

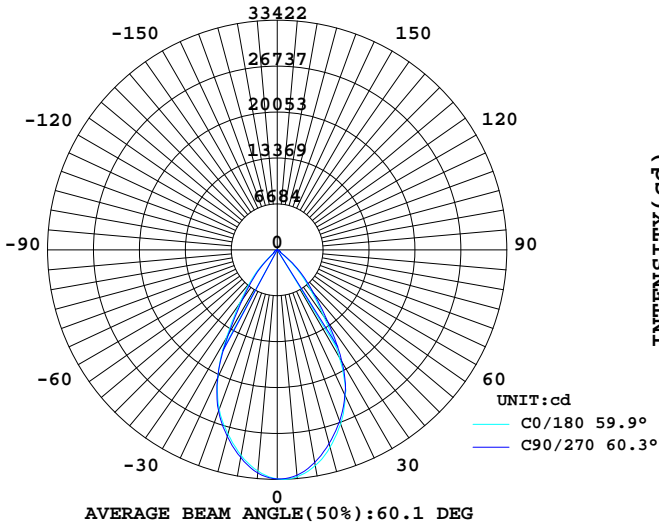
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

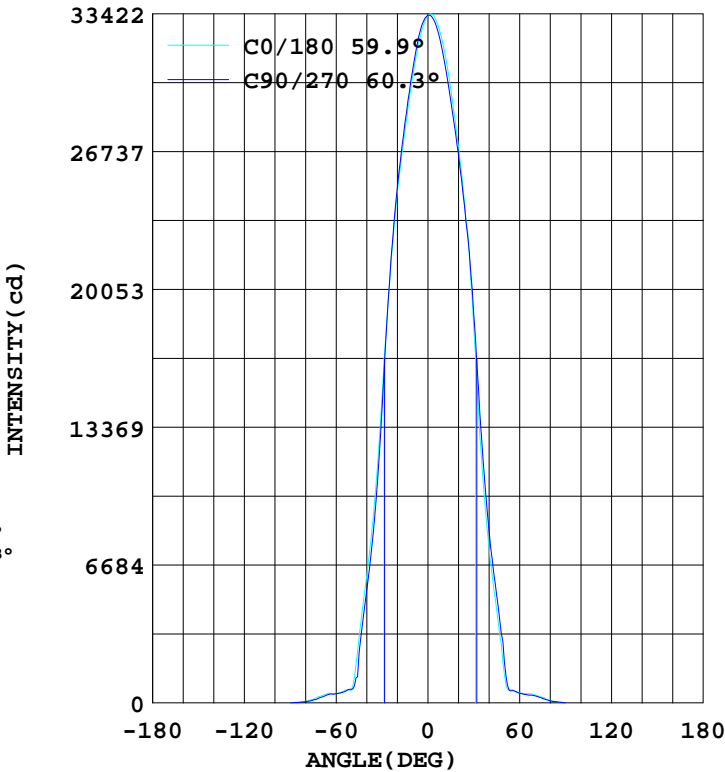
MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N20040-060	WEIGHT:
SPECIFICATION:5050LED 4000K 60°	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax(cd)	33422	S/MH(C0/180)	0.86
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.84
NOMINAL POWER(W)	200	TOTAL FLUX(lm)	32000	Voltage(V)	230.6
RATED VOLTAGE(V)	230	EFFICIENCY(lm/W)	160.0	Current(A)	0.867
NOMINAL FLUX(lm)	32000.0	η up(%)	0.0	Power(W)	200.0
LAMPS QUANTITY	1	η down(%)	100.0	Power Factor(PF)	1.000
TEST VOLTAGE(V)	230.6	Effective Flux(lm)	32000.0	EEI	0.094

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



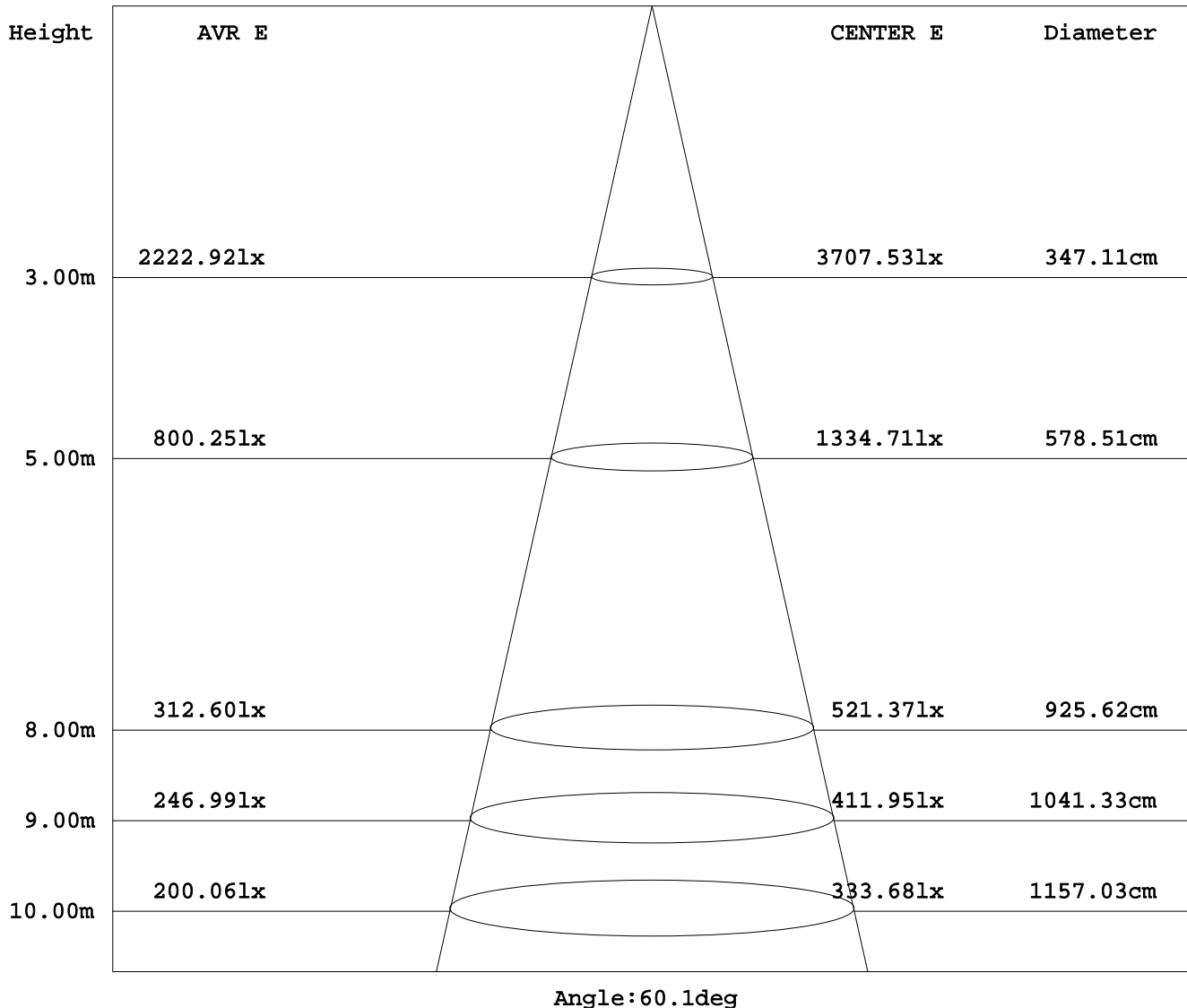
Test System:  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025.02.20

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-N20040-060	WEIGHT:
SPECIFICATION:5050LED 4000K 60°	DIMENSION:	SERIAL No.:



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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-N20040-060	WEIGHT:
SPECIFICATION:5050LED 4000K 60°	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
5.0	3232	3242	3259	3266	3316	3307	3294	3281	0- 5	790.0	790.0
10.0	3036	3047	3067	3090	3190	3173	3142	3123	5- 10	2283	3073
15.0	2777	2795	2812	2839	2972	2956	2917	2888	10- 15	3543	6615
20.0	2470	2479	2497	2522	2699	2690	2657	2620	15- 20	4488	11103
25.0	2044	2049	2053	2095	2335	2348	2329	2275	20- 25	5015	16118
30.0	1487	1427	1424	1455	1817	1841	1884	1807	25- 30	4872	20990
35.0	962.6	897.7	882.3	904.1	1189	1277	1293	1234	30- 35	3965	24955
40.0	614.0	555.4	543.0	559.1	749.1	811.4	831.6	800.7	35- 40	2890	27845
45.0	319.5	291.8	245.4	292.6	446.7	499.4	517.2	496.4	40- 45	1962	29807
50.0	63.38	63.01	65.40	64.26	139.5	187.7	201.1	126.1	45- 50	956.1	30763
55.0	56.68	52.36	53.39	53.13	63.66	65.28	59.02	64.26	50- 55	323.6	31087
60.0	45.99	41.61	44.42	43.27	49.19	50.32	47.16	48.88	55- 60	241.4	31328
65.0	46.03	37.11	40.84	38.45	44.00	41.89	39.09	40.51	60- 65	210.7	31539
70.0	33.02	27.94	26.74	29.33	39.25	36.06	34.91	34.80	65- 70	188.5	31728
75.0	16.37	17.76	13.45	19.10	26.40	27.70	21.47	26.86	70- 75	142.1	31870
80.0	8.257	5.836	6.077	6.736	11.95	16.50	10.10	15.79	75- 80	82.73	31952
85.0	3.376	1.569	2.043	1.735	5.418	5.567	3.883	5.238	80- 85	35.50	31988
90.0	1.408	0.817	1.344	0.830	1.376	1.773	0.947	1.616	85- 90	12.08	32000
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	

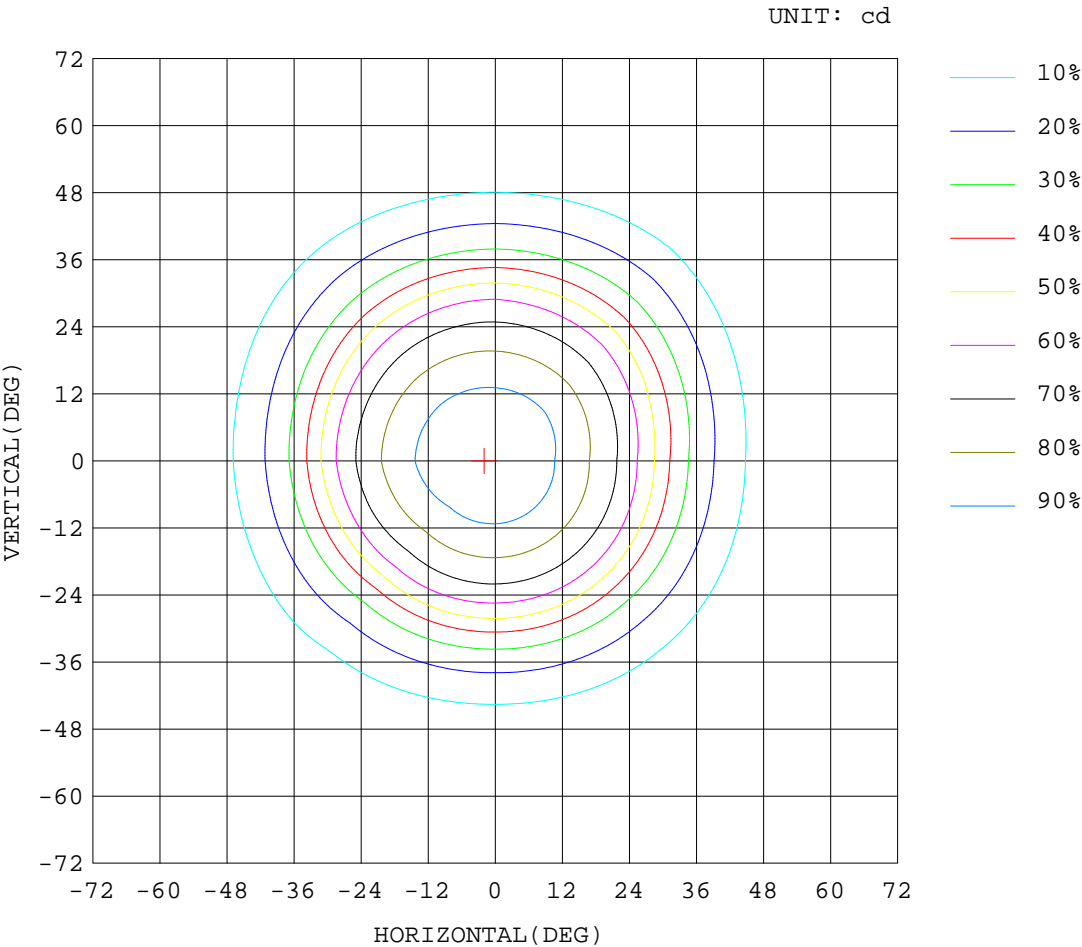
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 Operators:  
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 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N20040-060	WEIGHT:
SPECIFICATION:5050LED 4000K 60°	DIMENSION:	SERIAL No.:



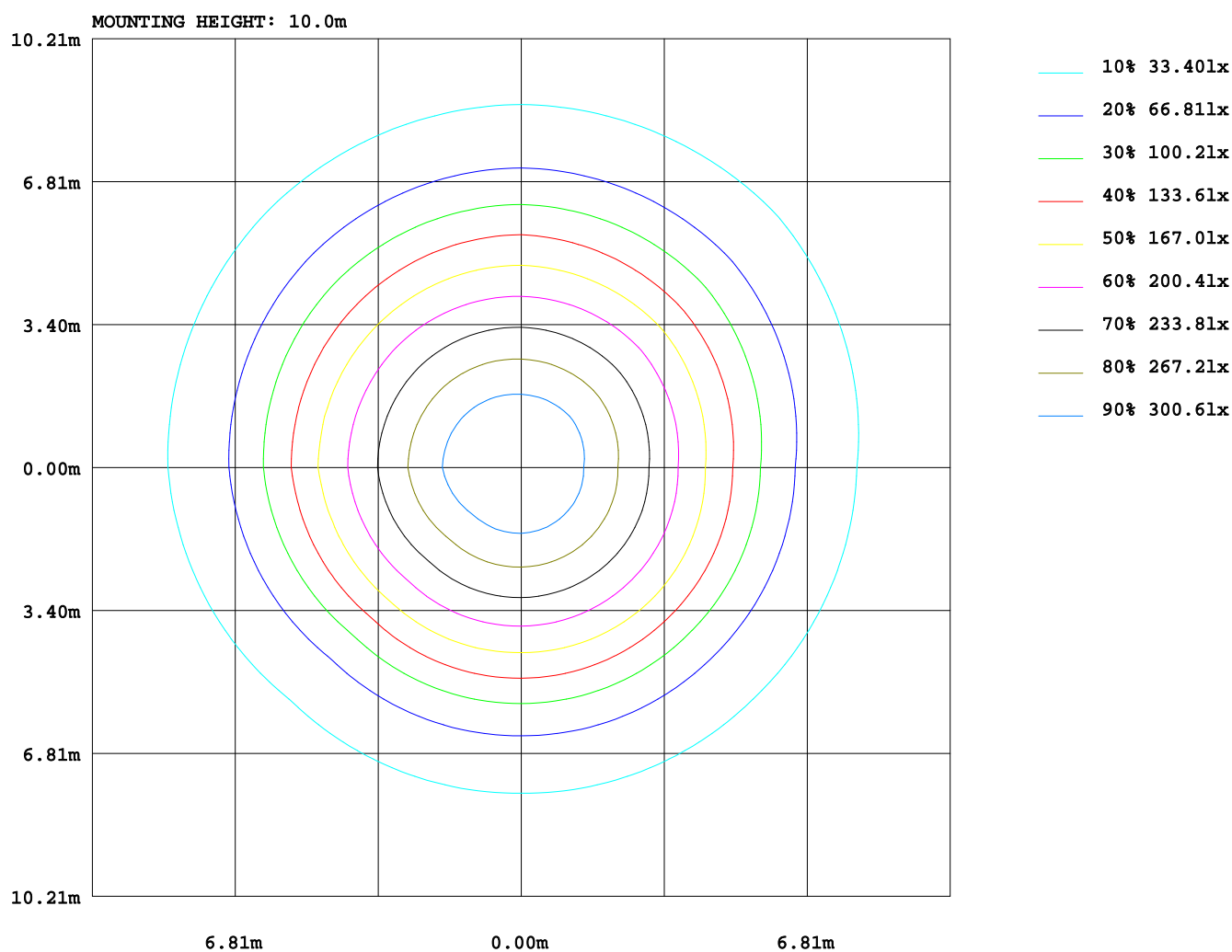
Test System:  
Temperature:25.3DEG  
Operators:  
Test Date:2025.02.20

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

## ISOLUX DIAGRAM

Report number:

MANUFACTURER: ILUMEN GMBH	Address:	
NAME: Kroos	TYPE:IL-SL13-N20040-060	WEIGHT:
SPECIFICATION:5050LED 4000K 60°	DIMENSION:	SERIAL No.:



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

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Test Distance:10.000 m  
Remarks:

## Uncorrected UGR Table

Report number:

MANUFACTURER: ILUMEN GMBH	Address:			
NAME: Kroos	TYPE:IL-SL13-N20040-060		WEIGHT:	
SPECIFICATION:5050LED 4000K 60°	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	23.4	24.4	23.6	24.6	24.8	23.0	24.0	23.2	24.2	24.4
3H	23.5	24.4	23.8	24.7	24.9	23.1	24.0	23.3	24.2	24.4
4H	23.5	24.4	23.8	24.6	24.9	23.0	23.9	23.3	24.2	24.4
6H	23.5	24.3	23.8	24.6	24.8	23.0	23.8	23.3	24.1	24.3
8H	23.5	24.3	23.8	24.5	24.8	23.0	23.8	23.3	24.0	24.3
12H	23.4	24.2	23.8	24.5	24.8	22.9	23.7	23.2	23.9	24.2
4H 2H	23.2	24.1	23.5	24.3	24.6	22.8	23.7	23.1	23.9	24.2
3H	23.4	24.2	23.8	24.5	24.8	23.0	23.8	23.3	24.0	24.3
4H	23.5	24.2	23.9	24.5	24.8	23.0	23.7	23.4	24.0	24.3
6H	23.5	24.1	23.9	24.4	24.8	23.0	23.6	23.4	23.9	24.3
8H	23.5	24.0	23.9	24.4	24.8	23.0	23.5	23.4	23.9	24.2
12H	23.5	24.0	23.9	24.3	24.7	22.9	23.4	23.3	23.8	24.2
8H 4H	23.4	24.0	23.8	24.4	24.7	23.0	23.5	23.4	23.9	24.2
6H	23.4	23.9	23.9	24.3	24.7	22.9	23.4	23.4	23.8	24.2
8H	23.4	23.8	23.9	24.3	24.7	22.9	23.3	23.4	23.7	24.2
12H	23.4	23.8	23.9	24.2	24.7	22.9	23.2	23.3	23.7	24.1
12H 4H	23.4	23.9	23.8	24.3	24.7	22.9	23.4	23.3	23.8	24.2
6H	23.4	23.8	23.8	24.2	24.7	22.9	23.3	23.3	23.7	24.2
8H	23.4	23.7	23.9	24.2	24.6	22.9	23.2	23.3	23.7	24.1

Variations with the observer position at spacings:

S = 1.0H	+ 2.3 / - 4.7	+ 2.2 / - 4.8
1.5H	+ 4.3 / - 4.7	+ 4.3 / - 4.5
2.0H	+ 5.7 / - 1.9	+ 5.1 / - 1.2

CIE Pub.117 Corrected 32000 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.0)

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Operators:  
Test Date:2025.02.20

Test Set: 5.0deg/s C-Gamma (TYPE C)  
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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-N20040-060	<b>WEIGHT:</b>
<b>SPECIFICATION:</b> 5050LED 4000K 60°	<b>DIMENSION:</b>	<b>SERIAL No.:</b>

UNIT: ×10cd

C (DEG) γ (DEG)	0	45	90	135	180	225	270	315
0.0	3335	3335	3335	3335	3335	3335	3335	3335
5.0	3232	3242	3259	3266	3316	3307	3294	3281
10.0	3036	3047	3067	3090	3190	3173	3142	3123
15.0	2777	2795	2812	2839	2972	2956	2917	2888
20.0	2470	2479	2497	2522	2699	2690	2657	2620
25.0	2044	2049	2053	2095	2335	2348	2329	2275
30.0	1487	1427	1424	1455	1817	1841	1884	1807
35.0	963	898	882	904	1189	1277	1293	1234
40.0	614	555	543	559	749	811	832	801
45.0	320	292	245	293	447	499	517	496
50.0	63.3	63.0	65.4	64.2	140	188	201	126
55.0	56.6	52.3	53.3	53.1	63.6	65.2	59.0	64.2
60.0	45.9	41.6	44.4	43.2	49.1	50.3	47.1	48.8
65.0	46.0	37.1	40.8	38.4	44.0	41.8	39.0	40.5
70.0	33.0	27.9	26.7	29.3	39.2	36.0	34.9	34.8
75.0	16.3	17.7	13.4	19.1	26.4	27.7	21.4	26.8
80.0	8.25	5.83	6.07	6.73	11.9	16.5	10.1	15.7
85.0	3.37	1.56	2.04	1.73	5.41	5.56	3.88	5.23
90.0	1.40	0.82	1.34	0.83	1.37	1.77	0.95	1.61

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

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