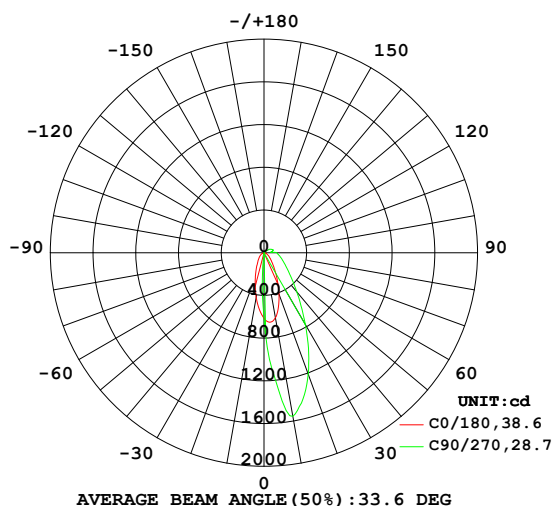


LUMINAIRE PHOTOMETRIC TEST REPORT

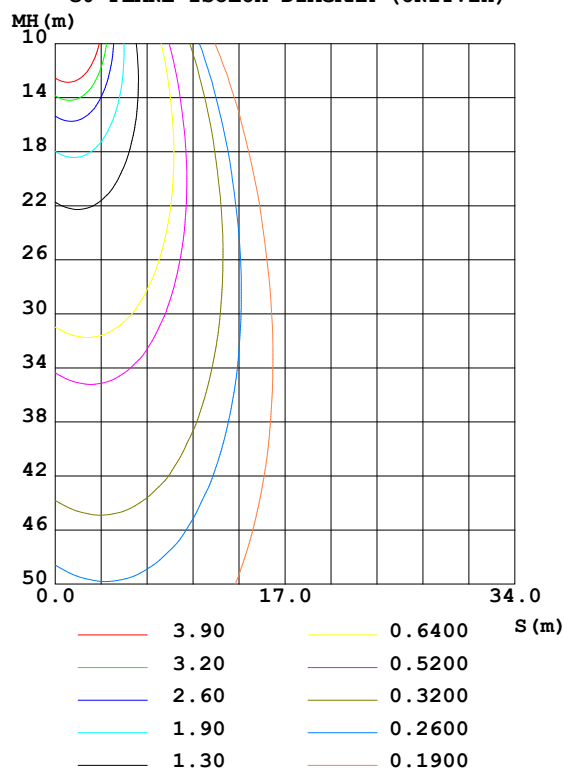
Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.: Φ 275*76	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 58.12 lm/W			
MODEL	E275 18W 000 4000K	I _{max} (cd)	1697	S/MH(C0/180)	0.51
NOMINAL POWER(W)	18	LOR(%)	100.0	S/MH(C90/270)	0.12
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1046.0	η UP,DN(C0-180)	8.4,87.8
NOMINAL FLUX(lm)	1046.05	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,3.6
LAMPS INSIDE	1	η up(%)	8.6	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	91.4	CIBSE SHR MAX	0.50

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:2023-06-29

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=1.4396]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	617.8	1504	1555	1078	424.0	39.08	6.209	42.41	0- 10	62.19	62.19	5.95,5.95
20	410.9	1339	1210	797.8	237.0	0.1621	0.1564	0.6994	10- 20	166.3	228.5	21.8,21.8
30	220.1	820.7	774.0	486.4	131.7	0.1621	0.1564	0.2339	20- 30	183.6	412.1	39.4,39.4
40	117.7	475.6	478.7	313.2	80.41	0.1621	0.2346	0.2339	30- 40	150.3	562.4	53.8,53.8
50	69.75	303.7	316.4	224.4	52.11	0.2432	0.3127	0.2339	40- 50	116.8	679.2	64.9,64.9
60	42.99	216.3	230.6	171.0	31.29	0.2432	0.3909	0.2339	50- 60	93.58	772.8	73.9,73.9
70	24.32	162.1	180.5	131.6	15.84	0.2432	0.3909	0.2339	60- 70	76.14	848.9	81.2,81.2
80	11.25	121.5	144.2	100.1	3.945	0.3243	0.3909	0.2339	70- 80	60.58	909.5	86.9,86.9
90	2.323	88.16	120.5	82.08	0	0.3243	0.3909	0.2339	80- 90	46.71	956.2	91.4,91.4
100	0	40.13	77.59	43.95	0	0.4055	0.6255	0.4712	90-100	28.38	984.6	94.1,94.1
110	0	36.00	87.51	53.02	0	0.5675	0.6255	0.6238	100-110	23.30	1008	96.4,96.4
120	0	28.21	67.28	43.15	0	0.5675	0.6255	0.6238	110-120	19.40	1027	98.2,98.2
130	0	12.59	29.16	24.73	0	0.5675	0.7796	0.6238	120-130	11.43	1039	99.3,99.3
140	0	1.952	17.53	10.02	0.1654	0.9749	1.095	0.7798	130-140	5.018	1044	99.8,99.8
150	0	1.295	3.928	0.6286	0.7461	1.459	2.111	1.405	140-150	1.327	1045	99.9,99.9
160	0.0827	1.621	0.4691	0	1.489	1.536	2.267	1.482	150-160	0.5607	1046	100,100
170	0.7438	1.054	0.3909	0.2310	1.489	1.378	1.642	1.482	160-170	0.2803	1046	100,100
180	1.323	1.216	1.403	1.170	1.406	1.296	1.402	1.323	170-180	0.1067	1046	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 624.29 lm

%lum = 59.7%

%lamp = 59.7%

Conical surface Flux(120deg): 772.81 lm

%lum = 73.9%

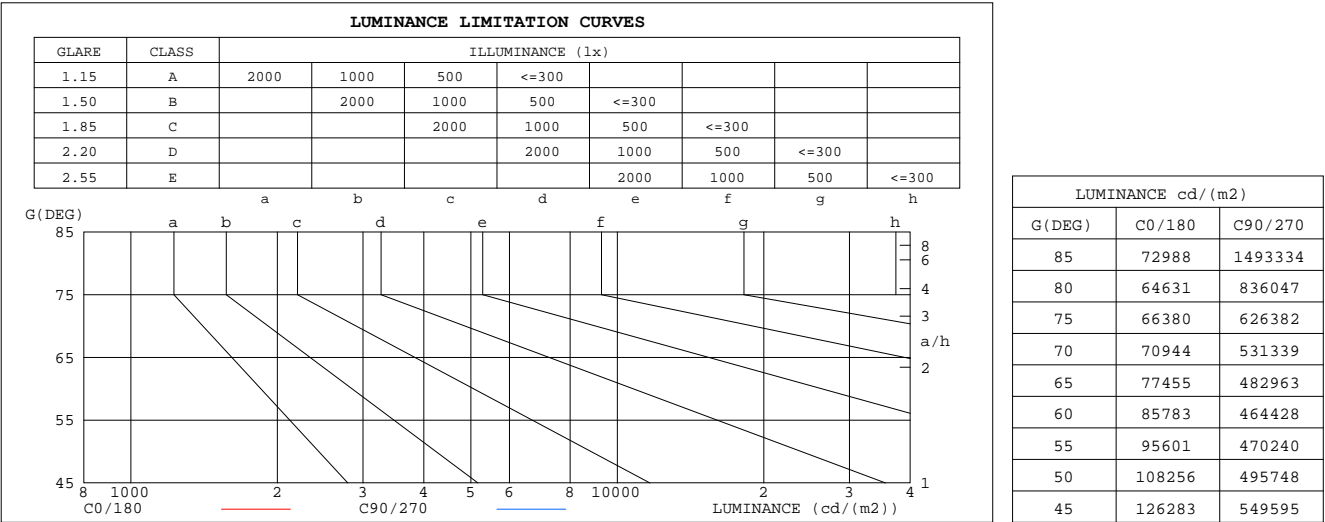
%lamp = 73.9%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-06-29

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:26.000m [K=1.4396]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.: Φ275*76	SERIAL No.:
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:2023-06-29

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=1.4396]
Remarks:

WEC AND CCEC

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.: Φ 275*76	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:N/A

pcc	80%			70%			50%			30%			10%			0	
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.303	.172	.055	.293	.167	.053	.275	.158	.050	.258	.149	.048	.243	.141	.045		
2.0	.269	.148	.045	.261	.144	.044	.245	.136	.042	.230	.129	.040	.216	.122	.039		
3.0	.244	.130	.039	.236	.127	.038	.222	.120	.037	.209	.114	.035	.197	.109	.034		
4.0	.223	.116	.034	.216	.113	.033	.204	.108	.032	.192	.103	.031	.181	.098	.030		
5.0	.206	.105	.030	.199	.102	.030	.188	.098	.029	.177	.094	.028	.168	.090	.027		
6.0	.191	.096	.027	.185	.094	.027	.175	.090	.026	.165	.086	.025	.156	.082	.024		
7.0	.178	.088	.025	.173	.086	.025	.163	.083	.024	.155	.079	.023	.146	.076	.022		
8.0	.166	.081	.023	.162	.080	.023	.153	.077	.022	.145	.074	.021	.138	.071	.021		
9.0	.156	.076	.021	.152	.074	.021	.144	.071	.020	.137	.069	.020	.130	.066	.019		
10.0	.147	.071	.020	.144	.069	.019	.137	.067	.019	.130	.064	.018	.123	.062	.018		

pcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.256	.256	.256	.219	.219	.219	.149	.149	.149	.086	.086	.086	.027	.027	.027	
1.0	.246	.222	.201	.210	.191	.173	.144	.131	.120	.083	.076	.070	.027	.024	.022	
2.0	.236	.198	.167	.202	.171	.144	.138	.118	.101	.080	.069	.059	.026	.022	.019	
3.0	.226	.181	.145	.194	.156	.125	.133	.108	.088	.077	.063	.052	.025	.021	.017	
4.0	.217	.167	.129	.187	.145	.112	.128	.101	.079	.074	.059	.047	.024	.019	.015	
5.0	.209	.157	.118	.180	.136	.103	.124	.095	.073	.072	.056	.043	.023	.018	.014	
6.0	.202	.148	.110	.174	.128	.096	.120	.090	.068	.069	.053	.040	.022	.017	.013	
7.0	.195	.141	.104	.168	.123	.090	.116	.086	.064	.067	.051	.038	.022	.017	.013	
8.0	.189	.136	.099	.162	.118	.086	.112	.083	.061	.065	.049	.036	.021	.016	.012	
9.0	.183	.131	.095	.158	.113	.083	.109	.080	.059	.064	.047	.035	.021	.015	.012	
10.0	.178	.126	.092	.153	.110	.080	.106	.077	.057	.062	.046	.034	.020	.015	.011	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-06-29

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=1.4396]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm										
NAME:			TYPE:LED			WEIGHT:N/A				
SPEC.:N/A			DIM.: Φ 275*76			SERIAL No.:				
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	33.9	33.0	34.2	34.6	35.9	37.1	36.2	37.5	37.8
3H	33.5	34.6	33.9	35.0	35.4	37.7	38.9	38.1	39.2	39.6
4H	33.8	34.8	34.2	35.2	35.6	38.8	39.9	39.3	40.3	40.7
6H	34.0	35.0	34.4	35.4	35.8	40.1	41.1	40.5	41.5	42.0
8H	34.0	35.0	34.5	35.4	35.9	40.8	41.8	41.3	42.3	42.7
12H	34.0	35.0	34.5	35.4	35.9	41.7	42.7	42.2	43.1	43.6
4H 2H	34.0	35.1	34.4	35.5	35.9	36.3	37.4	36.7	37.8	38.2
3H	35.4	36.3	35.8	36.8	37.2	38.5	39.5	39.0	39.9	40.4
4H	36.0	36.9	36.5	37.3	37.8	39.8	40.7	40.3	41.2	41.7
6H	36.5	37.3	37.0	37.8	38.3	41.4	42.1	41.9	42.6	43.2
8H	36.7	37.4	37.2	37.9	38.5	42.2	42.9	42.8	43.5	44.0
12H	36.8	37.4	37.3	38.0	38.6	43.2	43.9	43.8	44.4	45.0
8H 4H	37.2	37.9	37.7	38.4	39.0	40.2	40.9	40.7	41.4	42.0
6H	38.2	38.8	38.8	39.4	40.0	42.0	42.6	42.6	43.2	43.8
8H	38.6	39.2	39.2	39.7	40.4	43.1	43.7	43.7	44.2	44.9
12H	39.0	39.5	39.6	40.1	40.7	44.4	44.9	45.0	45.4	46.1
