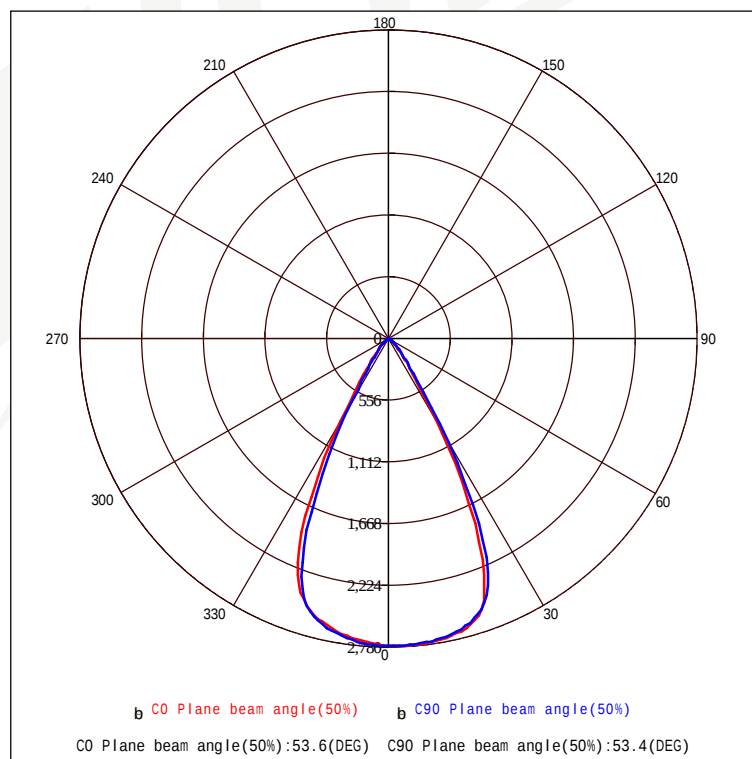


Goniophotometer Test Report

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm						
Lamp Name: Led Track Light			Lamp Type:		Weight(kg):	
Lamp ID: LPTRL-20W			Lamp Spec: LPTRL-20W		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPTRL-20W		Peak Value(cd)	2775.3	Efficiency(lm/w)	104.3
Nominal P(w)		1.0	Position	45.0,4.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	2065.037	Down(C0-C180)	54.7
Rated Flux(lm)		1.0	Up Flux Rate(%)	0.0	UP(C180-C360)	0.0
Illuminant QTY		1	Dw Flux Rate(%)	100.0	Down(C180-C360)	45.3

Planar Intensity Distribution Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

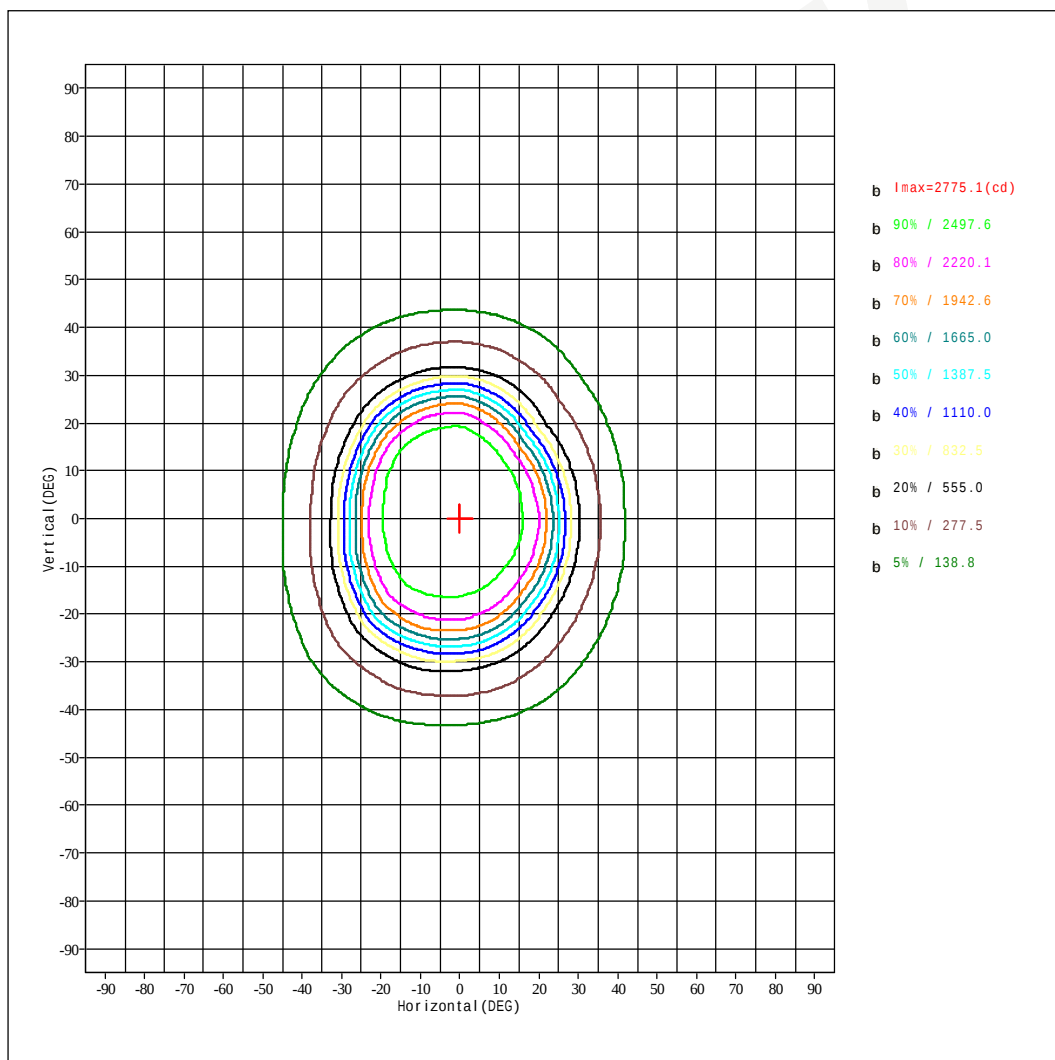
Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Planar IsoCandela Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

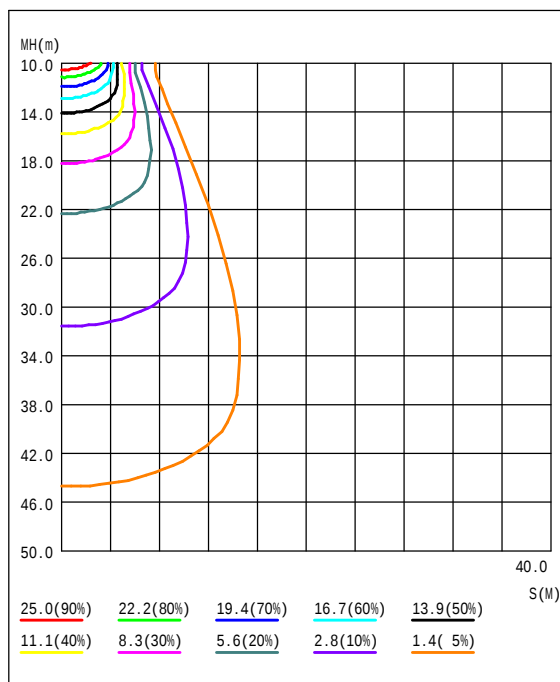
Humidity(%): 60

Date: 2025-2-19

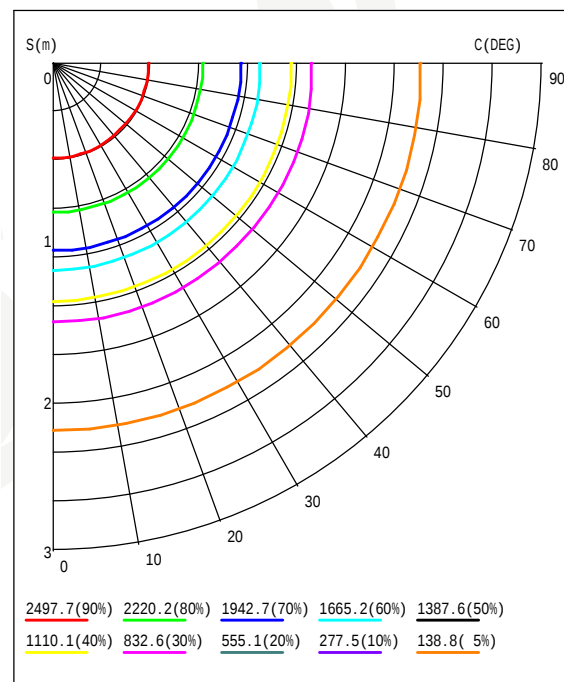
Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Spacial ISOLUX Curve



Planar ISOLUX Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-19

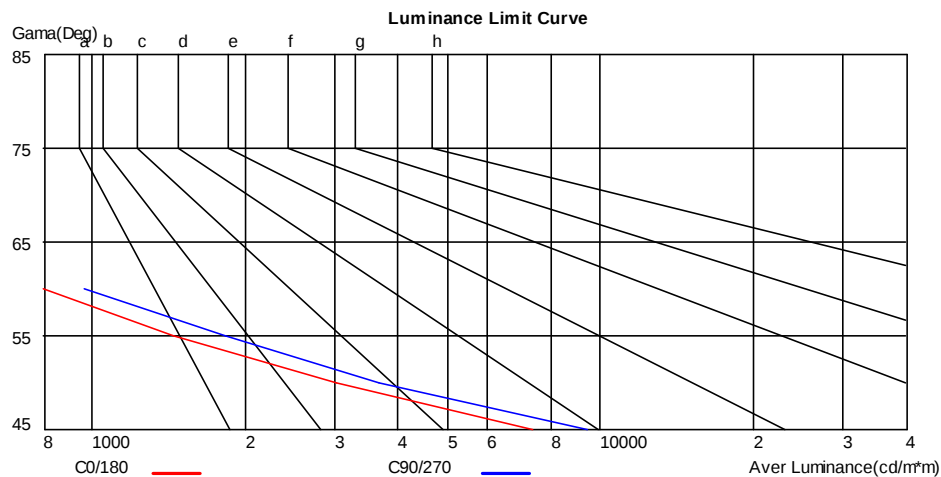
Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Luminance Limit Curve

Aver Luminance(cd/m²m)									
Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	7373.0	3032.1	1447.0	801.6	723.7	758.5	760.5	767.3	759.0
C90	9469.7	3677.5	1819.9	961.4	733.5	769.8	783.0	774.2	763.4

Glare									
Glare	Class	Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zyg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

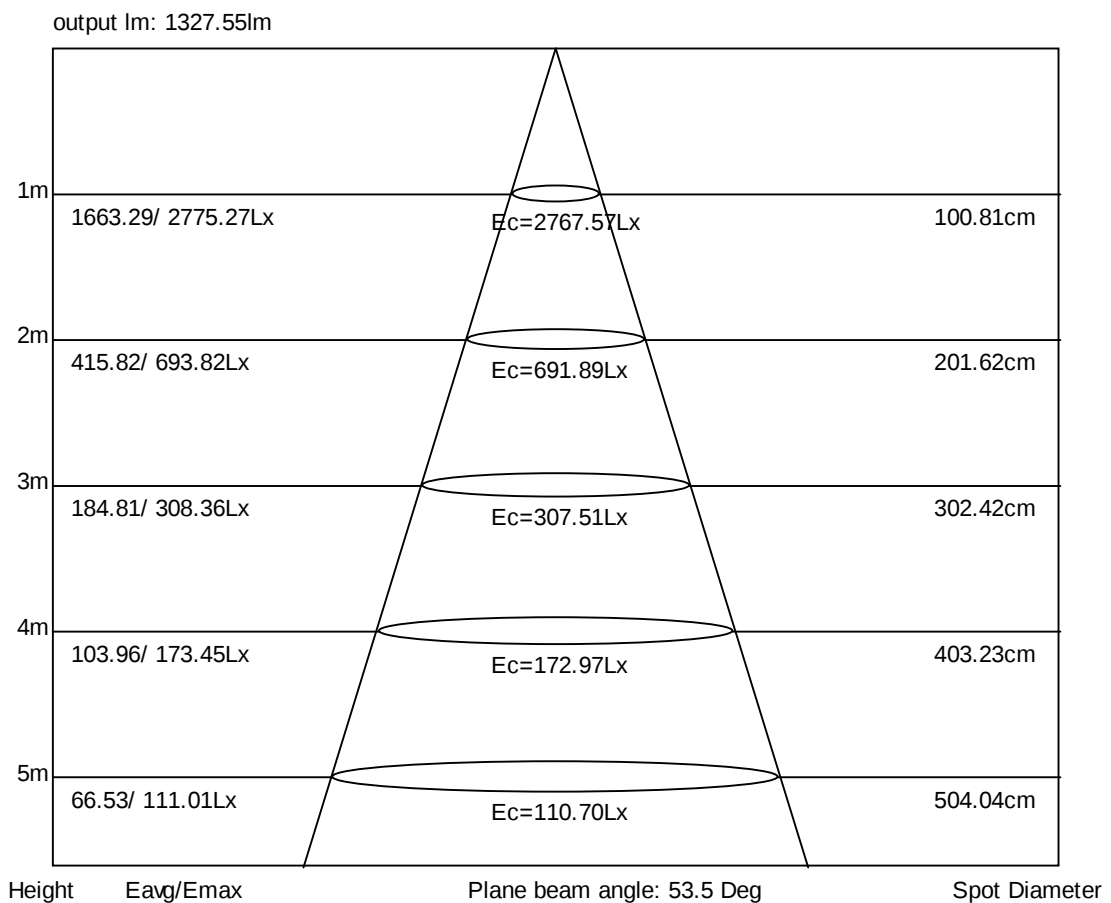
Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Average Illumination



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

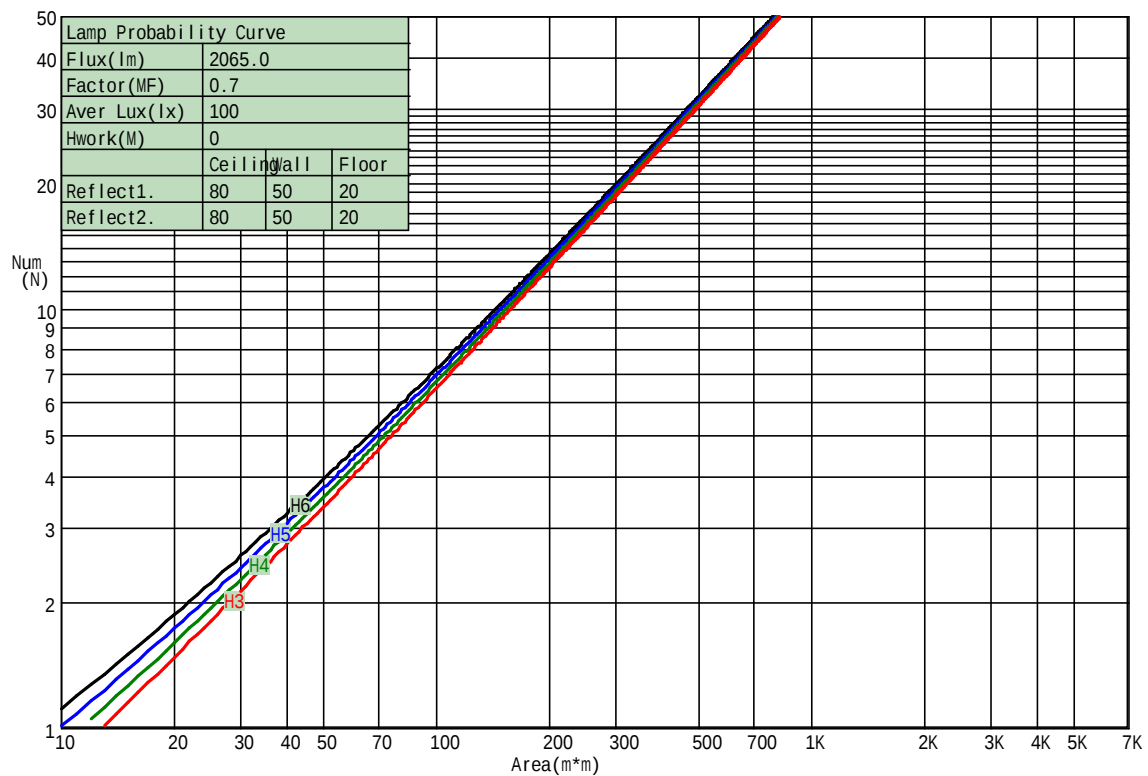
Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Lamp Probability Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

UF Table

Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5
Wall	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3
Floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.60	44	27	16	42	26	16	38	25	16
0.80	48	30	18	46	29	17	42	27	16
1.00	52	32	19	49	31	18	44	28	17
1.25	55	35	20	52	33	19	46	30	18
1.50	58	37	21	54	35	20	47	31	18
2.00	61	40	23	57	37	22	50	33	19
2.50	63	42	24	59	39	23	51	34	20
3.00	65	43	25	61	41	24	52	35	21
4.00	67	46	27	63	43	25	54	37	22
5.00	69	47	28	64	44	26	55	38	23

CoEfficients Utilization

Ceiling(%)		0			0			0			0			0	
Wall(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor (%)		0			0			0			0			0	
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02
1	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	1	0.99	0.98	0.97	0.96
2	1.04	1	0.97	1.02	0.99	0.96	0.99	0.96	0.94	0.96	0.94	0.92	0.93	0.92	0.9
3	0.98	0.93	0.89	0.96	0.92	0.89	0.94	0.9	0.87	0.91	0.89	0.86	0.89	0.87	0.85
4	0.92	0.87	0.83	0.91	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.8
5	0.87	0.82	0.78	0.86	0.81	0.77	0.84	0.8	0.77	0.83	0.79	0.76	0.81	0.78	0.75
6	0.82	0.77	0.73	0.82	0.76	0.73	0.8	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71
7	0.78	0.72	0.69	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.7	0.67
8	0.74	0.69	0.65	0.74	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.71	0.67	0.64
9	0.7	0.65	0.61	0.7	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61
10	0.67	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Wall Exitance CoEfficients

Ceiling(%)		0			0			0			0			0	
Wall(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor (%)		0			0			0			0			0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.17	0.1	0.03	0.16	0.09	0.03	0.15	0.09	0.03	0.14	0.08	0.03	0.13	0.07	0.02
2	0.16	0.09	0.03	0.16	0.09	0.03	0.14	0.08	0.02	0.13	0.08	0.02	0.13	0.07	0.02
3	0.15	0.08	0.02	0.15	0.08	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.12	0.07	0.02
4	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.07	0.02	0.12	0.06	0.02
5	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.07	0.02	0.12	0.06	0.02	0.11	0.06	0.02
6	0.13	0.07	0.02	0.13	0.06	0.02	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02
7	0.12	0.06	0.02	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.06	0.02
8	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.05	0.02	0.1	0.05	0.02
9	0.11	0.06	0.02	0.11	0.05	0.02	0.11	0.05	0.02	0.1	0.05	0.01	0.1	0.05	0.01
10	0.11	0.05	0.01	0.11	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01

Ceiling Cavity Exitance CoEfficients

Ceiling(%)		0			0			0			0			0	
Wall(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor (%)		0			0			0			0			0	
0	0.19	0.19	0.19	0.16	0.16	0.16	0.11	0.11	0.11	0.06	0.06	0.06	0.02	0.02	0.02
1	0.17	0.16	0.15	0.15	0.14	0.13	0.1	0.09	0.09	0.06	0.05	0.05	0.02	0.02	0.02
2	0.15	0.13	0.11	0.13	0.11	0.1	0.09	0.08	0.07	0.05	0.05	0.04	0.02	0.01	0.01
3	0.14	0.11	0.09	0.12	0.1	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01	0.01
4	0.13	0.1	0.07	0.11	0.09	0.06	0.08	0.06	0.05	0.04	0.03	0.03	0.01	0.01	0.01
5	0.12	0.09	0.06	0.1	0.08	0.05	0.07	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.01
6	0.11	0.08	0.05	0.1	0.07	0.04	0.07	0.05	0.03	0.04	0.03	0.02	0.01	0.01	0.01
7	0.11	0.07	0.04	0.09	0.06	0.04	0.06	0.04	0.03	0.04	0.02	0.02	0.01	0.01	0.01
8	0.1	0.06	0.04	0.09	0.05	0.03	0.06	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
9	0.1	0.06	0.03	0.08	0.05	0.03	0.06	0.04	0.02	0.03	0.02	0.01	0.01	0.01	0
10	0.09	0.05	0.03	0.08	0.05	0.02	0.05	0.03	0.02	0.03	0.02	0.01	0.01	0.01	0

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Ring-shaped Flux Data Table

Gm\C(Deg)	0	45	90	135	180	225	270	315	Range	Ring	T(lm)
5	2771	2774	2766	2760	2733	2731	2749	2755	0-5	66	66
10	2752	2761	2740	2722	2674	2657	2695	2705	5-10	196	262
15	2693	2714	2673	2651	2566	2527	2575	2585	10-15	317	578
20	2470	2570	2508	2497	2330	2184	2232	2107	15-20	414	993
25	1753	1999	1942	2109	1680	1412	1446	1206	20-25	430	1422
30	780	1034	992	1273	783	577	591	446	25-30	312	1735
35	313	365	358	480	312	269	272	249	30-35	152	1887
40	177	209	207	243	171	135	149	122	35-40	81.3	1968
45	73.7	94.4	94.7	124	67	49.3	57	44.3	40-45	44.9	2013
50	30.3	36.4	36.8	47.9	25.9	20.5	22.1	17.6	45-50	19.6	2033
55	14.5	18	18.2	21.6	11.5	8.37	9.47	6.64	50-55	8.88	2042
60	8.02	9.68	9.61	11.7	4.97	3.7	4	3.15	55-60	4.47	2046
65	7.24	7.44	7.34	7.75	3.61	3.47	3.58	3.53	60-65	2.84	2049
70	7.59	7.77	7.7	7.82	4.05	3.99	4.01	3.89	65-70	2.87	2052
75	7.6	7.85	7.83	8.02	4.29	4.17	4.2	4.1	70-75	3.11	2055
80	7.67	7.81	7.74	7.84	4.47	4.48	4.51	4.47	75-80	3.24	2058
85	7.59	7.73	7.63	7.71	4.73	4.79	4.84	4.83	80-85	3.36	2062
90	7.43	7.48	7.5	7.54	5.01	4.99	5.13	5.05	85-90	3.43	2065
95									90-95		
100									95-100		
105									100-105		
110									105-110		
115									110-115		
120									115-120		
125									120-125		
130									125-130		
135									130-135		
140									135-140		
145									140-145		
150									145-150		
155									150-155		
160									155-160		
165									160-165		
170									165-170		
175									170-175		
180									175-180		

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 223.8V I: 160.0mA P: 19.80W PF: 0.553 Test LM: 2065.04lm		
Lamp Name: Led Track Light	Lamp Type:	Weight(kg):
Lamp ID: LPTRL-20W	Lamp Spec: LPTRL-20W	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

CD Table

Gm\C(Deg)	0	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340
5.0	2771	2773	2774	2772	2768	2765	2762	2757	2745	2733	2732	2731	2737	2745	2750	2753	2757	2764
10.0	2752	2755	2760	2754	2744	2736	2727	2716	2695	2674	2666	2659	2669	2687	2697	2701	2710	2731
15.0	2693	2702	2712	2700	2682	2668	2658	2641	2603	2566	2549	2531	2543	2565	2578	2582	2597	2646
20.0	2470	2514	2559	2549	2521	2505	2501	2479	2403	2330	2266	2200	2200	2221	2205	2148	2147	2312
25.0	1753	1861	1972	1980	1954	1978	2054	2062	1868	1680	1563	1441	1423	1438	1393	1284	1266	1514
30.0	780	891	1006	1020	1001	1054	1181	1219	997	783	693	599	581	588	559	493	482	634
35.0	313	336	360	363	360	385	440	462	385	312	293	273	270	272	267	257	256	285
40.0	177	191	205	208	207	215	231	235	202	171	155	139	139	146	143	131	128	153
45.0	73.7	82.8	92.1	94.5	94.6	101	114	117	91.7	67	59.2	51.2	51.8	55.3	54.2	48.5	47.5	60.9
50.0	30.3	33	35.8	36.5	36.7	39.2	44.3	45.5	35.6	25.9	23.5	21.1	21	21.8	21.1	19.1	19	24.8
55.0	14.5	16	17.6	18.1	18.2	18.9	20.5	20.5	15.9	11.5	10.2	8.72	8.73	9.23	8.85	7.57	7.5	11
60.0	8.02	8.75	9.5	9.66	9.63	10.1	11	11	7.93	4.97	4.42	3.84	3.8	3.94	3.82	3.43	3.68	5.89
65.0	7.24	7.33	7.42	7.41	7.36	7.43	7.62	7.3	5.42	3.61	3.55	3.48	3.51	3.56	3.57	3.55	3.94	5.62
70.0	7.59	7.66	7.75	7.74	7.71	7.72	7.78	7.4	5.7	4.05	4.02	4	4	4.01	3.99	3.93	4.29	5.97
75.0	7.6	7.71	7.83	7.85	7.84	7.87	7.96	7.61	5.92	4.29	4.24	4.19	4.18	4.2	4.18	4.14	4.48	6.07
80.0	7.67	7.73	7.8	7.79	7.76	7.76	7.81	7.47	5.94	4.47	4.48	4.48	4.49	4.5	4.5	4.48	4.82	6.27
85.0	7.59	7.65	7.71	7.7	7.65	7.65	7.69	7.39	6.03	4.73	4.75	4.78	4.8	4.83	4.83	4.83	5.13	6.38
90.0	7.43	7.45	7.48	7.49	7.49	7.51	7.53	7.26	6.12	5.01	5	5	5.04	5.1	5.11	5.08	5.31	6.39
95.0																		
100.0																		
105.0																		
110.0																		
115.0																		
120.0																		
125.0																		
130.0																		
135.0																		
140.0																		
145.0																		
150.0																		
155.0																		
160.0																		
165.0																		
170.0																		
175.0																		
180.0																		

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-19

Remark: