

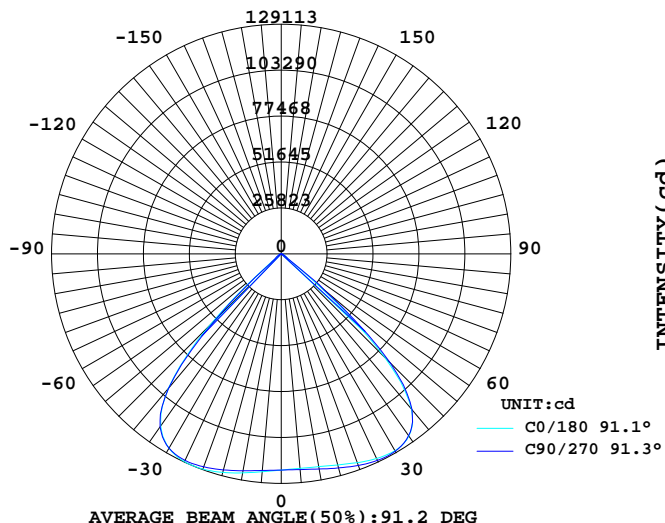
# LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

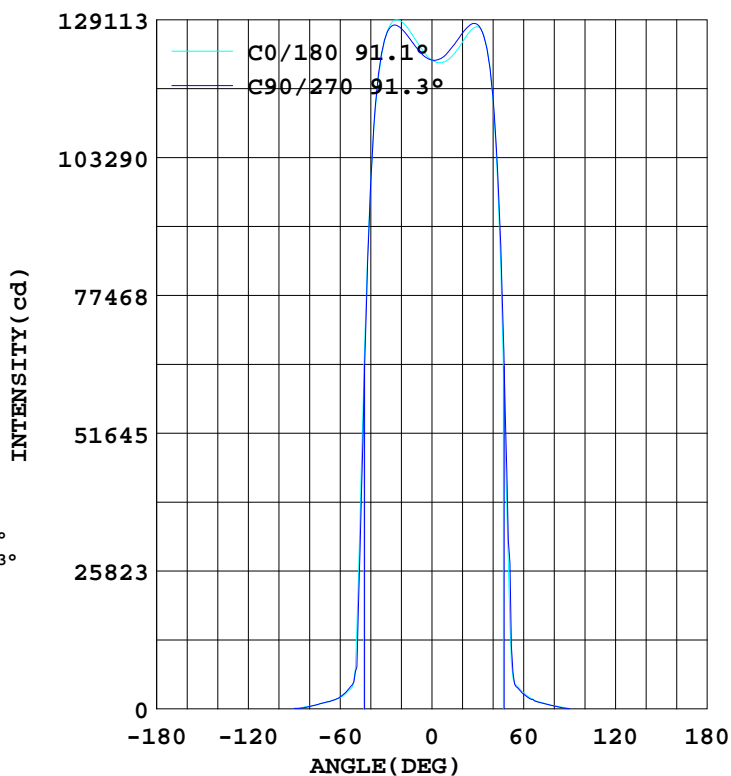
MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N150040-090	WEIGHT:
SPECIFICATION:5050LED 4000K 90°	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax(cd)	129332	S/MH(C0/180)	1.32
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.31
NOMINAL POWER(W)	1500	TOTAL FLUX(lm)	240000	Voltage(V)	231.0
RATED VOLTAGE(V)	230	EFFICIENCY(lm/W)	160.0	Current(A)	6.505
NOMINAL FLUX(lm)	240000.0	$\eta$ up(%)	0.0	Power(W)	1500
LAMPS QUANTITY	1	$\eta$ down(%)	100.0	Power Factor(PF)	0.999
TEST VOLTAGE(V)	231.0	Effective Flux(lm)	239999.9	EEI	0.094

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



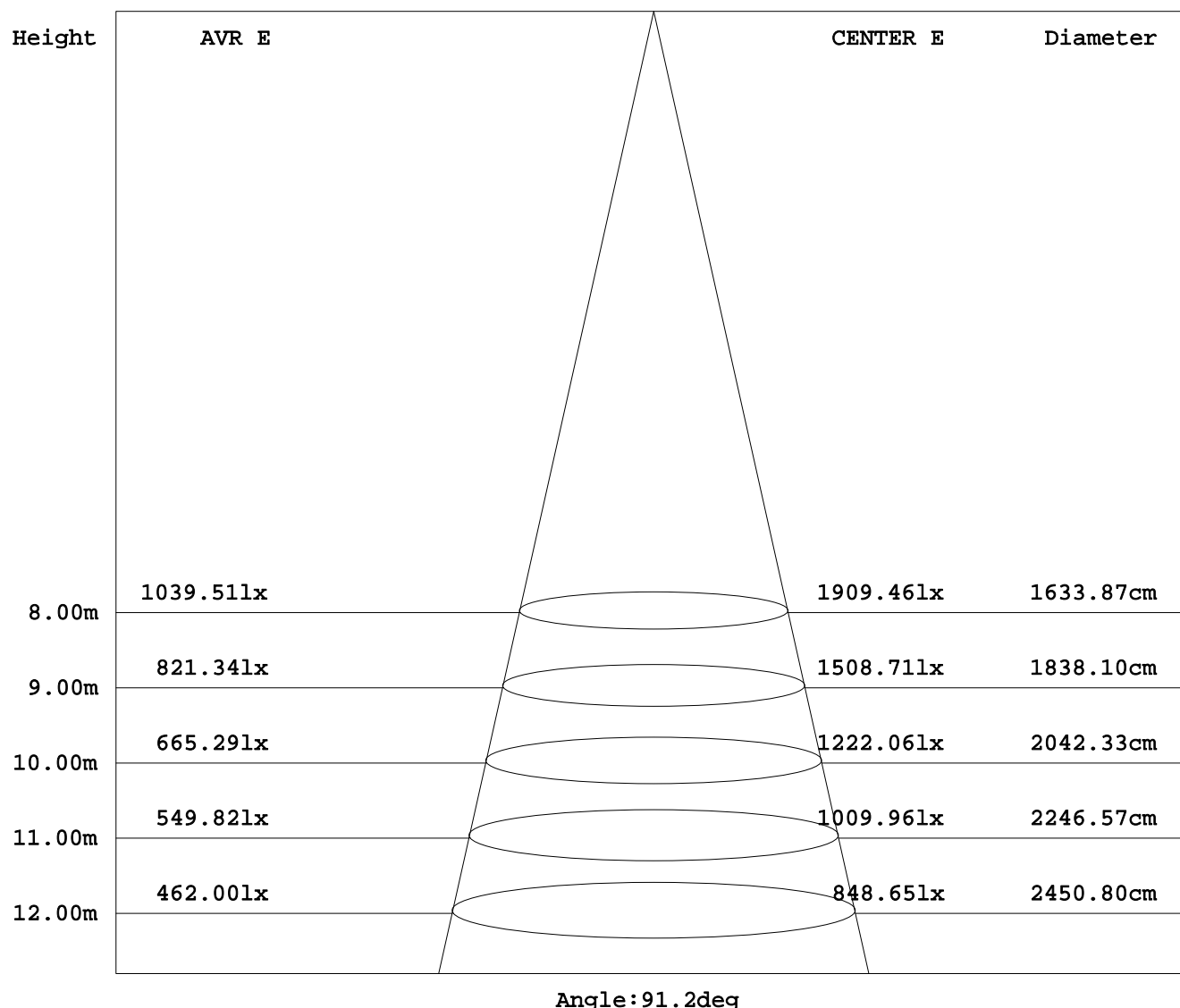
Test System:  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025.02.20

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-N150040-090	WEIGHT:
SPECIFICATION:5050LED 4000K 90°	DIMENSION:	SERIAL No.:



Test System:  
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 Operators:  
 Test Date:2025.02.20

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 Remarks:

## ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N150040-090	WEIGHT:
SPECIFICATION:5050LED 4000K 90°	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
5.0	1230	1228	1223	1217	1211	1211	1218	1224	0- 5	2912	2912
10.0	1250	1247	1238	1228	1215	1217	1229	1240	5- 10	8776	11688
15.0	1272	1268	1258	1246	1229	1233	1246	1261	10- 15	14744	26432
20.0	1288	1283	1274	1265	1250	1253	1266	1281	15- 20	20793	47226
25.0	1289	1285	1281	1278	1270	1271	1281	1293	20- 25	26782	74008
30.0	1262	1256	1261	1268	1278	1278	1282	1286	25- 30	32360	106369
35.0	1182	1174	1188	1205	1251	1252	1248	1240	30- 35	36777	143145
40.0	987.3	962.1	984.5	1013	1141	1153	1144	1120	35- 40	38378	181523
45.0	569.8	513.5	518.6	550.0	826.9	869.8	866.5	826.1	40- 45	33185	214708
50.0	76.51	71.76	70.26	80.01	274.4	306.4	314.9	291.0	45- 50	17297	232004
55.0	32.89	32.24	35.40	39.46	44.77	48.64	41.96	43.86	50- 55	3518	235523
60.0	21.38	20.56	22.34	24.81	30.15	33.01	27.66	28.30	55- 60	1503	237026
65.0	16.05	14.62	15.80	15.73	18.97	20.87	17.88	19.52	60- 65	1041	238067
70.0	12.01	10.25	11.94	10.86	13.08	13.35	12.40	13.59	65- 70	743.2	238811
75.0	7.754	7.041	8.030	7.545	9.165	9.681	8.911	9.728	70- 75	541.1	239352
80.0	5.193	4.062	4.499	4.262	5.800	6.551	5.396	6.684	75- 80	366.7	239719
85.0	2.513	1.327	1.523	1.418	3.223	3.058	2.277	3.210	80- 85	205.4	239924
90.0	0.969	0.585	0.960	0.590	0.867	1.027	0.587	1.027	85- 90	75.80	240000
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:×100cd									UNIT:lm	

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

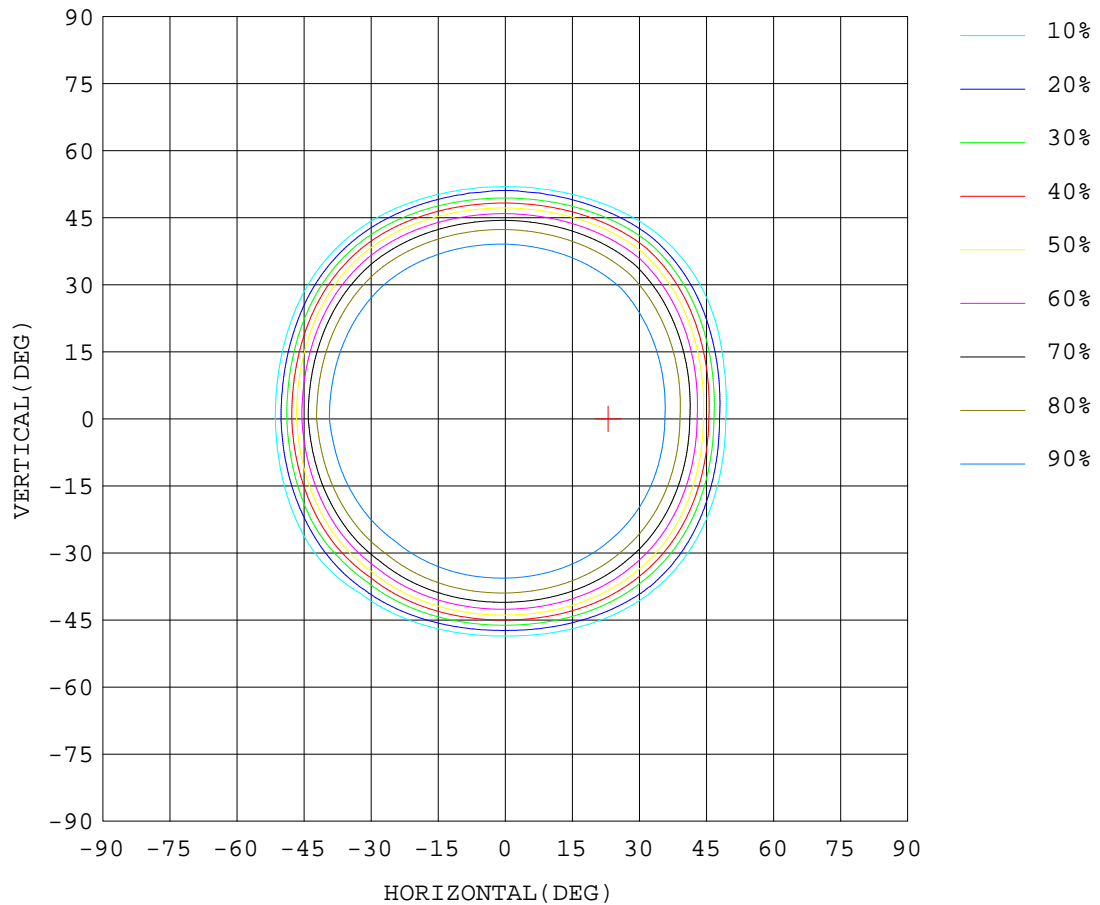
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:10.000 m  
 Remarks:

## ISOCANDELA DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N150040-090	WEIGHT:
SPECIFICATION:5050LED 4000K 90°	DIMENSION:	SERIAL No.:

UNIT: cd



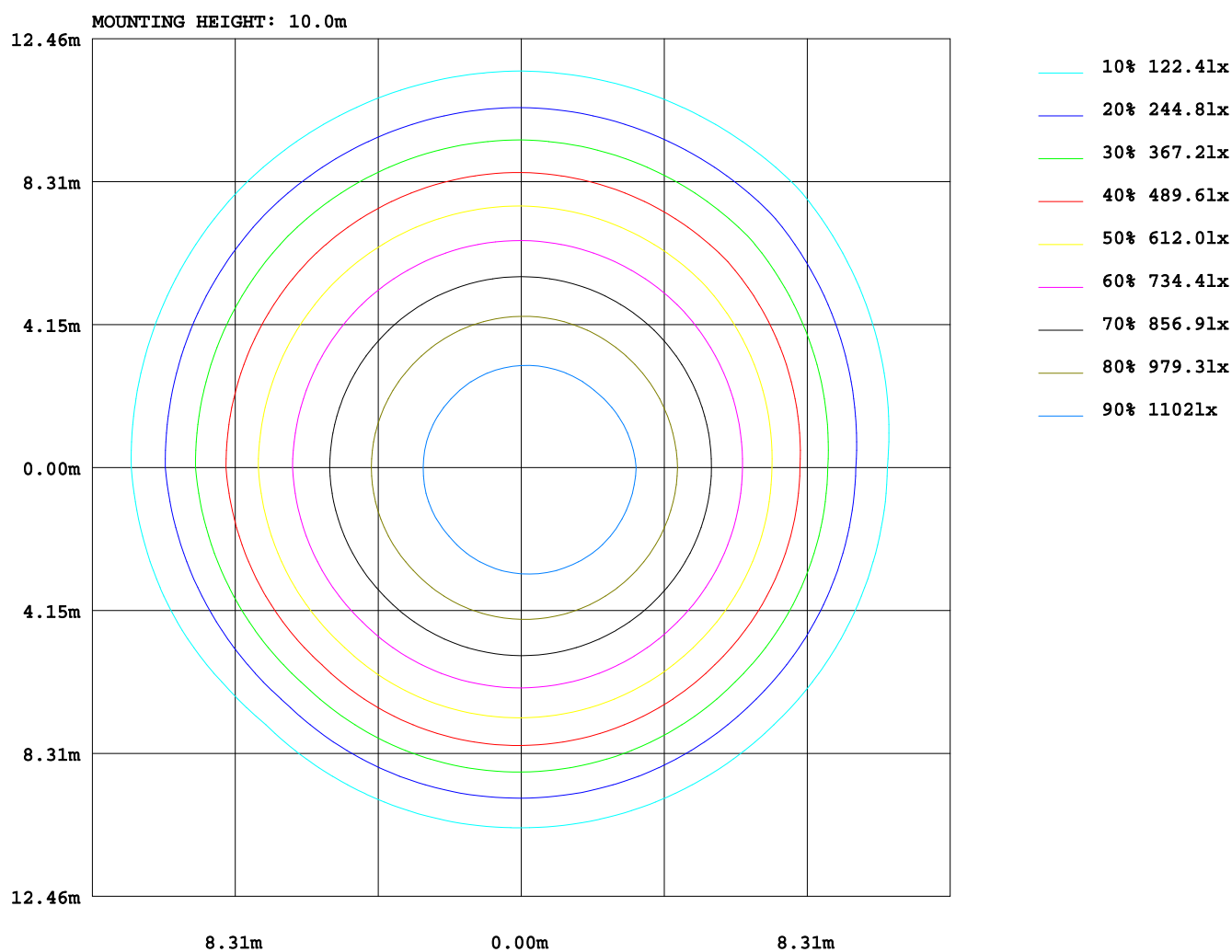
Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.02.20

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

## ISOLUX DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N150040-090	WEIGHT:
SPECIFICATION:5050LED 4000K 90°	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-N150040-090		WEIGHT:	
SPECIFICATION:5050LED 4000K 90°	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	27.2	28.3	27.4	28.5	28.7	27.0	28.2	27.3	28.4	28.6
3H	27.0	28.1	27.3	28.3	28.5	26.9	27.9	27.1	28.1	28.4
4H	26.9	27.9	27.2	28.1	28.4	26.8	27.8	27.1	28.0	28.3
6H	26.8	27.8	27.1	28.0	28.3	26.7	27.6	27.0	27.9	28.1
8H	26.8	27.7	27.1	27.9	28.2	26.7	27.6	27.0	27.8	28.1
12H	26.7	27.6	27.1	27.9	28.2	26.6	27.5	26.9	27.7	28.0
4H 2H	26.9	27.9	27.2	28.1	28.4	26.8	27.8	27.1	28.0	28.2
3H	26.7	27.6	27.1	27.9	28.2	26.6	27.5	26.9	27.7	28.0
4H	26.7	27.4	27.0	27.7	28.0	26.5	27.3	26.9	27.6	27.9
6H	26.6	27.3	27.0	27.6	27.9	26.4	27.1	26.8	27.5	27.8
8H	26.5	27.2	26.9	27.5	27.9	26.4	27.0	26.8	27.4	27.8
12H	26.5	27.1	26.9	27.4	27.8	26.4	26.9	26.8	27.3	27.7
8H 4H	26.5	27.1	26.9	27.5	27.9	26.4	27.0	26.8	27.4	27.7
6H	26.4	27.0	26.9	27.4	27.8	26.3	26.8	26.8	27.2	27.6
8H	26.4	26.9	26.9	27.3	27.7	26.3	26.7	26.7	27.1	27.6
12H	26.4	26.8	26.8	27.2	27.7	26.2	26.6	26.7	27.1	27.5
12H 4H	26.5	27.0	26.9	27.4	27.8	26.4	26.9	26.8	27.3	27.7
6H	26.4	26.8	26.9	27.3	27.7	26.3	26.7	26.7	27.1	27.6
8H	26.4	26.7	26.8	27.2	27.7	26.2	26.6	26.7	27.1	27.5

Variations with the observer position at spacings:

S = 1.0H	+ 2.6 / -12.0	+ 2.6 / -12.1
1.5H	+ 3.9 / -12.0	+ 4.1 / -11.9
2.0H	+ 8.1 / - 8.3	+ 8.1 / - 7.9

CIE Pub.117 Corrected 240000 lm Total Lamp Luminous Flux.(8log(F/F0) = 19.0)

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Operators:  
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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-N150040-090	<b>WEIGHT:</b>
<b>SPECIFICATION:</b> 5050LED 4000K 90°	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: ×100cd

C (DEG) γ (DEG)	0	45	90	135	180	225	270	315
0.0	1216	1216	1216	1216	1216	1216	1216	1216
5.0	1230	1228	1223	1217	1211	1211	1218	1224
10.0	1250	1247	1238	1228	1215	1217	1229	1240
15.0	1272	1268	1258	1246	1229	1233	1246	1261
20.0	1288	1283	1274	1265	1250	1253	1266	1281
25.0	1289	1285	1281	1278	1270	1271	1281	1293
30.0	1262	1256	1261	1268	1278	1278	1282	1286
35.0	1182	1174	1188	1205	1251	1252	1248	1240
40.0	987	962	985	1013	1141	1153	1144	1120
45.0	570	514	519	550	827	870	867	826
50.0	76.5	71.7	70.2	80.0	274	306	315	291
55.0	32.8	32.2	35.4	39.4	44.7	48.6	41.9	43.8
60.0	21.3	20.5	22.3	24.8	30.1	33.0	27.6	28.3
65.0	16.0	14.6	15.8	15.7	18.9	20.8	17.8	19.5
70.0	12.0	10.2	11.9	10.8	13.0	13.3	12.4	13.5
75.0	7.75	7.04	8.03	7.54	9.16	9.68	8.91	9.72
80.0	5.19	4.06	4.49	4.26	5.80	6.55	5.39	6.68
85.0	2.51	1.32	1.52	1.41	3.22	3.05	2.27	3.21
90.0	0.97	0.58	0.96	0.59	0.87	1.02	0.59	1.02

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

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**Test Distance:**10.000 m  
**Remarks:**