12H 4H	37.5	38.2	38.1	38.7	39.3	40.2	40.9	40.8	41.4	42.0
6H	38.8	39.3	39.4	39.9	40.5	42.2	42.7	42.7	43.3	43.9
8H	39.4	39.9	40.0	40.5	41.2	43.4	43.8	44.0	44.4	45.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.3 / - 0.5					+ 0.2 / - 0.2				
2.0H	+ 0.3 / - 0.8					+ 0.2 / - 0.3				

CIE Pub.117, 1046 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 0.2$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2023-06-29

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=1.4396]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.: $\Phi 275 \times 76$	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:N/A

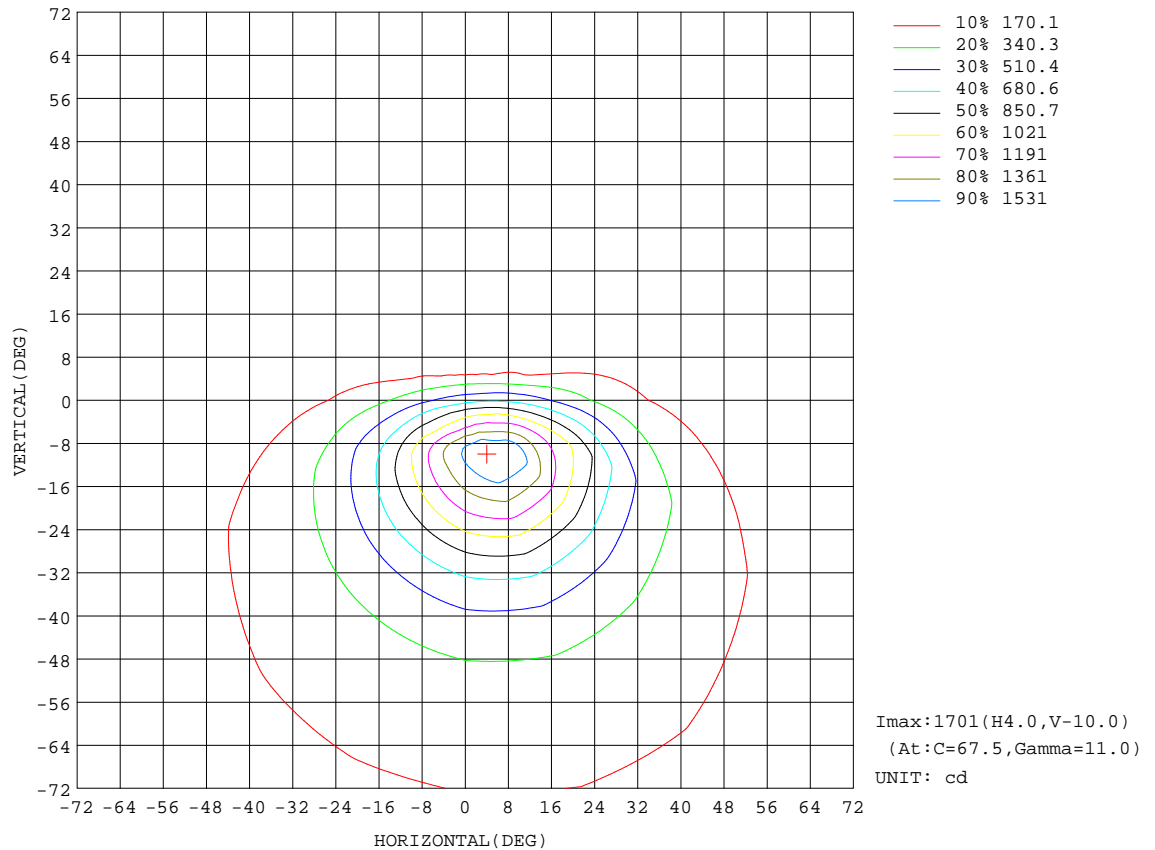
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	53	47	62	53	47	61	52	46	41
0.80	72	61	55	71	61	55	69	60	54	48
1.00	79	68	62	77	68	61	75	68	61	54
1.25	84	75	68	83	74	68	80	72	66	59
1.50	89	79	73	87	78	72	83	76	71	63
2.00	94	86	80	92	84	79	88	82	77	68
2.50	98	90	84	95	88	83	90	85	80	71
3.00	101	94	88	98	92	87	93	88	84	74
4.00	104	98	94	101	96	92	96	92	88	77
5.00	106	101	97	103	99	95	98	94	91	79
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: 2023-06-29

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=1.4396]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.: $\Phi 275 \times 76$	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:N/A

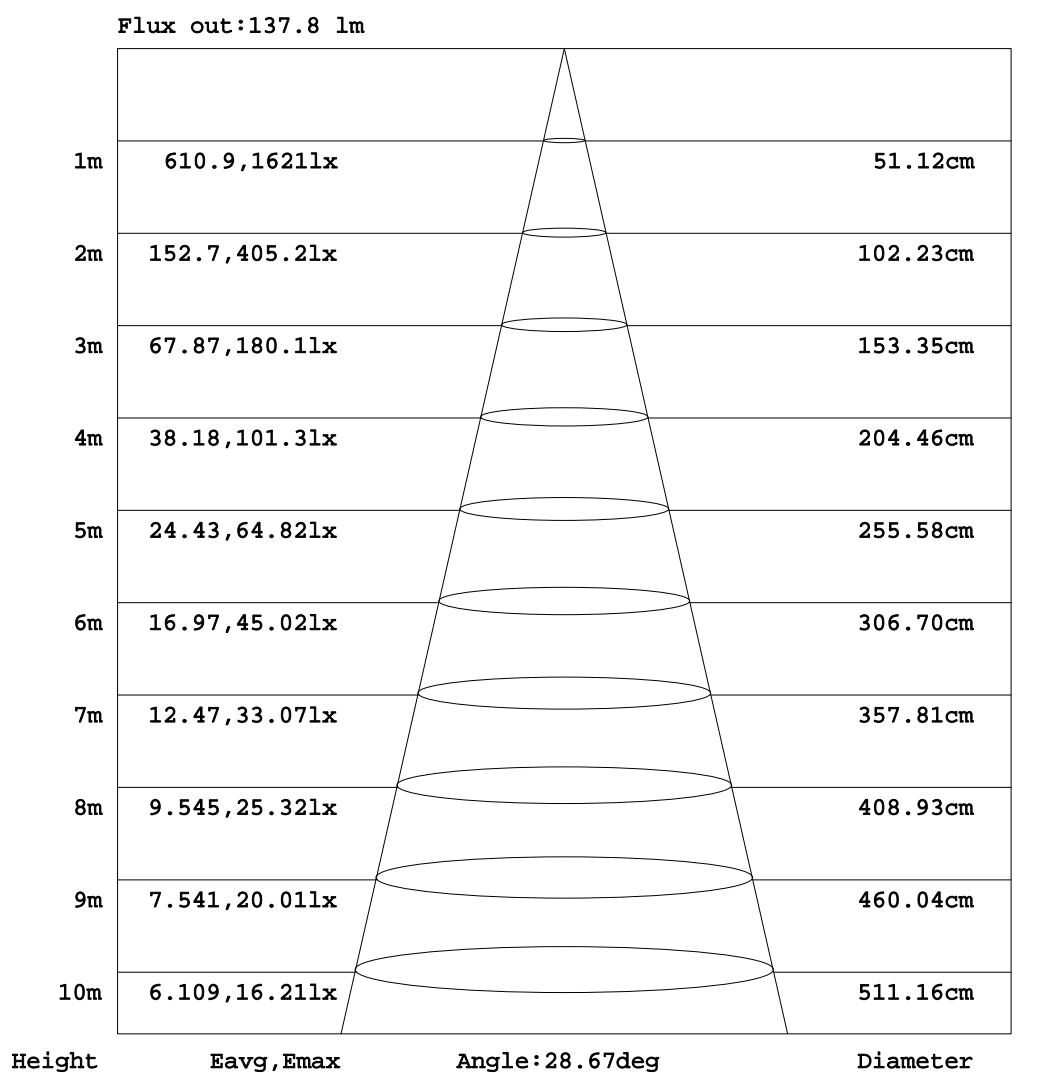


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-06-29

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=1.4396]
Remarks:

AAI Figure

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.: $\Phi 275 \times 76$	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:N/A

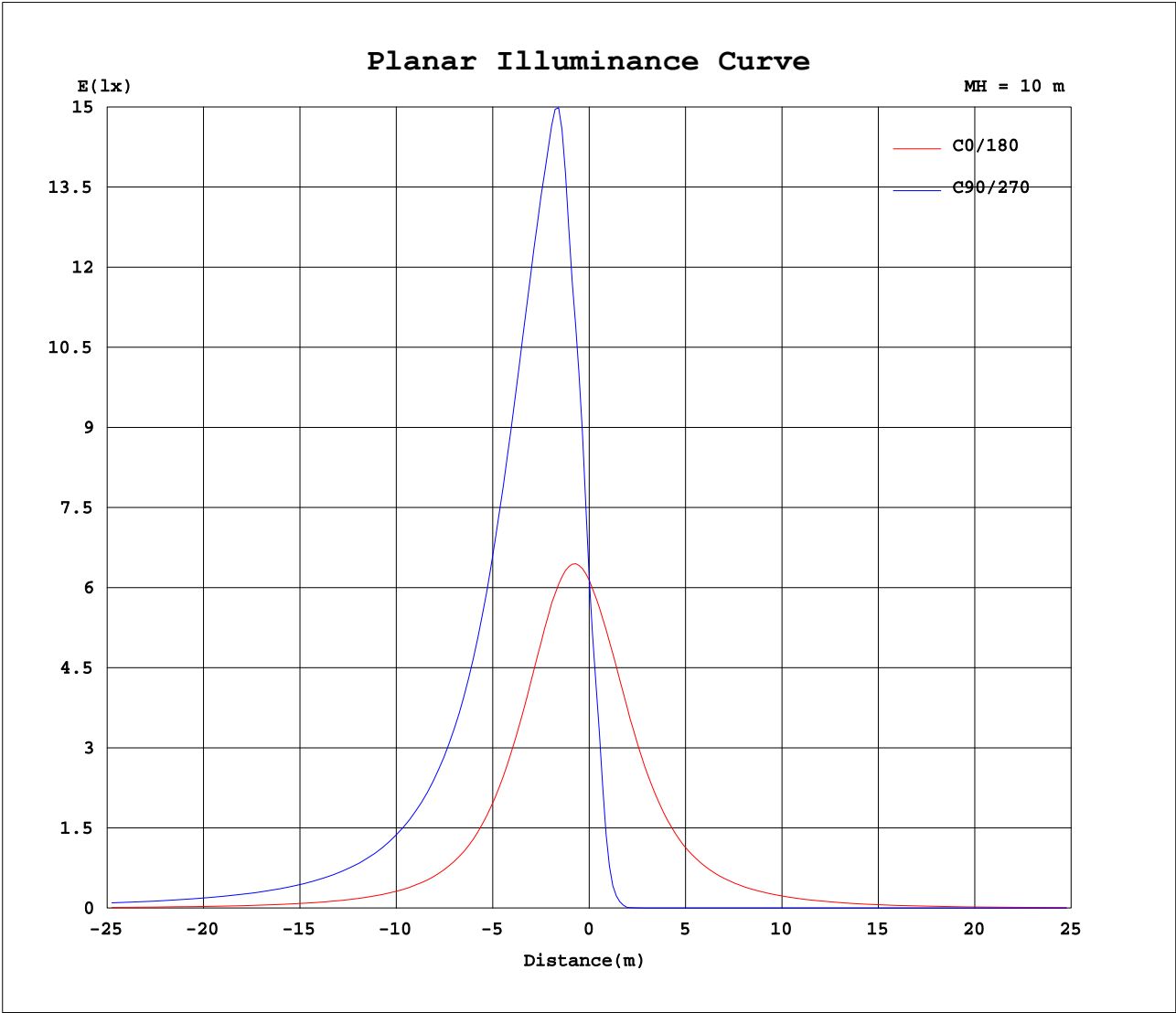


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.9DEG
 Operators: Zero huang
 Test Date: 2023-06-29

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=1.4396]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-06-29

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=1.4396]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.15V I:0.0843A P:17.997W PF:0.9274 Freq:50.01Hz Lamp Flux:1046.05x1 lm																	
NAME:									TYPE:LED						WEIGHT:N/A		
SPEC.:N/A									DIM.: Φ 275*76						SERIAL No.:		
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	616	616	616	616	616	616	616	616	616	616	616	616	616	616	616	616			
5	653	936	1124	1202	1178	1080	945	752	529	378	256	166	140	177	292	453			
10	618	1128	1504	1686	1555	1370	1078	745	424	186	39.1	11.1	6.21	11.2	42.4	249			
15	526	1141	1590	1581	1415	1206	997	656	321	66.1	3.30	0.24	0.31	0.70	3.34	86.3			
20	411	1056	1339	1365	1210	1005	798	561	237	23.0	0.16	0.08	0.16	0.16	0.70	27.0			
25	305	875	1068	1107	986	803	625	446	174	7.63	0.16	0.00	0.16	0.16	0.23	8.35			
30	220	666	821	864	774	626	486	348	132	1.21	0.16	0.16	0.16	0.16	0.23	1.15			
35	160	499	622	666	606	491	386	278	102	0.00	0.16	0.16	0.16	0.16	0.23	0.08			
40	118	378	476	516	479	393	313	230	80.4	0.00	0.16	0.32	0.23	0.23	0.23	0.00			
45	89.5	296	373	409	386	322	263	193	64.9	0.00	0.24	0.32	0.31	0.31	0.23	0.00			
50	69.7	239	304	332	316	271	224	165	52.1	0.00	0.24	0.32	0.31	0.47	0.23	0.00			
55	55.0	196	253	276	268	234	195	141	40.7	0.00	0.24	0.32	0.31	0.39	0.23	0.00			
60	43.0	164	216	236	231	205	171	120	31.3	0.00	0.24	0.32	0.39	0.39	0.23	0.00			
65	32.8	137	187	206	203	182	150	101	23.0	0.00	0.24	0.40	0.39	0.39	0.23	0.00			
70	24.3	114	162	182	180	162	132	83.7	15.8	0.00	0.24	0.40	0.39	0.39	0.23	0.00			
75	17.2	93.4	141	161	161	145	115	68.2	9.41	0.00	0.32	0.40	0.39	0.39	0.23	0.00			
80	11.2	75.1	122	143	144	129	100	54.5	3.94	0.00	0.32	0.40	0.39	0.39	0.23	0.00			
85	6.38	59.0	104	127	129	117	88.7	44.2	0.00	0.00	0.32	0.40	0.39	0.39	0.23	0.00			
90	2.32	44.8	88.2	115	121	109	82.1	40.0	0.00	0.08	0.32	0.40	0.39	0.39	0.23	0.00			
95	0.00	31.4	59.9	57.8	63.2	53.0	49.7	29.0	0.00	0.08	0.32	0.56	0.47	0.39	0.31	0.08			
100	0.00	19.4	40.1	67.5	77.6	61.4	44.0	18.5	0.00	0.16	0.41	0.64	0.63	0.62	0.47	0.31			
105	0.00	11.4	39.5	81.0	90.1	69.4	48.6	18.2	0.00	0.24	0.57	0.64	0.63	0.62	0.62	0.31			
110	0.00	5.54	36.0	79.9	87.5	64.9	53.0	18.2	0.00	0.24	0.57	0.64	0.63	0.62	0.62	0.31			
115	0.00	2.53	34.0	69.4	77.6	58.2	50.7	17.0	0.00	0.24	0.57	0.64	0.63	0.62	0.62	0.31			
120	0.00	1.95	28.2	58.6	67.3	51.1	43.2	13.4	0.00	0.33	0.57	0.64	0.63	0.62	0.62	0.31			
125	0.00	2.60	20.3	45.9	46.0	39.4	33.3	8.63	0.00	0.33	0.57	0.72	0.63	0.62	0.62	0.31			
130	0.00	2.93	12.6	31.8	29.2	30.5	24.7	4.62	0.00	0.33	0.57	0.88	0.78	0.71	0.62	0.31			
135	0.00	3.66	6.28	19.9	27.2	22.0	16.9	1.48	0.00	0.49	0.73	1.03	0.94	0.78	0.62	0.38			
140	0.00	3.83	1.95	8.74	17.5	9.73	10.02	0.00	0.17	0.73	0.97	1.27	1.09	1.01	0.78	0.54			
145	0.00	3.43	1.05	5.03	0.39	5.67	4.16	0.00	0.33	0.98	1.38	1.68	1.56	1.33	0.94	0.77			
150	0.00	2.37	1.29	1.36	3.93	4.47	0.63	0.00	0.75	1.30	1.46	1.91	2.11	1.80	1.41	0.92			
155	0.00	1.31	1.46	0.80	0.48	0.48	0.00	0.00	1.16	1.46	1.46	1.91	2.35	1.87	1.48	1.30			
160	0.08	0.81	1.62	0.80	0.47	0.16	0.00	0.00	1.49	1.46	1.54	1.75	2.27	1.87	1.48	1.23			
165	0.41	0.65	1.54	0.72	0.00	0.00	0.00	0.08	1.49	1.46	1.38	1.51	1.72	1.56	1.48	1.23			
170	0.74	0.65	1.05	0.72	0.39	0.08	0.23	0.54	1.49	1.46	1.38	1.35	1.64	1.56	1.48	1.23			
175	1.32	0.81	1.05	1.03	0.93	0.54	1.17	0.54	1.41	1.38	1.38	1.35	1.64	1.56	1.48	1.31			
180	1.32	1.30	1.22	1.20	1.40	1.17	1.17	0.77	1.41	1.30	1.30	1.27	1.40	1.40	1.32	1.15			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2023-06-29

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=1.4396]
Remarks: