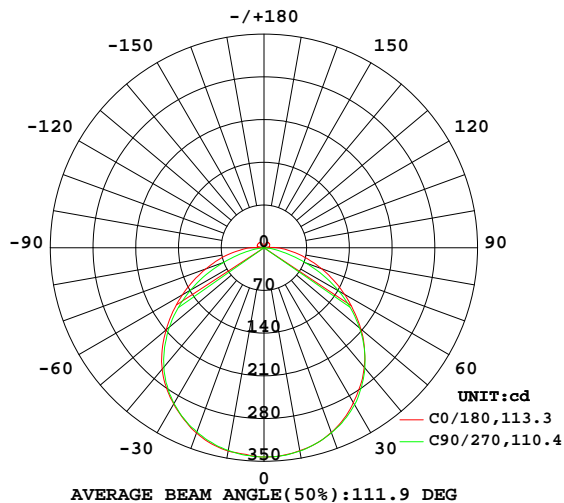


LUMINAIRE PHOTOMETRIC TEST REPORT

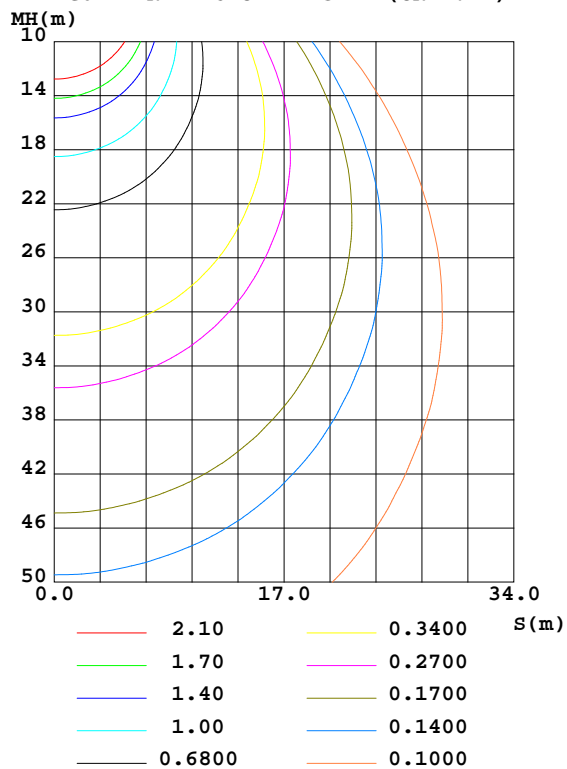
Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.41 lm/W			
CR 865 8.5W C0/180	F1 1M IP67 21015137	I _{max} (cd)	342.9	S/MH(C0/180)	1.28
NOMINAL POWER(W)	8.5	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1028.1	η UP,DN(C0-180)	1.7,48.5
NOMINAL FLUX(lm)	1028.14	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.8,48.0
LAMPS INSIDE	1	η up(%)	3.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	96.5	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60%
Test Distance:26.000m [K=0.3846]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	337.8	339.2	338.2	338.0	338.3	337.0	337.2	338.2	0- 10	32.50	32.50	3.16,3.16
20	322.2	324.2	322.7	323.2	323.1	321.6	321.3	322.2	10- 20	93.71	126.2	12.3,12.3
30	292.9	297.7	296.8	295.8	295.7	293.6	295.0	296.8	20- 30	143.2	269.5	26.2,26.2
40	255.4	257.7	257.0	256.2	259.6	255.4	255.3	255.6	30- 40	173.7	443.2	43.1,43.1
50	207.0	206.7	204.6	206.0	209.2	205.4	202.5	202.3	40- 50	179.5	622.7	60.6,60.6
60	152.1	146.7	141.3	148.0	154.6	146.7	139.1	144.6	50- 60	158.4	781.0	76.76
70	100.2	90.43	72.77	89.80	101.5	88.93	70.60	88.81	60- 70	116.4	897.5	87.3,87.3
80	55.18	44.08	19.39	43.56	56.51	41.30	17.66	43.47	70- 80	66.96	964.4	93.8,93.8
90	22.90	14.68	0.8014	14.50	22.91	11.99	0.0435	15.71	80- 90	27.75	992.2	96.5,96.5
100	2.789	4.882	0	5.121	4.594	7.073	0	6.243	90-100	4.520	996.7	96.9,96.9
110	9.819	7.149	0	7.095	11.78	8.298	0.4443	8.121	100-110	6.382	1003	97.6,97.6
120	11.05	7.908	0	7.713	11.96	8.405	0.8176	8.121	110-120	6.805	1010	98.2,98.2
130	11.29	8.372	0.2655	7.676	11.73	8.234	0.9774	8.121	120-130	6.250	1016	98.8,98.8
140	11.18	8.319	0.2973	7.611	11.27	7.409	0.9774	8.121	130-140	5.144	1021	99.3,99.3
150	10.59	3.824	0.3292	0.8831	9.476	6.142	0.9774	8.121	140-150	3.964	1025	99.7,99.7
160	0.5121	5.060	0.3764	1.035	3.735	0.7883	0.9774	8.121	150-160	1.854	1027	99.9,99.9
170	2.997	2.190	1.154	0.6393	1.058	1.668	0.9774	8.121	160-170	0.8345	1028	100,100
180	0.6847	0.7865	1.333	0.5984	0.5123	2.548	0.9774	8.121	170-180	0.2190	1028	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 533.95 lm

%lum = 51.9%

%lamp = 51.9%

Conical surface Flux(120deg): 781.05 lm

%lum = 76.0%

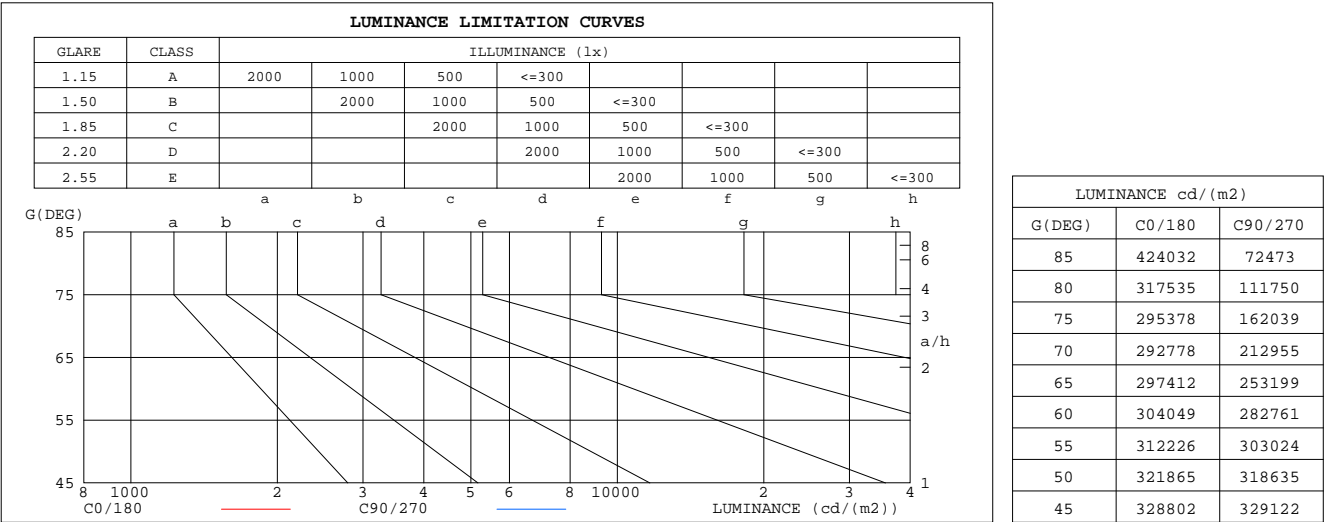
%lamp = 76.0%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:26.000m [K=0.3846]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60%
Test Distance:26.000m [K=0.3846]
Remarks:

WEC AND CCEC

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm									
NAME:				TYPE:LED				WEIGHT:N/A	
SPEC.:N/A				DIM.:				SERIAL No.:N/A	
MFR.:				SUR.:				Shielding Angle:N/A	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.314	.179	.057	.306	.175	.056	.291	.167	.053	.277	.160	.051	.264	.153	.049	
2.0	.292	.160	.049	.285	.157	.048	.271	.151	.047	.259	.145	.045	.247	.140	.044	
3.0	.269	.143	.043	.263	.141	.042	.251	.136	.041	.240	.131	.040	.229	.127	.039	
4.0	.248	.129	.038	.242	.127	.037	.232	.123	.037	.222	.119	.036	.212	.115	.035	
5.0	.229	.117	.034	.224	.115	.034	.214	.112	.033	.205	.108	.032	.197	.105	.032	
6.0	.212	.107	.030	.208	.105	.030	.199	.102	.030	.191	.099	.029	.184	.097	.029	
7.0	.198	.098	.028	.194	.096	.027	.186	.094	.027	.179	.092	.027	.172	.089	.026	
8.0	.185	.090	.025	.181	.089	.025	.174	.087	.025	.167	.085	.024	.161	.083	.024	
9.0	.173	.084	.023	.170	.083	.023	.163	.081	.023	.157	.079	.023	.152	.077	.022	
10.0	.163	.078	.022	.160	.077	.022	.154	.075	.021	.148	.074	.021	.143	.072	.021	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.217	.217	.217	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.208	.183	.161	.178	.157	.138	.121	.108	.096	.070	.063	.056	.022	.020	.018	
2.0	.199	.159	.125	.171	.137	.108	.117	.095	.075	.067	.055	.044	.022	.018	.014	
3.0	.192	.141	.102	.164	.122	.088	.113	.085	.062	.065	.050	.036	.021	.016	.012	
4.0	.184	.128	.086	.158	.111	.075	.109	.077	.052	.063	.045	.031	.020	.015	.010	
5.0	.176	.118	.075	.152	.102	.065	.104	.071	.046	.060	.042	.027	.019	.014	.009	
6.0	.169	.110	.067	.146	.095	.058	.100	.066	.041	.058	.039	.024	.019	.013	.008	
7.0	.163	.103	.061	.140	.089	.053	.097	.062	.038	.056	.037	.022	.018	.012	.007	
8.0	.156	.097	.056	.134	.084	.049	.093	.059	.035	.054	.035	.021	.018	.011	.007	
9.0	.150	.092	.053	.129	.080	.046	.090	.056	.033	.052	.033	.020	.017	.011	.006	
10.0	.144	.088	.050	.125	.076	.044	.086	.054	.031	.050	.032	.019	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:26.000m [K=0.3846]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm										
NAME:					TYPE:LED			WEIGHT:N/A		
SPEC.:N/A					DIM.:			SERIAL No.:N/A		
MFR.:					SUR.:			Shielding Angle:N/A		
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	32.6	34.1	33.0	34.4	34.7	32.4	33.9	32.8	34.2	34.5
3H	34.2	35.6	34.6	35.9	36.2	33.6	35.0	33.9	35.3	35.6
4H	35.0	36.3	35.3	36.6	36.9	33.9	35.2	34.3	35.5	35.9
6H	35.6	36.9	36.0	37.2	37.5	34.1	35.3	34.5	35.6	36.0
8H	36.0	37.1	36.4	37.5	37.8	34.1	35.3	34.5	35.6	36.0
12H	36.3	37.4	36.7	37.8	38.1	34.1	35.2	34.5	35.6	35.9
4H 2H	33.2	34.5	33.5	34.8	35.1	33.0	34.3	33.4	34.6	34.9
3H	35.0	36.1	35.4	36.5	36.8	34.4	35.5	34.8	35.9	36.2
4H	35.9	36.9	36.3	37.3	37.7	34.8	35.9	35.3	36.3	36.7
6H	36.7	37.6	37.2	38.0	38.5	35.1	36.0	35.6	36.4	36.9
8H	37.1	38.0	37.6	38.4	38.8	35.2	36.0	35.6	36.5	36.9
12H	37.5	38.3	38.0	38.8	39.2	35.2	36.0	35.7	36.4	36.9
8H 4H	36.1	36.9	36.5	37.4	37.8	35.2	36.0	35.7	36.5	36.9
6H	37.1	37.8	37.6	38.3	38.8	35.6	36.4	36.1	36.8	37.3
8H	37.7	38.3	38.2	38.8	39.3	35.8	36.4	36.3	36.9	37.4
12H	38.3	38.8	38.8	39.3	39.9	35.9	36.4	36.4	37.0	37.5
12H 4H	36.1	36.9	36.6	37.3	37.8	35.2	36.0	35.7	36.5	37.0
6H	37.2	37.8	37.7	38.3	38.8	35.8	36.4	36.3	36.9	37.4
8H	37.8	38.3	38.3	38.9	39.4	36.0	36.6	36.5	37.1	37.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 1028 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 0.1$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:26.000m [K=0.3846]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

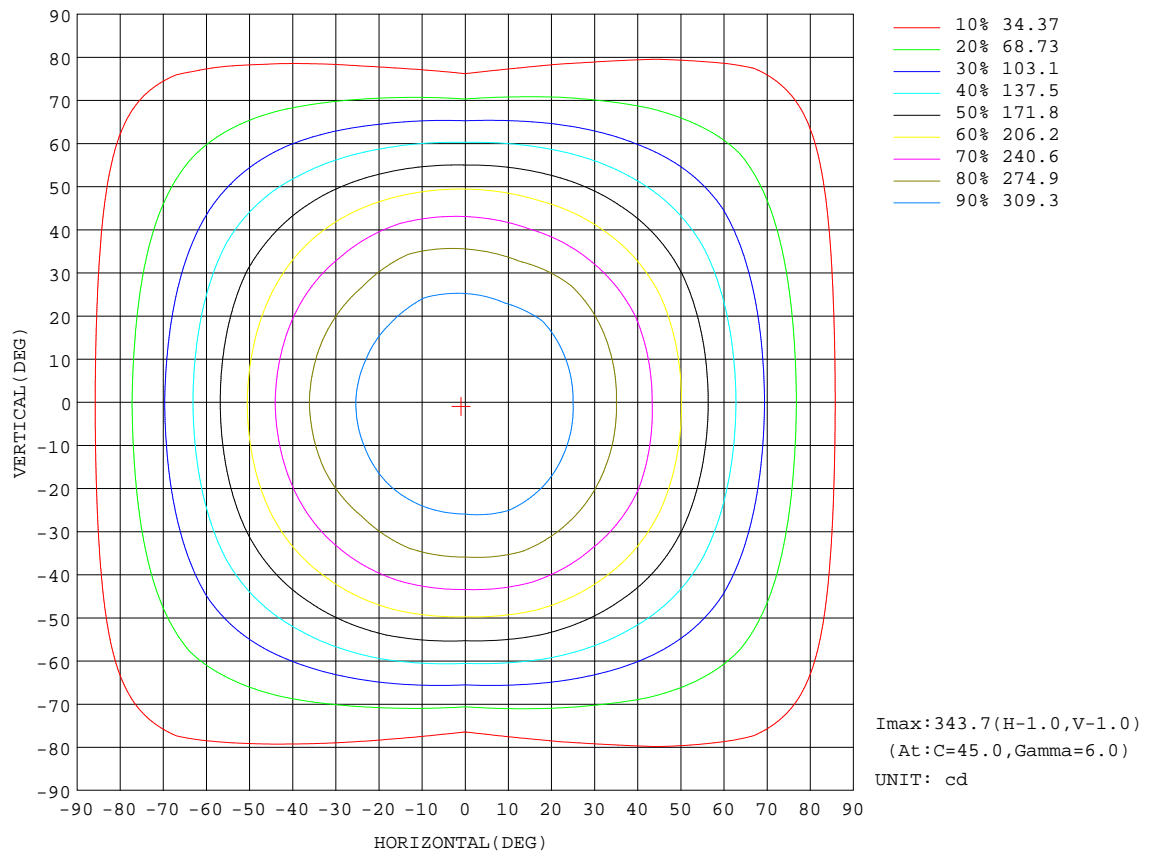
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	45	38	56	45	38	54	44	38	31
0.80	66	55	47	65	54	47	63	53	47	40
1.00	75	64	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	64	77	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	67
2.50	98	90	83	95	88	82	91	85	80	71
3.00	101	94	88	99	92	87	94	89	84	75
4.00	105	99	94	102	97	93	97	93	89	80
5.00	107	102	98	105	100	96	100	96	93	82
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:26.000m [K=0.3846]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

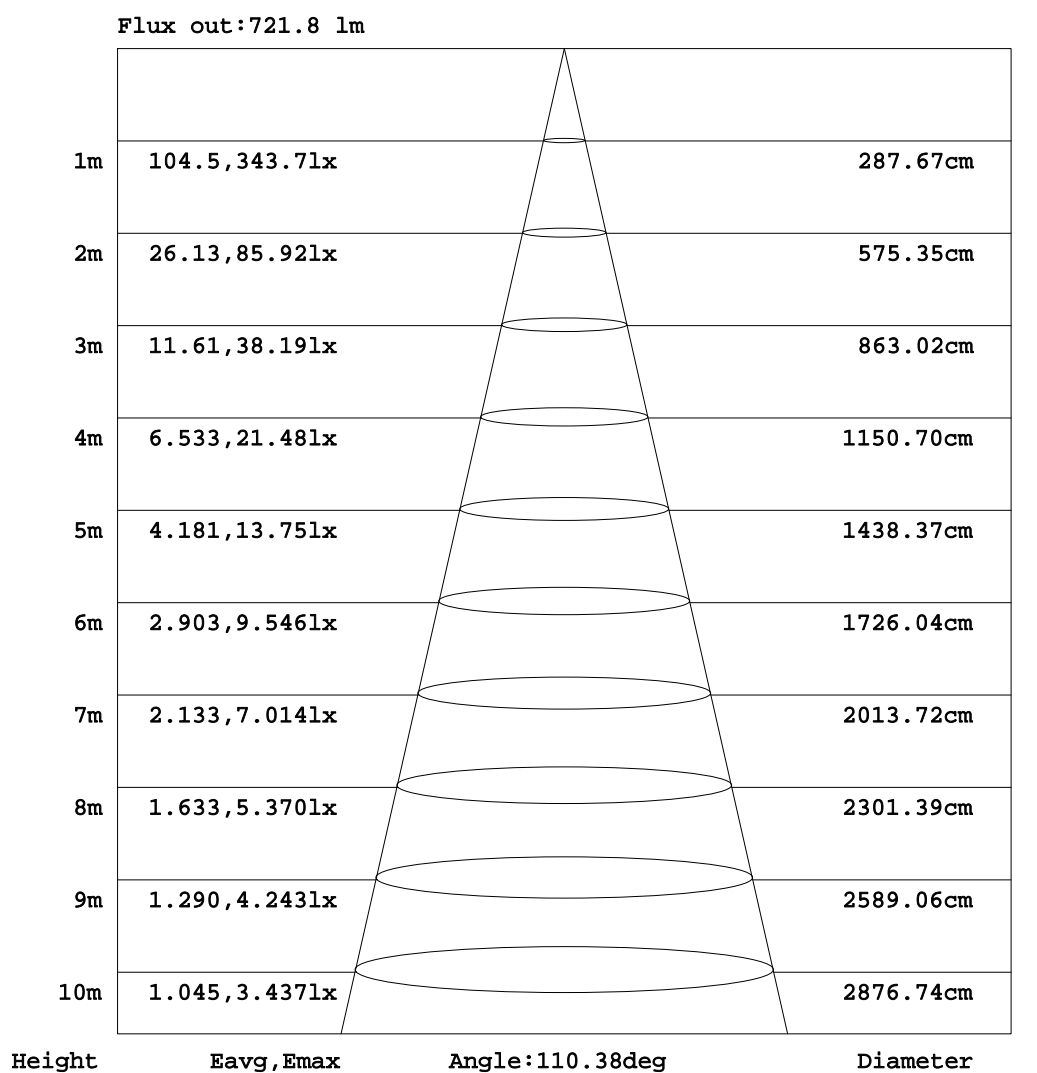


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 24.9DEG
Operators: Zero huang
Test Date: 2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity: 60%
Test Distance: 26.000m [K=0.3846]
Remarks:

AAI Figure

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

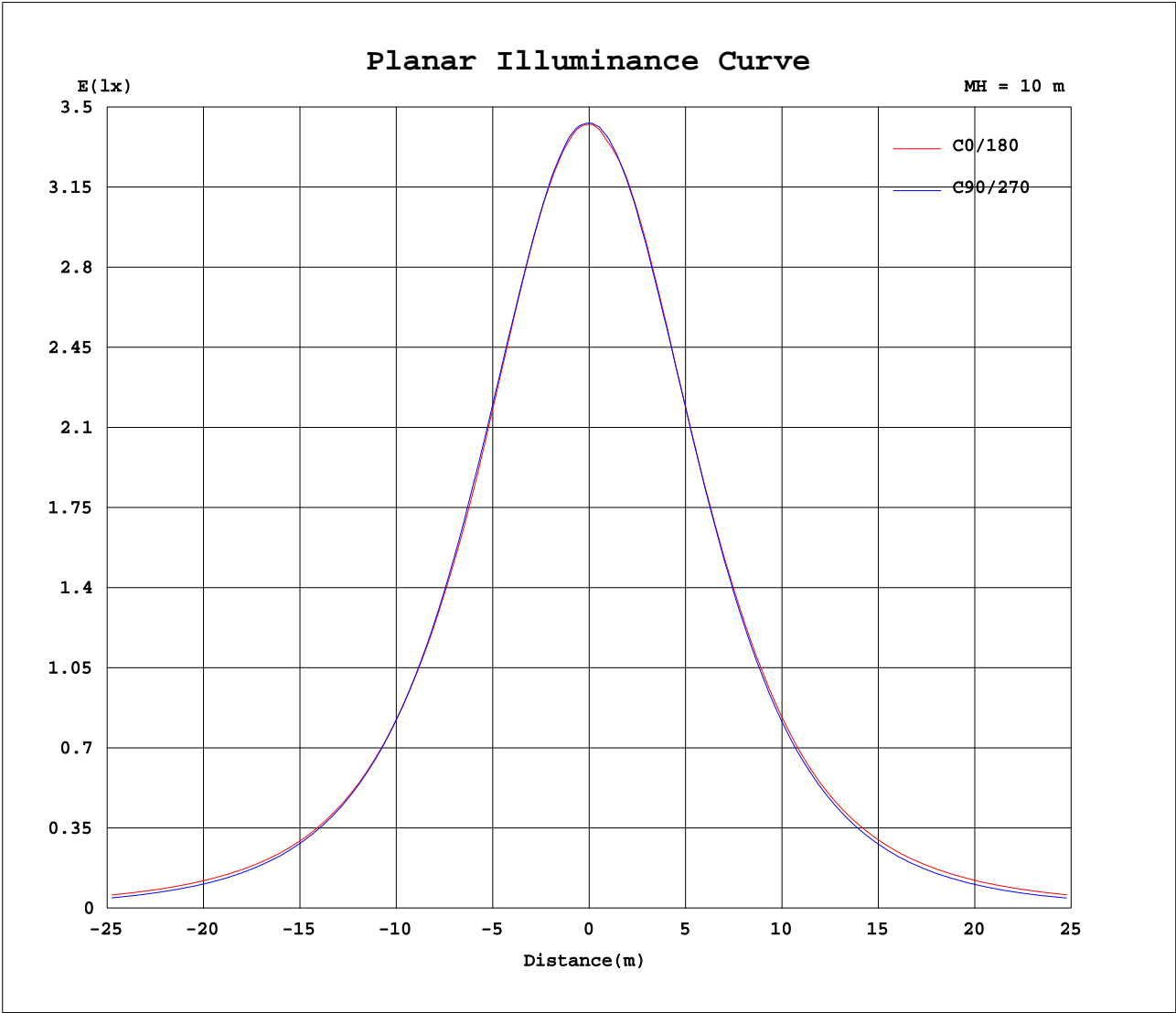


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60%
Test Distance:26.000m [K=0.3846]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-12-29

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60%
Test Distance:26.000m [K=0.3846]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.006V I:0.3776A P:9.0657W PF:1.0000 Freq:0Hz Lamp Flux:1028.14x1 lm																		
NAME:									TYPE:LED					WEIGHT:N/A				
SPEC.:N/A									DIM.:					SERIAL No.:N/A				
MFR.:									SUR.:					Shielding Angle:N/A				

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343	343			
5	342	342	343	343	342	343	342	342	340	341	341	341	341	341	342	342			
10	338	338	339	340	338	339	338	339	338	337	337	338	337	337	338	338			
15	332	331	333	334	332	333	332	333	333	331	331	331	330	330	332	332			
20	322	322	324	327	323	325	323	324	323	321	322	323	321	321	322	323			
25	309	310	313	315	311	312	311	311	311	309	309	311	310	309	310	311			
30	293	295	298	300	297	298	296	296	296	293	294	299	295	293	297	295			
35	275	276	279	283	278	279	275	279	279	276	276	281	276	274	278	277			
40	255	258	258	261	257	257	256	259	260	258	255	260	255	252	256	257			
45	233	236	234	236	233	234	233	235	236	234	232	233	230	228	229	234			
50	207	208	207	208	205	208	206	209	209	207	205	204	202	202	202	208			
55	179	178	177	178	174	179	178	182	182	181	177	174	172	173	174	179			
60	152	150	147	146	141	147	148	154	155	155	147	142	139	142	145	151			
65	126	123	118	113	107	113	118	126	127	124	117	110	105	111	116	124			
70	100	97.9	90.4	81.9	72.8	81.5	89.8	99.3	102	96.2	88.9	79.5	70.6	80.8	88.8	98.3			
75	76.5	74.0	65.7	54.6	41.9	53.9	64.8	74.8	78.2	72.1	63.0	51.6	40.5	53.3	64.4	74.1			
80	55.2	53.1	44.1	32.8	19.4	32.0	43.6	53.5	56.5	51.1	41.3	30.0	17.7	31.5	43.5	53.1			
85	37.0	34.5	27.2	17.5	6.31	17.1	26.3	34.7	37.0	33.0	24.9	14.2	4.59	16.5	26.7	34.8			
90	22.9	20.4	14.7	8.28	0.80	8.83	14.5	22.3	22.9	18.1	12.0	6.81	0.04	7.69	15.7	21.5			
95	1.77	0.85	0.03	0.09	0.00	0.35	0.00	0.11	0.00	0.01	0.02	0.37	0.00	0.54	0.00	0.09			
100	2.79	2.96	4.88	1.41	0.00	1.39	5.12	7.70	4.59	4.83	7.07	3.08	0.00	2.39	6.24	5.70			
105	9.68	8.67	6.45	2.81	0.00	2.61	6.67	9.76	11.6	10.4	7.94	3.52	0.25	2.55	7.61	9.67			
110	9.82	9.43	7.15	3.10	0.00	2.87	7.10	10.2	11.8	11.1	8.30	3.52	0.44	2.70	8.12	10.4			
115	10.2	9.87	7.65	3.30	0.00	2.42	7.52	11.1	12.0	11.4	8.42	3.51	0.62	2.85	8.12	11.0			
120	11.0	10.8	7.91	3.47	0.00	1.97	7.71	11.2	12.0	11.5	8.41	3.18	0.82	3.01	8.12	11.0			
125	11.2	11.1	8.09	3.15	0.09	1.51	7.77	11.2	11.9	11.4	8.39	2.91	0.95	2.96	8.12	11.0			
130	11.3	11.1	8.37	2.03	0.27	1.06	7.68	11.2	11.7	11.3	8.23	2.19	0.98	2.79	8.12	11.0			
135	11.2	11.0	8.35	0.91	0.28	0.70	7.64	11.2	11.6	11.3	7.85	0.53	0.98	2.79	8.12	11.0			
140	11.2	11.0	8.32	0.59	0.30	1.40	7.61	11.2	11.3	11.0	7.41	1.40	0.98	2.79	8.12	11.0			
145	11.1	10.6	8.29	3.13	0.31	0.96	6.75	10.5	10.7	9.70	6.80	0.70	0.98	2.79	8.12	11.0			
150	10.6	9.96	3.82	3.04	0.33	0.78	0.88	9.24	9.48	8.83	6.14	0.67	0.98	2.79	8.12	11.0			
155	9.49	7.60	0.52	2.91	0.35	0.76	2.13	1.95	7.94	7.54	0.52	0.65	0.98	2.79	8.12	11.0			
160	0.51	3.95	5.06	2.73	0.38	0.75	1.03	3.04	3.74	0.52	0.79	0.62	0.98	2.79	8.12	11.0			
165	4.80	5.15	3.93	2.33	0.43	0.73	0.67	0.95	1.45	1.35	1.23	0.59	0.98	2.79	8.12	11.0			
170	3.00	2.84	2.19	1.76	1.15	0.72	0.64	0.66	1.06	0.68	1.67	0.57	0.98	2.79	8.12	11.0			
175	1.63	1.21	1.14	1.23	1.37	0.70	0.61	0.62	0.67	0.26	2.11	0.54	0.98	2.79	8.12	11.0			
180	0.68	0.69	0.79	1.06	1.33	0.70	0.60	0.60	0.51	0.00	2.55	0.53	0.98	2.79	8.12	11.0			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-12-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:26.000m [K=0.3846]
 Remarks: