.42	2.83	2.49
100.0	1.87	2.08	1.31	1.89	1.30	2.05	1.87	3.13	2.96
105.0	2.27	2.35	1.68	2.14	1.66	2.34	2.31	3.43	3.33
110.0	2.64	2.65	2.05	2.44	2.05	2.66	2.71	3.71	3.62
115.0	2.97	2.93	2.41	2.75	2.42	2.96	3.08	3.97	3.91
120.0	3.25	3.21	2.77	3.05	2.77	3.27	3.38	4.24	4.18
125.0	3.51	3.47	3.08	3.35	3.11	3.55	3.66	4.46	4.46
130.0	3.81	3.76	3.41	3.63	3.43	3.82	3.93	4.66	4.71
135.0	4.09	4.04	3.73	3.93	3.74	4.09	4.17	4.83	4.85
140.0	4.34	4.31	4.06	4.23	4.05	4.35	4.40	4.90	4.84
145.0	4.49	4.52	4.33	4.47	4.30	4.54	4.52	4.89	4.76
150.0	4.54	4.63	4.50	4.62	4.46	4.64	4.55	4.83	4.67
155.0	4.58	4.70	4.61	4.72	4.55	4.69	4.56	4.77	4.58
160.0	4.59	4.73	4.66	4.79	4.61	4.71	4.55	4.71	4.51
165.0	4.59	4.73	4.67	4.82	4.63	4.71	4.54	4.65	4.47
170.0	4.58	4.71	4.64	4.80	4.62	4.69	4.52	4.61	4.43
175.0	4.53	4.63	4.55	4.71	4.53	4.60	4.45	4.53	4.38
180.0	4.50	4.54	4.48	4.60	4.45	4.47	4.37	4.45	4.37

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