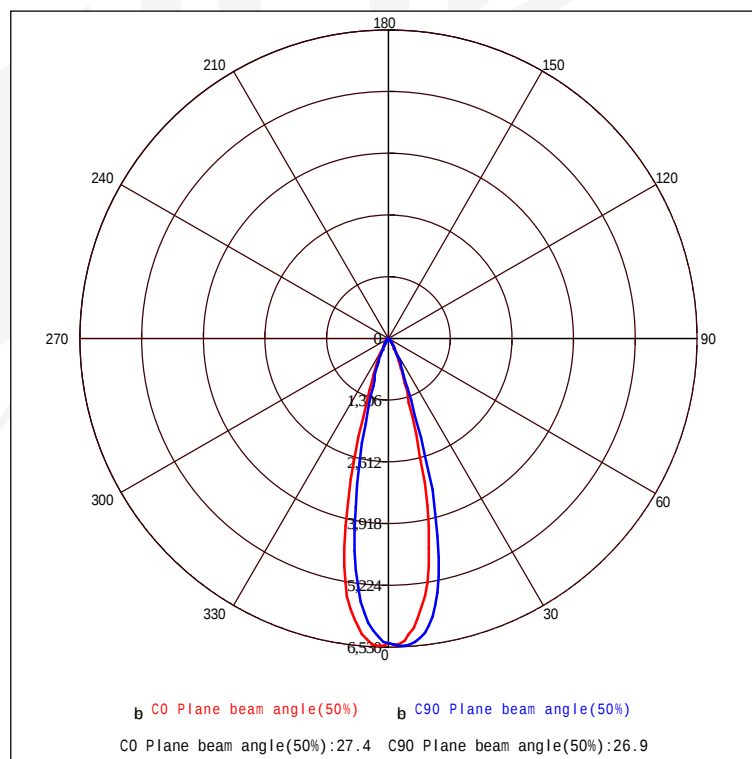


Goniophotometer Test Report

Measured Para U: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm						
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)	6587.2	Efficiency(lm/w)	82.1
Nominal P(w)		1.0	Position	135.0,3.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	1625.251	Down(C0-C180)	59.4
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)	40.6

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

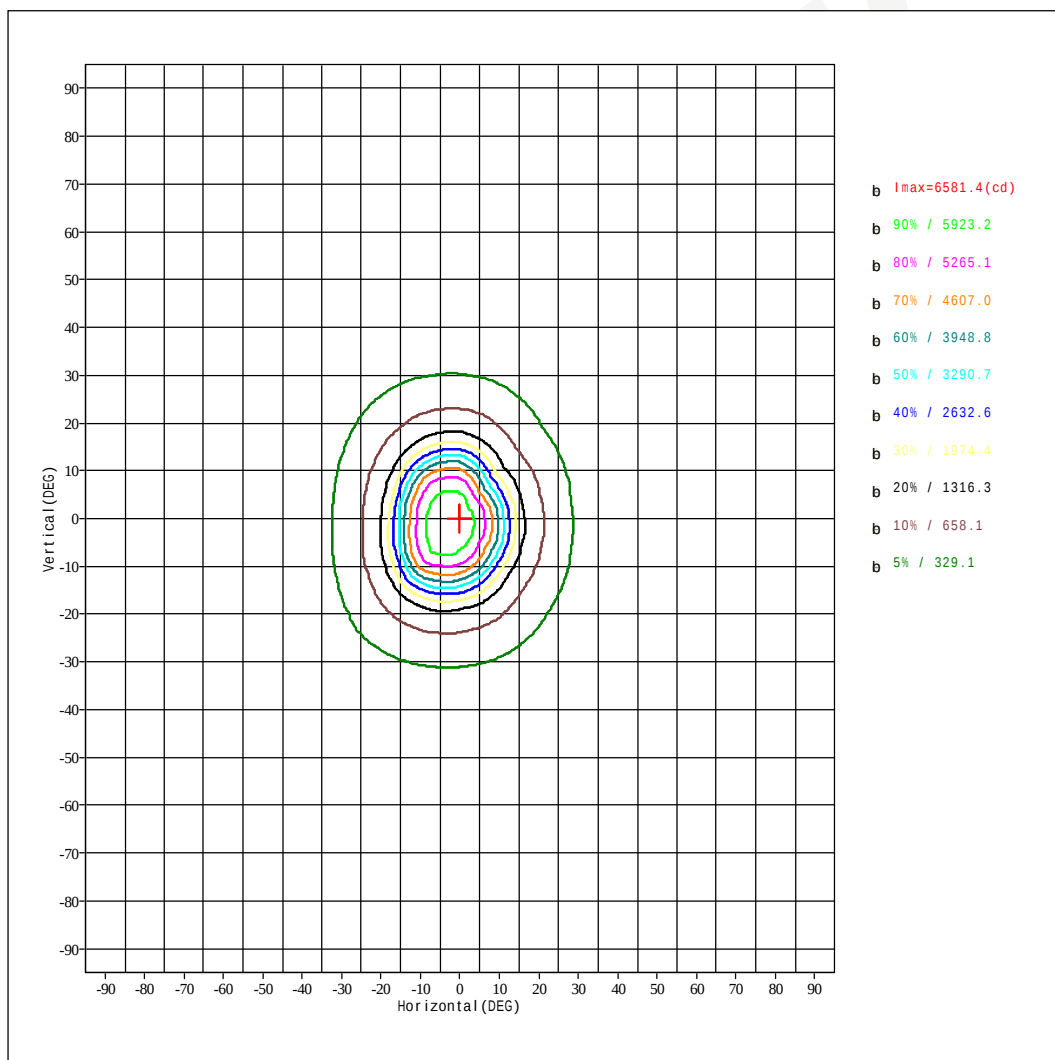
Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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

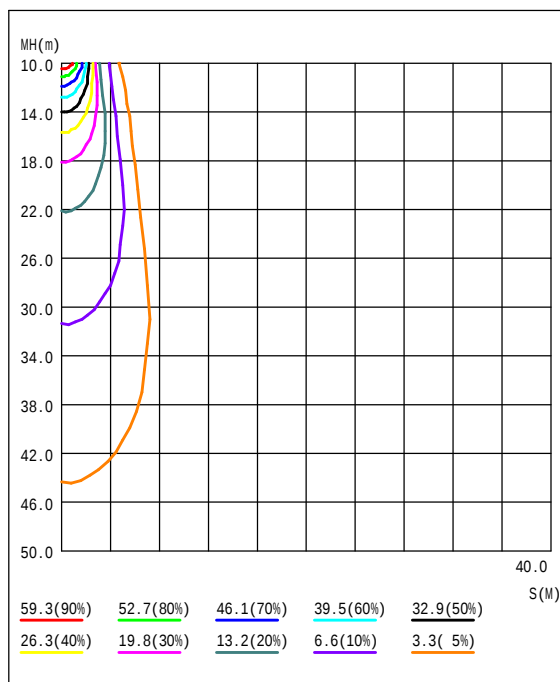
Humidity(%): 60

Date: 2025-2-19

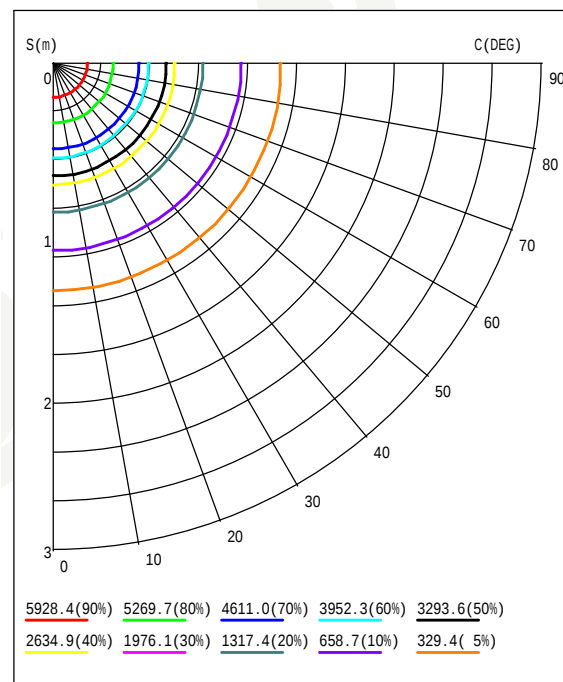
Remark:

Measured Para U: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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: zxg

