

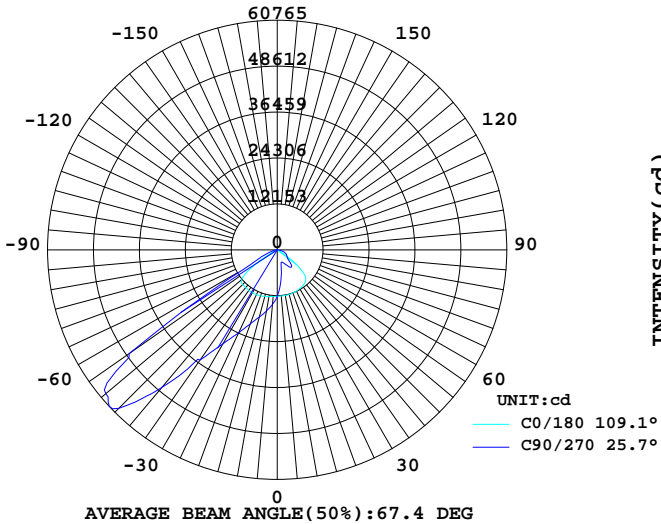
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

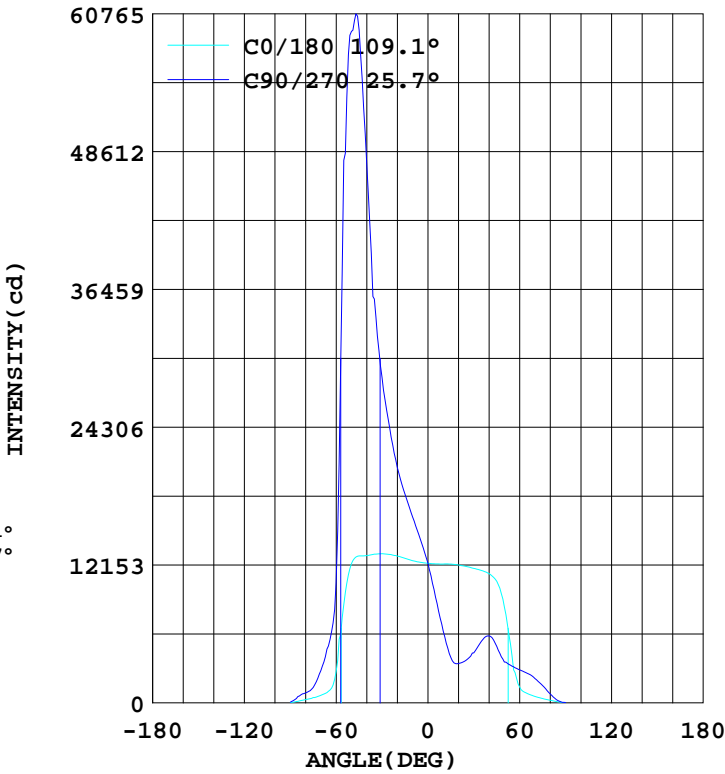
MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N40040-P50	WEIGHT:
SPECIFICATION:5050LED 4000K P50 30X110°	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax(cd)	66686	S/MH(C0/180)	1.61
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	2.27
NOMINAL POWER(W)	400	TOTAL FLUX(lm)	58000	Voltage(V)	230.1
RATED VOLTAGE(V)	230	EFFICIENCY(lm/W)	145.0	Current(A)	1.738
NOMINAL FLUX(lm)	58000.0	$\eta$ up(%)	0.0	Power(W)	400.0
LAMPS QUANTITY	1	$\eta$ down(%)	100.0	Power Factor(PF)	0.999
TEST VOLTAGE(V)	230.2	Effective Flux(lm)	57999.9	EEI	0.103

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



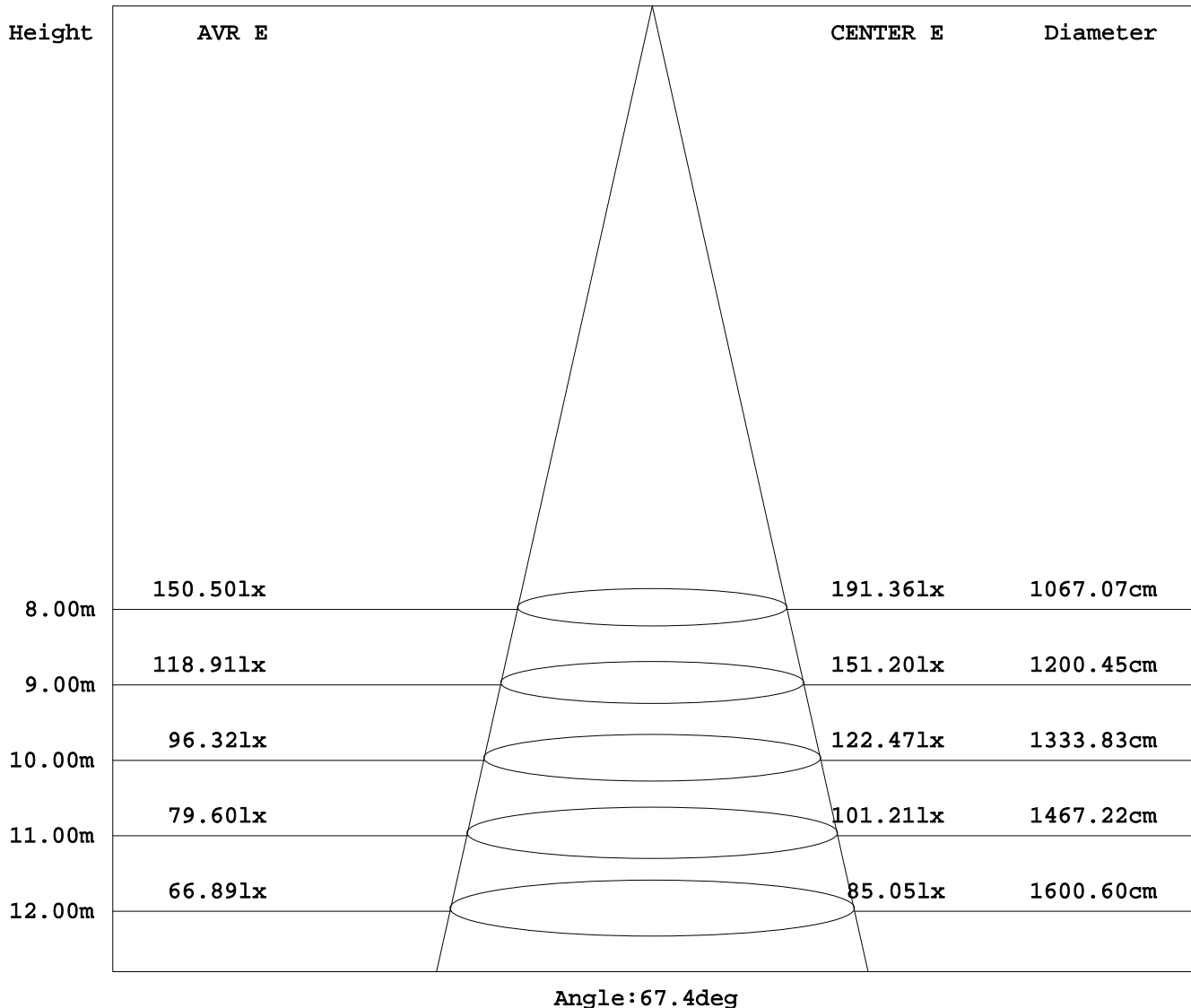
Test System:  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025.02.20

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: Kroos	TYPE:IL-SL13-N40040-P50	WEIGHT:
SPECIFICATION:5050LED 4000K P50 30X110°	DIMENSION:	SERIAL No.:



Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.02.20

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: Kroos	TYPE:IL-SL13-N40040-P50	WEIGHT:
SPECIFICATION:5050LED 4000K P50 30X110°	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
5.0	1240	1400	1444	1376	1226	1011	932.9	1044	0- 5	291.4	291.4
10.0	1254	1558	1640	1522	1225	787.8	634.6	839.7	5- 10	854.5	1146
15.0	1275	1726	1843	1679	1224	583.3	400.2	651.8	10- 15	1394	2540
20.0	1295	1915	2078	1855	1216	427.8	347.1	470.6	15- 20	1948	4488
25.0	1309	2106	2424	2042	1203	345.1	376.7	355.8	20- 25	2582	7070
30.0	1315	2314	2869	2239	1186	334.6	441.1	309.1	25- 30	3336	10406
35.0	1311	2583	3561	2489	1168	356.3	544.1	315.0	30- 35	4276	14681
40.0	1298	2999	4764	2874	1140	388.8	590.4	333.5	35- 40	5563	20244
45.0	1296	3852	5931	3614	1072	423.4	497.8	359.8	40- 45	7398	27642
50.0	1228	4941	5920	4374	848.0	414.4	360.9	351.5	45- 50	9246	36889
55.0	865.5	5105	4784	4112	416.2	286.2	324.3	274.9	50- 55	9699	46588
60.0	274.1	3122	1060	1636	138.3	213.7	291.8	187.0	55- 60	6828	53415
65.0	101.7	394.8	501.4	221.7	82.96	173.7	260.4	153.1	60- 65	2415	55831
70.0	66.74	107.7	285.2	89.06	56.98	132.1	215.3	112.2	65- 70	994.1	56825
75.0	46.79	57.55	136.1	48.38	38.79	76.05	153.5	63.70	70- 75	603.2	57428
80.0	28.77	32.54	88.32	27.46	23.24	29.48	78.44	26.95	75- 80	352.4	57780
85.0	13.87	15.86	55.24	13.21	9.549	7.529	20.89	8.216	80- 85	168.3	57949
90.0	3.169	4.766	6.334	3.946	2.858	2.699	4.008	2.489	85- 90	51.11	58000
95.0									90- 95		
100.0									95-100		
105.0									100-105		
110.0									105-110		
115.0									110-115		
120.0									115-120		
125.0									120-125		
130.0									125-130		
135.0									130-135		
140.0									135-140		
145.0									140-145		
150.0									145-150		
155.0									150-155		
160.0									155-160		
165.0									160-165		
170.0									165-170		
175.0									170-175		
180.0									175-180		
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm	

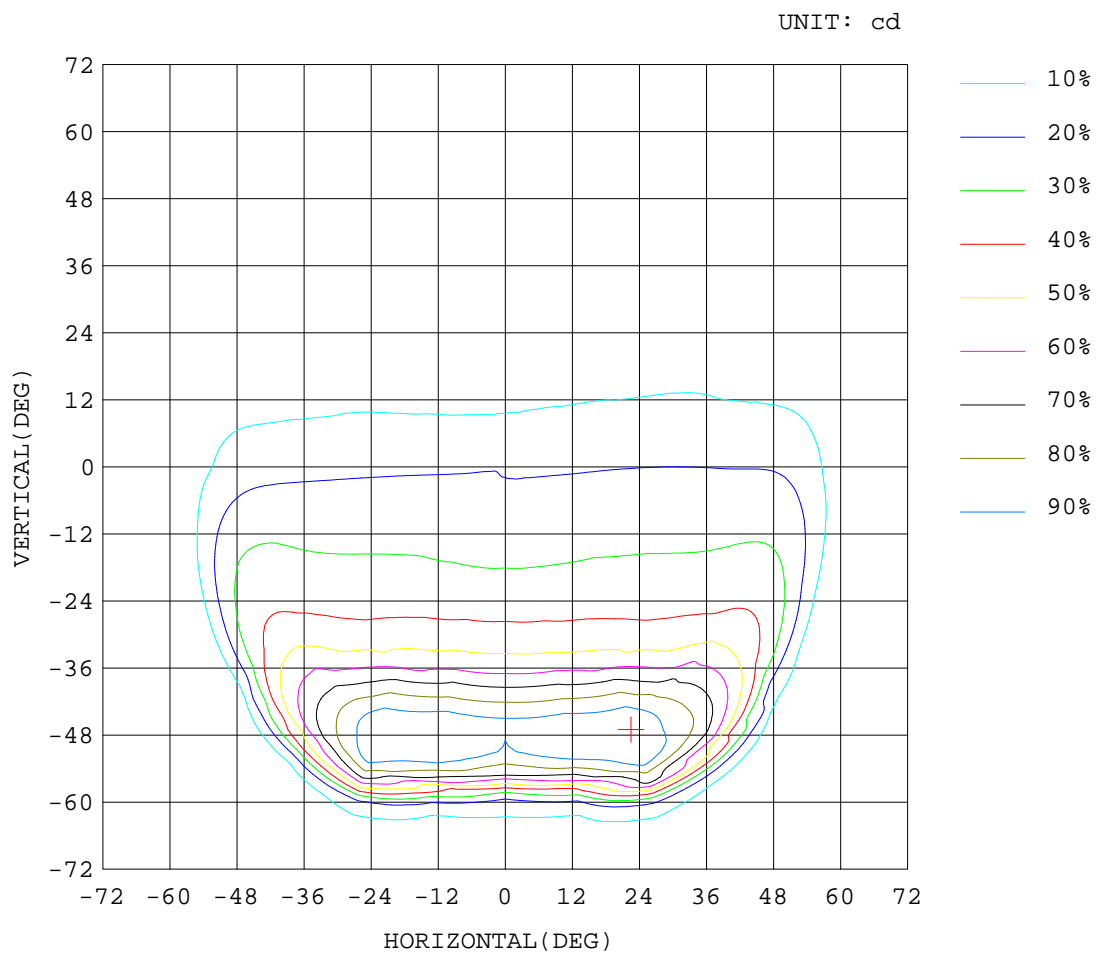
Test System:  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025.02.20

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: Kroos	TYPE: IL-SL13-N40040-P50	WEIGHT:
SPECIFICATION: 5050LED 4000K P50 30X110°	DIMENSION:	SERIAL No.:



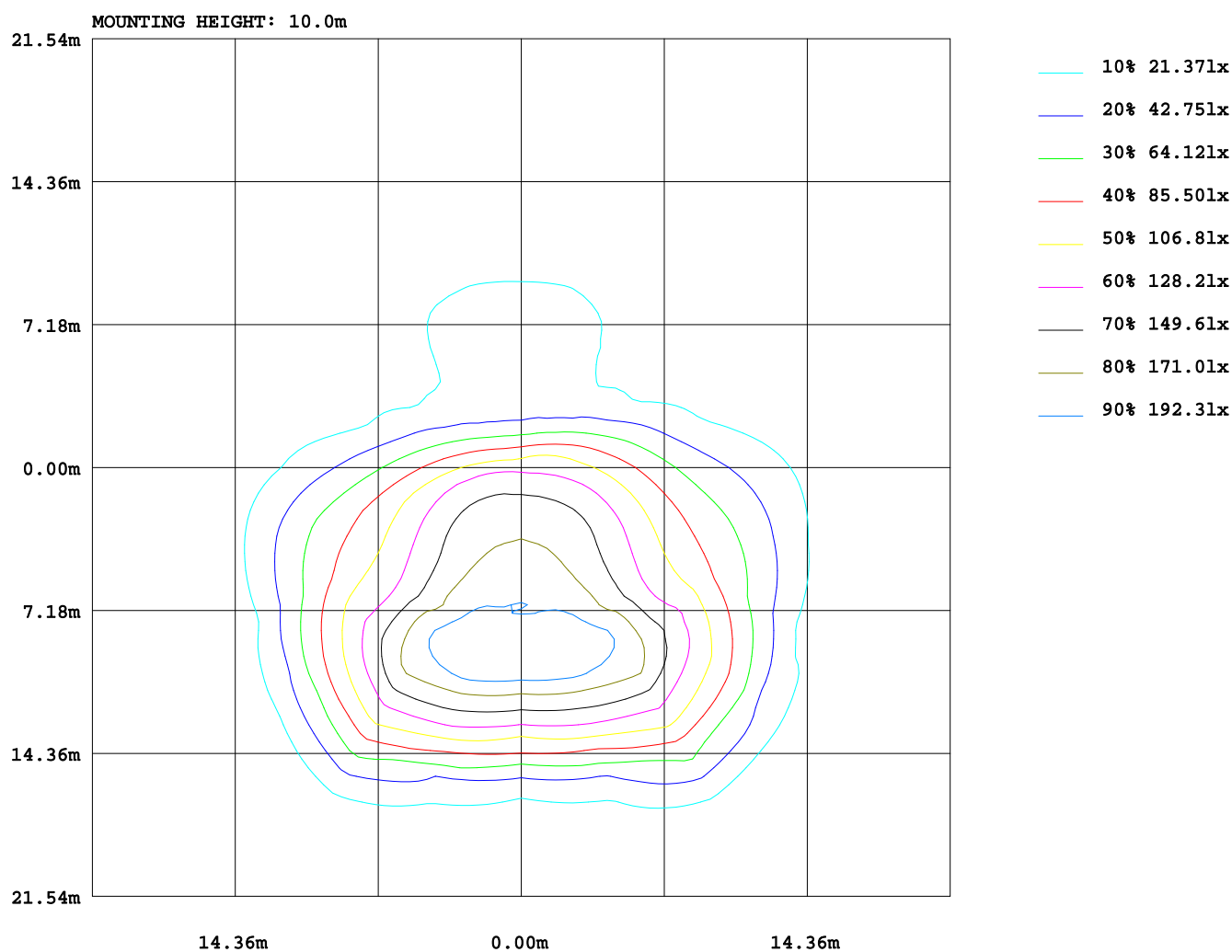
Test System:  
Temperature: 25.3 DEG  
Operators:  
Test Date: 2025.02.20

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: Kroos	TYPE: IL-SL13-N40040-P50	WEIGHT:
SPECIFICATION: 5050LED 4000K P50 30X110°	DIMENSION:	SERIAL No.:



Test System:  
Temperature: 25.3DEG  
Operators:  
Test Date: 2025.02.20

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

## Uncorrected UGR Table

Report number:

MANUFACTURER: ILUMEN GMBH	Address:			
NAME: Kroos	TYPE:IL-SL13-N40040-P50		WEIGHT:	
SPECIFICATION:5050LED 4000K P50 30X110°	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	34.3	35.9	34.6	36.1	36.3	40.5	42.0	40.8	42.2	42.5
3H	34.1	35.5	34.4	35.7	36.0	40.3	41.7	40.6	42.0	42.2
4H	34.0	35.3	34.3	35.6	35.8	40.2	41.6	40.5	41.8	42.1
6H	33.9	35.1	34.2	35.4	35.7	40.1	41.4	40.5	41.7	41.9
8H	33.8	35.0	34.2	35.3	35.6	40.1	41.3	40.4	41.6	41.9
12H	33.8	34.9	34.1	35.2	35.5	40.0	41.2	40.4	41.5	41.8
4H 2H	35.9	37.2	36.2	37.5	37.8	40.4	41.8	40.7	42.0	42.3
3H	35.7	36.9	36.1	37.2	37.5	40.3	41.4	40.6	41.7	42.0
4H	35.6	36.7	36.0	37.0	37.3	40.2	41.3	40.6	41.6	41.9
6H	35.5	36.4	35.9	36.8	37.2	40.1	41.1	40.5	41.4	41.8
8H	35.5	36.3	35.9	36.7	37.1	40.1	41.0	40.5	41.3	41.7
12H	35.5	36.2	35.9	36.6	37.0	40.1	40.8	40.5	41.2	41.6
8H 4H	35.5	36.3	35.9	36.7	37.1	40.1	40.9	40.5	41.3	41.7
6H	35.4	36.1	35.9	36.5	36.9	40.0	40.7	40.5	41.1	41.5
8H	35.4	36.0	35.9	36.4	36.9	40.0	40.6	40.5	41.0	41.5
12H	35.4	35.9	35.8	36.3	36.8	40.0	40.5	40.5	40.9	41.4
12H 4H	35.5	36.2	35.9	36.6	37.0	40.0	40.8	40.5	41.2	41.6
6H	35.4	36.0	35.9	36.4	36.9	40.0	40.6	40.4	41.0	41.5
8H	35.4	35.9	35.8	36.3	36.8	40.0	40.5	40.4	40.9	41.4

Variations with the observer position at spacings:

S = 1.0H	+ 2.1 / - 4.9	+ 1.9 / - 2.5
1.5H	+ 1.9 / - 4.4	+ 3.3 / - 6.2
2.0H	+ 5.8 / -13.2	+ 2.3 / - 9.2

CIE Pub.117 Corrected 58000 lm Total Lamp Luminous Flux.(8log(F/F0) = 14.1)

Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.02.20

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> Kroos	<b>TYPE:</b> IL-SL13-N40040-P50	<b>WEIGHT:</b>
<b>SPECIFICATION:</b> 5050LED 4000K P50 30X110°	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: ×10cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210
0.0	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231	1231
5.0	1240	1302	1355	1400	1427	1446	1444	1436	1409	1376	1330	1281	1226	1150	1078
10.0	1254	1376	1476	1558	1607	1640	1640	1625	1579	1522	1439	1339	1225	1067	918
15.0	1275	1457	1605	1726	1802	1846	1843	1830	1767	1679	1554	1403	1224	986	767
20.0	1295	1540	1740	1915	2002	2069	2078	2046	1961	1855	1676	1467	1216	899	615
25.0	1309	1617	1879	2106	2250	2388	2424	2371	2204	2042	1796	1531	1203	813	475
30.0	1315	1692	2024	2314	2607	2820	2869	2814	2559	2239	1920	1598	1186	710	358
35.0	1311	1774	2175	2583	3111	3467	3561	3474	3057	2489	2060	1678	1168	572	296
40.0	1298	1883	2376	2999	4013	4684	4764	4709	3917	2874	2260	1794	1140	416	274
45.0	1296	2046	2690	3852	5476	5974	5931	5993	5304	3614	2564	1933	1072	258	257
50.0	1228	2110	2996	4941	6610	6222	5920	6285	6354	4374	2687	1884	848	185	236
55.0	866	1539	2544	5105	6612	5196	4784	5388	6229	4112	1905	1146	416	148	204
60.0	274	243	846	3122	4968	1660	1060	1835	4100	1636	183	196	138	118	161
65.0	102	112	122	395	832	558	501	537	744	222	96.7	92.5	82.9	85.8	121
70.0	66.7	70.1	74.3	108	237	332	285	327	170	89.0	62.6	59.6	56.9	57.1	81.4
75.0	46.7	44.7	50.3	57.5	101	198	136	175	75.9	48.3	37.6	38.6	38.7	37.1	47.3
80.0	28.7	29.3	27.1	32.5	52.0	76.8	88.3	71.3	37.8	27.4	23.4	24.8	23.2	21.0	23.6
85.0	13.8	15.3	12.7	15.8	17.2	54.3	55.2	39.2	14.6	13.2	10.5	12.4	9.54	6.69	8.59
90.0	3.16	4.28	3.29	4.76	4.08	9.06	6.33	6.90	3.36	3.94	2.39	3.18	2.85	1.90	3.08

**Test System:**  
**Temperature:**25.3DEG  
**Operators:**  
**Test Date:**2025.02.20

**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> Kroos	<b>TYPE:</b> IL-SL13-N40040-P50	<b>WEIGHT:</b>
<b>SPECIFICATION:</b> 5050LED 4000K P50 30X110°	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: ×10cd

C (DEG) γ (DEG)	225	240	255	270	285	300	315	330	345
0.0	1231	1231	1231	1231	1231	1231	1231	1231	1231
5.0	1011	965	935	933	947	990	1044	1112	1180
10.0	788	699	643	635	662	736	840	977	1124
15.0	583	472	419	400	464	507	652	845	1065
20.0	428	357	349	347	342	351	471	715	997
25.0	345	352	370	377	364	337	356	573	932
30.0	335	388	429	441	408	361	309	443	867
35.0	356	450	531	544	496	407	315	321	767
40.0	389	522	592	590	558	463	334	248	621
45.0	423	544	542	498	537	484	360	225	461
50.0	414	465	400	361	408	444	352	200	289
55.0	286	318	322	324	310	288	275	169	173
60.0	214	267	288	292	278	247	187	139	120
65.0	174	230	252	260	249	216	153	107	82.3
70.0	132	195	217	215	218	181	112	71.9	56.7
75.0	76.0	150	168	154	175	129	63.7	45.9	38.4
80.0	29.4	79.8	96.0	78.4	104	62.1	26.9	25.6	22.9
85.0	7.52	16.8	20.0	20.8	20.7	14.4	8.21	10.3	8.65
90.0	2.69	4.46	2.74	4.00	2.90	4.28	2.48	2.86	1.89

Test System:  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025.02.20

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