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

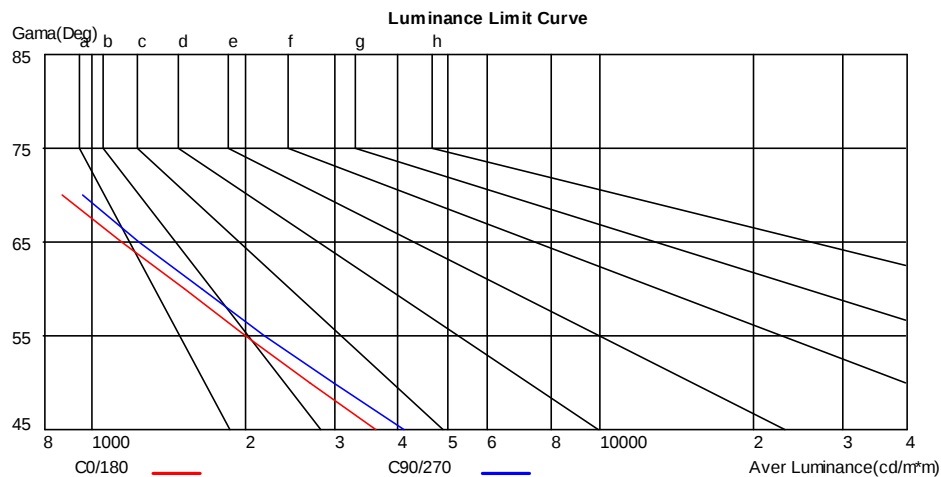
Remark:

Measured Para U: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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	3613.8	2678.8	2005.6	1513.1	1140.7	872.7	713.4	679.6	634.1
C90	4100.3	2971.9	2177.1	1638.6	1238.2	952.6	763.9	699.2	654.2

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

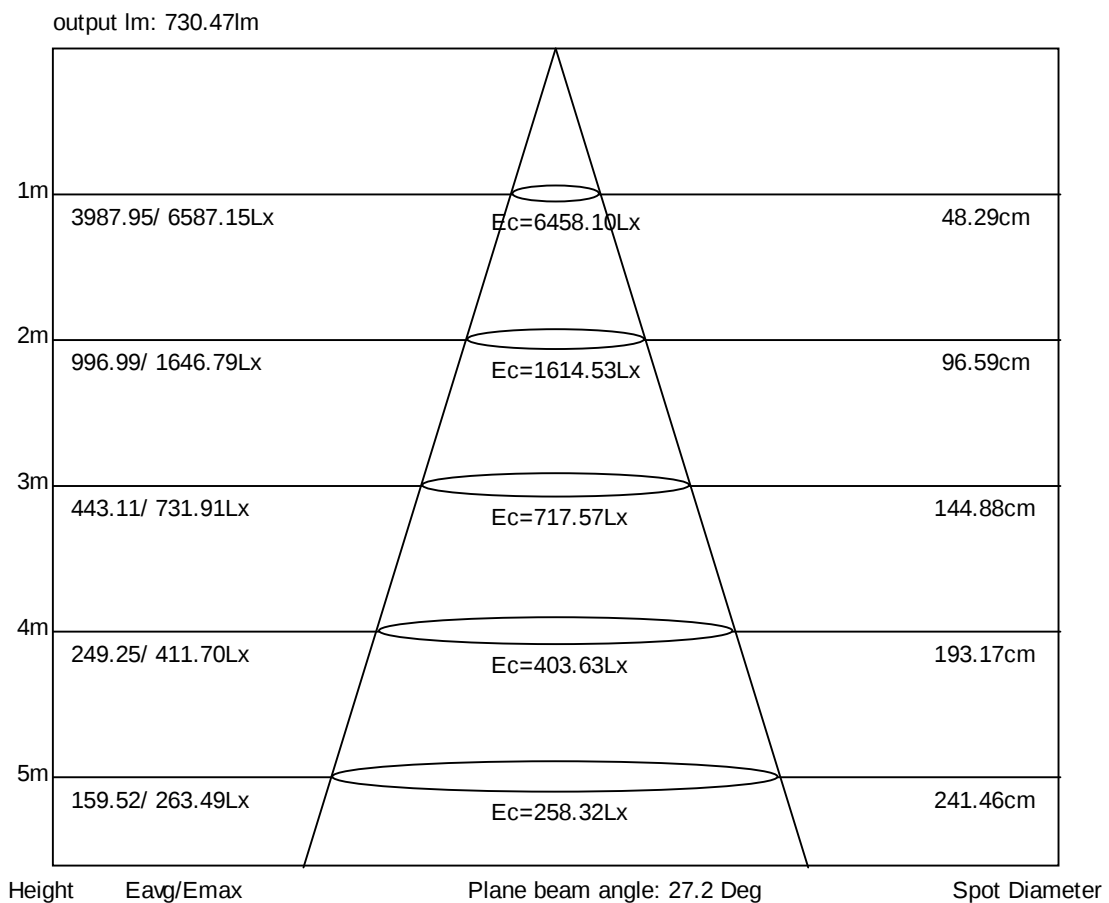
Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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

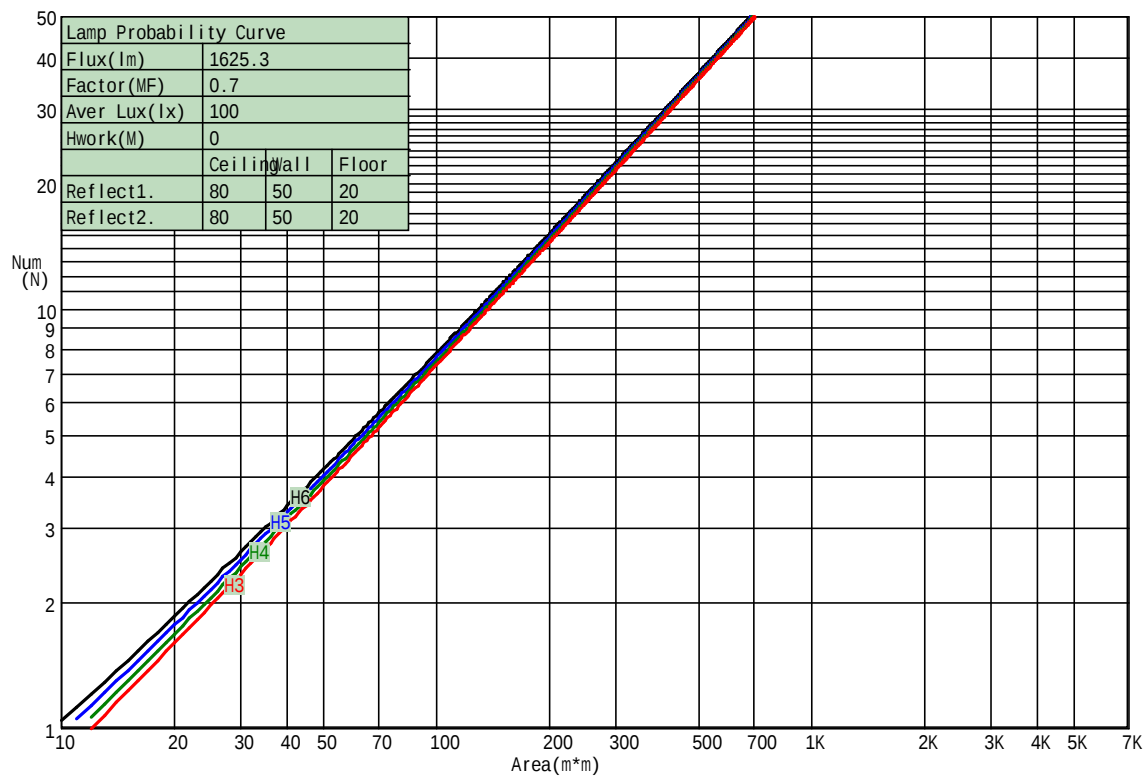
Humidity(%): 60

Date: 2025-2-19

Remark:

Measured Para U: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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	41	24	13	39	23	13	36	21	12
0.80	46	27	15	44	26	14	40	24	13
1.00	50	30	17	47	29	16	42	26	15
1.25	54	33	18	51	32	17	45	28	16
1.50	57	36	20	53	34	19	47	30	17
2.00	60	39	22	56	37	21	49	32	18
2.50	63	41	23	59	39	22	51	34	19
3.00	65	43	24	60	40	23	52	35	20
4.00	67	45	26	62	42	24	53	36	21
5.00	68	47	27	63	43	25	54	37	22

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	1.12	1.1	1.08	1.1	1.08	1.07	1.06	1.05	1.03	1.03	1.01	1	0.99	0.98	0.97
2	1.07	1.03	1.01	1.05	1.02	1	1.02	1	0.97	0.99	0.97	0.95	0.96	0.95	0.93
3	1.02	0.98	0.95	1	0.97	0.94	0.98	0.95	0.93	0.96	0.93	0.91	0.94	0.92	0.9
4	0.98	0.93	0.9	0.96	0.93	0.9	0.94	0.91	0.89	0.93	0.9	0.88	0.91	0.89	0.87
5	0.94	0.89	0.86	0.93	0.89	0.86	0.91	0.88	0.85	0.9	0.87	0.84	0.88	0.86	0.84
6	0.9	0.86	0.83	0.9	0.85	0.82	0.88	0.85	0.82	0.87	0.84	0.81	0.86	0.83	0.81
7	0.87	0.83	0.8	0.87	0.83	0.8	0.86	0.82	0.79	0.84	0.81	0.79	0.83	0.81	0.78
8	0.84	0.8	0.77	0.84	0.8	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.81	0.78	0.76
9	0.82	0.78	0.75	0.81	0.77	0.75	0.81	0.77	0.74	0.8	0.77	0.74	0.79	0.76	0.74
10	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72

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: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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	0.15	0.08	0.03	0.14	0.08	0.03	0.13	0.07	0.02	0.12	0.07	0.02	0.11	0.06	0.02
2	0.14	0.07	0.02	0.13	0.07	0.02	0.12	0.07	0.02	0.11	0.06	0.02	0.1	0.06	0.02
3	0.13	0.07	0.02	0.12	0.07	0.02	0.11	0.06	0.02	0.11	0.06	0.02	0.1	0.05	0.02
4	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.06	0.02	0.1	0.05	0.02	0.09	0.05	0.02
5	0.11	0.06	0.02	0.11	0.06	0.02	0.1	0.05	0.02	0.1	0.05	0.01	0.09	0.05	0.01
6	0.1	0.05	0.02	0.1	0.05	0.01	0.1	0.05	0.01	0.09	0.05	0.01	0.09	0.05	0.01
7	0.1	0.05	0.01	0.1	0.05	0.01	0.09	0.05	0.01	0.09	0.04	0.01	0.08	0.04	0.01
8	0.09	0.05	0.01	0.09	0.05	0.01	0.09	0.04	0.01	0.08	0.04	0.01	0.08	0.04	0.01
9	0.09	0.04	0.01	0.09	0.04	0.01	0.08	0.04	0.01	0.08	0.04	0.01	0.08	0.04	0.01
10	0.09	0.04	0.01	0.08	0.04	0.01	0.08	0.04	0.01	0.08	0.04	0.01	0.08	0.04	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	0.14	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	0.12	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	0.01	0.01	0.01
4	0.12	0.1	0.08	0.11	0.08	0.07	0.07	0.06	0.05	0.04	0.03	0.03	0.01	0.01	0.01
5	0.11	0.09	0.06	0.1	0.07	0.06	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	0.09	0.07	0.05	0.06	0.05	0.03	0.04	0.03	0.02	0.01	0.01	0.01
7	0.1	0.07	0.05	0.08	0.06	0.04	0.06	0.04	0.03	0.03	0.02	0.02	0.01	0.01	0.01
8	0.09	0.06	0.04	0.08	0.05	0.04	0.05	0.04	0.02	0.03	0.02	0.01	0.01	0.01	0
9	0.09	0.06	0.04	0.07	0.05	0.03	0.05	0.03	0.02	0.03	0.02	0.01	0.01	0.01	0
10	0.08	0.05	0.03	0.07	0.04	0.03	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: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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	6078	6312	6430	6550	6220	5795	5728	5448	0-5	150	150
10	4726	5425	5617	5968	5093	4110	3890	3367	5-10	388	538
15	2326	3187	3652	4403	2899	1834	1687	1295	10-15	436	974
20	959	1180	1236	1880	1035	783	775	659	15-20	283	1257
25	443	597	624	749	512	362	333	265	20-25	151	1409
30	179	238	259	352	198	145	145	119	25-30	82.3	1491
35	91.8	112	118	145	97.1	76.5	77.3	65.7	30-35	41.5	1532
40	55.3	64.4	66.3	77.6	56.9	46.8	47.1	40.9	35-40	24.9	1557
45	36.1	40.1	41	47.1	35.7	32.7	29.8	28.2	40-45	16.8	1574
50	26.8	27	29.7	30.7	23.4	22	21.9	19.2	45-50	12.2	1586
55	20.1	21.9	21.8	24.2	17.6	15.1	15	12.7	50-55	9.35	1596
60	15.1	16.7	16.4	18.5	11.6	9.74	9.76	7.84	55-60	7.28	1603
65	11.4	12.7	12.4	14	7.11	6.04	6	4.77	60-65	5.4	1608
70	8.73	9.64	9.53	10.7	4.53	3.96	3.95	3.31	65-70	4.02	1612
75	7.13	7.72	7.64	8.48	3.44	3.39	3.53	3.74	70-75	3.19	1616
80	6.8	7.11	6.99	7.24	4.17	4.61	4.78	5	75-80	3.04	1619
85	6.34	6.65	6.54	6.83	5.34	5.82	5.96	6.03	80-85	3.28	1622
90	5.99	6.09	6.16	6.25	6.26	6.43	6.6	6.38	85-90	3.43	1625
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: 224.1V I: 159.0mA P: 19.80W PF: 0.557 Test LM: 1625.25lm		
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	6078	6181	6286	6351	6404	6456	6510	6514	6364	6220	6034	5841	5773	5743	5667	5540	5517	5803
10.0	4726	5032	5349	5488	5575	5694	5853	5872	5476	5093	4663	4218	4038	3938	3776	3539	3516	4132
15.0	2326	2703	3093	3340	3550	3816	4157	4239	3557	2899	2433	1951	1786	1719	1601	1423	1407	1875
20.0	959	1056	1156	1198	1224	1377	1668	1787	1405	1035	925	810	780	777	750	697	692	828
25.0	443	511	580	606	618	651	708	723	616	512	446	378	353	339	318	288	285	366
30.0	179	205	232	245	255	280	322	335	266	198	175	150	145	145	139	127	125	153
35.0	91.8	101	110	114	116	124	136	140	118	97.1	88.1	78.7	76.7	77.1	74.8	69.5	68.5	80.4
40.0	55.3	59.2	63.4	65	65.9	68.7	73.9	75.3	65.9	56.9	52.5	47.9	46.9	47	45.8	42.9	42.5	49
45.0	36.1	37.9	39.7	40.4	40.8	42.3	45.1	45.9	40.7	35.7	34.4	33	31.7	30.4	29.5	28.8	29.1	32.7
50.0	26.8	26.9	26.9	27.9	29.1	29.9	30.4	29.9	26.6	23.4	22.8	22.2	22	22	21.3	20.1	20	23.5
55.0	20.1	20.9	21.7	21.9	21.8	22.3	23.4	23.5	20.5	17.6	16.5	15.3	15	15	14.5	13.5	13.5	16.9
60.0	15.1	15.8	16.5	16.6	16.5	16.8	17.8	17.7	14.6	11.6	10.8	9.94	9.75	9.76	9.34	8.47	8.63	11.9
65.0	11.4	12	12.5	12.6	12.4	12.7	13.5	13.3	10.1	7.11	6.64	6.15	6.03	6.01	5.73	5.18	5.5	8.5
70.0	8.73	9.13	9.54	9.6	9.55	9.79	10.3	10.1	7.25	4.53	4.28	4.03	3.96	3.96	3.81	3.52	3.9	6.36
75.0	7.13	7.39	7.66	7.7	7.66	7.82	8.2	7.93	5.64	3.44	3.42	3.4	3.44	3.5	3.58	3.67	4.11	5.65
80.0	6.8	6.93	7.07	7.07	7.02	7.05	7.16	6.9	5.51	4.17	4.36	4.56	4.66	4.74	4.83	4.93	5.2	6.01
85.0	6.34	6.48	6.62	6.62	6.57	6.6	6.74	6.67	5.99	5.34	5.55	5.76	5.86	5.93	5.98	6.01	6.07	6.21
90.0	5.99	6.03	6.08	6.11	6.15	6.18	6.22	6.25	6.26	6.26	6.33	6.41	6.49	6.56	6.55	6.45	6.34	6.16
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: