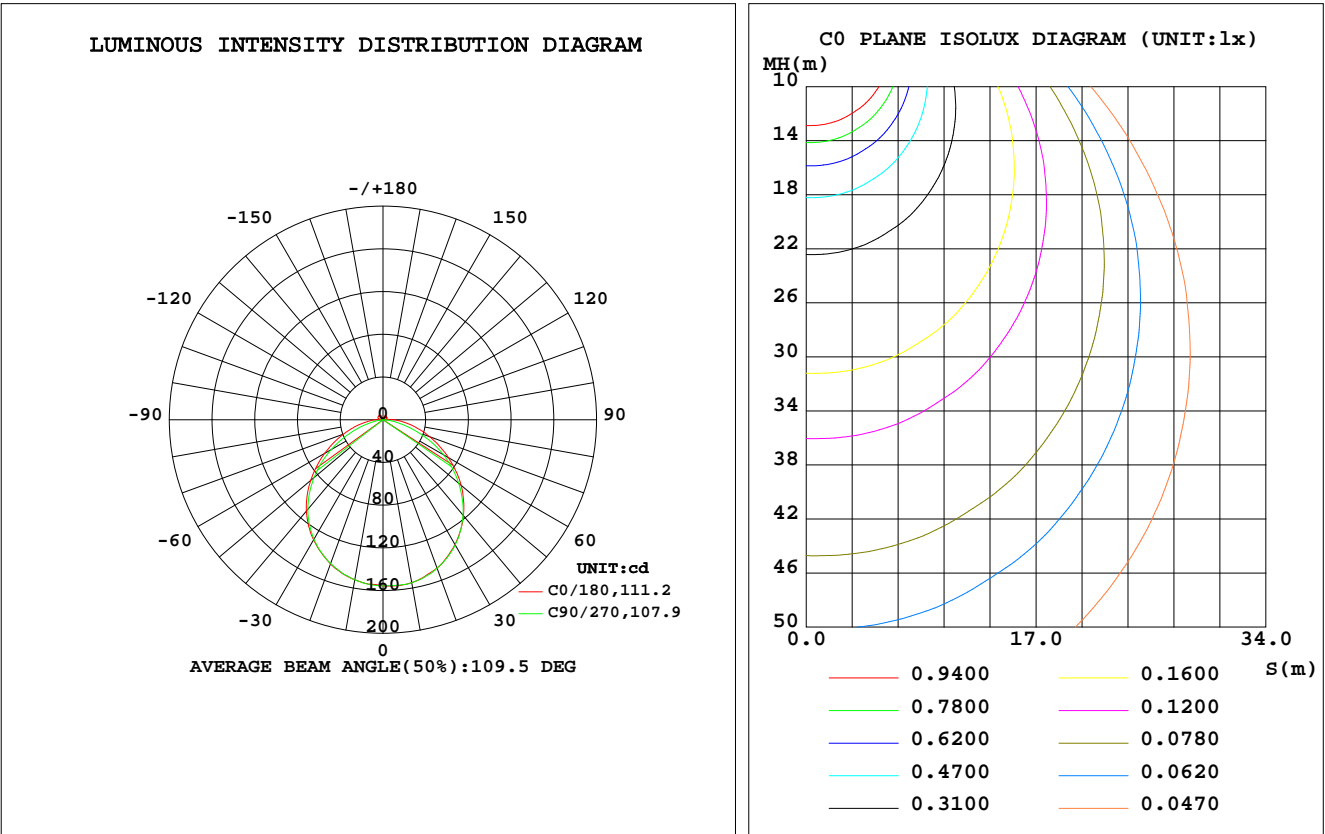


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 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: 118.50 lm/W			
MODEL	CM04L 3.5W ONOFF F1 1M IP67	I _{max} (cd)	156.1	S/MH(C0/180)	1.24
NOMINAL POWER(W)	3.5	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	452.94	η UP,DN(C0-180)	1.4,50.3
NOMINAL FLUX(lm)	452.942	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.5,46.8
LAMPS INSIDE	1	η up(%)	3.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	97.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2024-01-04

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=1.5110]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	154.9	155.4	154.9	154.0	152.1	152.0	152.2	153.1	0- 10	14.76	14.76	3.26,3.26
20	147.8	149.6	148.0	146.6	143.8	142.9	143.5	145.5	10- 20	42.45	57.21	12.6,12.6
30	134.9	136.9	135.4	133.5	130.0	128.9	129.2	133.0	20- 30	64.48	121.7	26.9,26.9
40	117.1	119.1	116.7	114.3	111.7	110.3	109.4	114.8	30- 40	77.68	199.4	44,44
50	95.52	96.29	92.60	91.91	88.46	86.53	84.30	89.94	40- 50	79.53	278.9	61.6,61.6
60	70.71	69.66	65.38	65.42	63.20	59.60	56.13	63.29	50- 60	69.58	348.5	76.9,76.9
70	46.53	43.74	35.54	38.99	39.46	33.95	27.50	38.00	60- 70	50.65	399.1	88.1,88.1
80	25.57	22.14	11.08	18.59	19.57	14.13	6.487	17.68	70- 80	28.69	427.8	94.5,94.5
90	10.88	8.050	0.9947	7.218	7.854	4.712	0	5.661	80- 90	11.63	439.4	97,97
100	0.0852	1.638	0	1.626	0.8939	1.949	0	2.495	90-100	1.867	441.3	97.4,97.4
110	3.844	2.882	0	2.747	5.044	3.493	0	2.834	100-110	2.330	443.6	97.9,97.9
120	4.272	3.052	0	2.748	5.384	3.493	0.1782	2.834	110-120	2.627	446.3	98.5,98.5
130	4.528	3.056	0	2.920	5.384	3.493	0.1782	2.834	120-130	2.451	448.7	99.1,99.1
140	4.529	3.056	0	2.920	5.298	3.406	0.1782	2.660	130-140	2.022	450.7	99.5,99.5
150	4.529	2.013	0	0.0006	4.699	3.139	0.1782	0.0003	140-150	1.510	452.3	99.8,99.8
160	0	0.4366	0	1.288	0.0034	1.829	0.1738	0.0859	150-160	0.5375	452.8	100,100
170	0.0861	0.0875	0	0.6870	0.3413	0.1746	0	0.1718	160-170	0.1346	452.9	100,100
180	0.0855	0	0.2640	0.0884	0.0855	0	0	0.1718	170-180	0.0146	452.9	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 239.69 lm

%lum = 52.9%

%lamp = 52.9%

Conical surface Flux(120deg): 348.49 lm

%lum = 76.9%

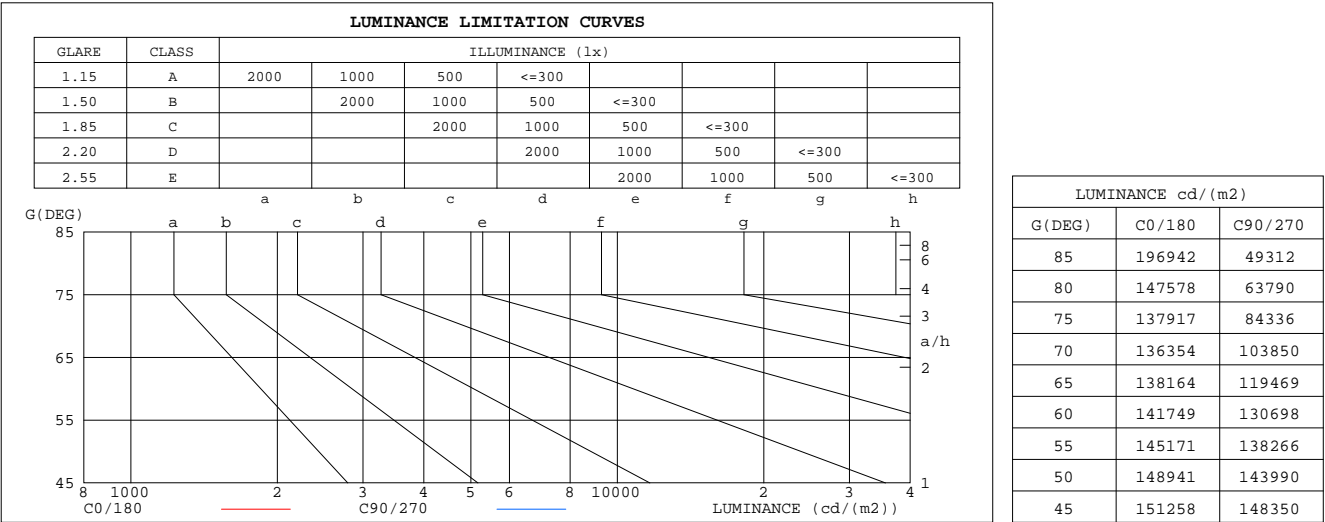
%lamp = 76.9%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2024-01-04

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=1.5110]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 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:2024-01-04

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=1.5110]
Remarks:

WEC AND CCEC

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 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	
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	.311	.177	.056	.303	.173	.055	.288	.165	.053	.275	.158	.051	.262	.152	.049		
2.0	.290	.159	.049	.283	.156	.048	.269	.150	.047	.257	.144	.045	.246	.139	.044		
3.0	.267	.142	.043	.261	.140	.042	.249	.135	.041	.238	.131	.040	.228	.126	.039		
4.0	.247	.128	.038	.241	.126	.037	.231	.122	.037	.221	.119	.036	.212	.115	.035		
5.0	.228	.116	.034	.223	.114	.033	.214	.111	.033	.205	.108	.032	.197	.105	.032		
6.0	.212	.106	.030	.207	.105	.030	.199	.102	.030	.191	.099	.029	.183	.097	.029		
7.0	.197	.097	.028	.193	.096	.027	.185	.094	.027	.178	.091	.027	.172	.089	.026		
8.0	.184	.090	.025	.180	.089	.025	.174	.087	.025	.167	.085	.024	.161	.083	.024		
9.0	.173	.083	.023	.169	.083	.023	.163	.081	.023	.157	.079	.023	.152	.077	.022		
10.0	.162	.078	.022	.159	.077	.021	.154	.075	.021	.148	.074	.021	.143	.072	.021		

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	.213	.213	.213	.182	.182	.182	.124	.124	.124	.071	.071	.071	.023	.023	.023	
1.0	.203	.179	.157	.174	.154	.135	.119	.106	.094	.068	.061	.054	.022	.020	.018	
2.0	.195	.155	.121	.167	.133	.105	.114	.092	.073	.066	.054	.043	.021	.017	.014	
3.0	.187	.137	.098	.160	.119	.085	.110	.082	.059	.064	.048	.035	.020	.016	.011	
4.0	.179	.124	.082	.154	.107	.071	.106	.075	.050	.061	.044	.030	.020	.014	.010	
5.0	.172	.114	.071	.148	.098	.062	.102	.069	.044	.059	.040	.026	.019	.013	.009	
6.0	.165	.106	.063	.142	.091	.055	.098	.064	.039	.057	.038	.023	.018	.012	.008	
7.0	.158	.099	.057	.136	.086	.050	.094	.060	.035	.055	.035	.021	.018	.012	.007	
8.0	.152	.093	.052	.131	.081	.046	.090	.057	.032	.053	.033	.019	.017	.011	.006	
9.0	.146	.088	.049	.126	.076	.043	.087	.054	.030	.051	.032	.018	.016	.010	.006	
10.0	.140	.084	.046	.121	.073	.040	.084	.051	.029	.049	.030	.017	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2024-01-04

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=1.5110]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 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		30.2	31.7	30.5	31.9	32.2	29.9	31.4	30.3	31.7
	3H	31.8	33.2	32.2	33.5	33.8	31.2	32.5	31.5	32.8
	4H	32.6	33.9	32.9	34.2	34.5	31.6	32.9	32.0	33.2
	6H	33.2	34.4	33.6	34.8	35.1	31.8	33.0	32.2	33.4
	8H	33.5	34.7	33.9	35.1	35.4	31.9	33.0	32.3	33.4
	12H	33.9	35.0	34.3	35.3	35.7	31.9	33.0	32.3	33.3
4H	2H	30.8	32.1	31.1	32.4	32.7	30.6	31.9	30.9	32.2
	3H	32.6	33.7	33.0	34.1	34.4	32.0	33.1	32.4	33.5
	4H	33.5	34.5	33.9	34.9	35.3	32.6	33.6	33.0	34.0
	6H	34.3	35.2	34.8	35.6	36.1	32.9	33.8	33.4	34.2
	8H	34.7	35.6	35.2	36.0	36.5	33.0	33.9	33.5	34.3
	12H	35.1	35.9	35.6	36.4	36.8	33.1	33.9	33.6	34.3
8H	4H	33.7	34.6	34.2	35.0	35.5	32.9	33.8	33.4	34.2
	6H	34.8	35.5	35.3	36.0	36.5	33.5	34.2	34.0	34.7
	8H	35.3	36.0	35.8	36.4	37.0	33.7	34.3	34.2	34.8
	12H	35.9	36.5	36.5	37.0	37.5	33.9	34.4	34.4	34.9
12H	4H	33.8	34.5	34.2	35.0	35.4	33.0	33.8	33.5	34.2
	6H	34.9	35.5	35.4	36.0	36.5	33.6	34.3	34.1	34.7
	8H	35.5	36.0	36.0	36.5	37.1	33.9	34.5	34.4	35.0
Variations with the observer position at spacings:										
S = 1.0H		+ 0.1 / - 0.2				+ 0.2 / - 0.2				
1.5H		+ 0.2 / - 0.3				+ 0.2 / - 0.4				
2.0H		+ 0.1 / - 0.3				+ 0.2 / - 0.4				

CIE Pub.117, 452.9 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -2.8$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2024-01-04

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=1.5110]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

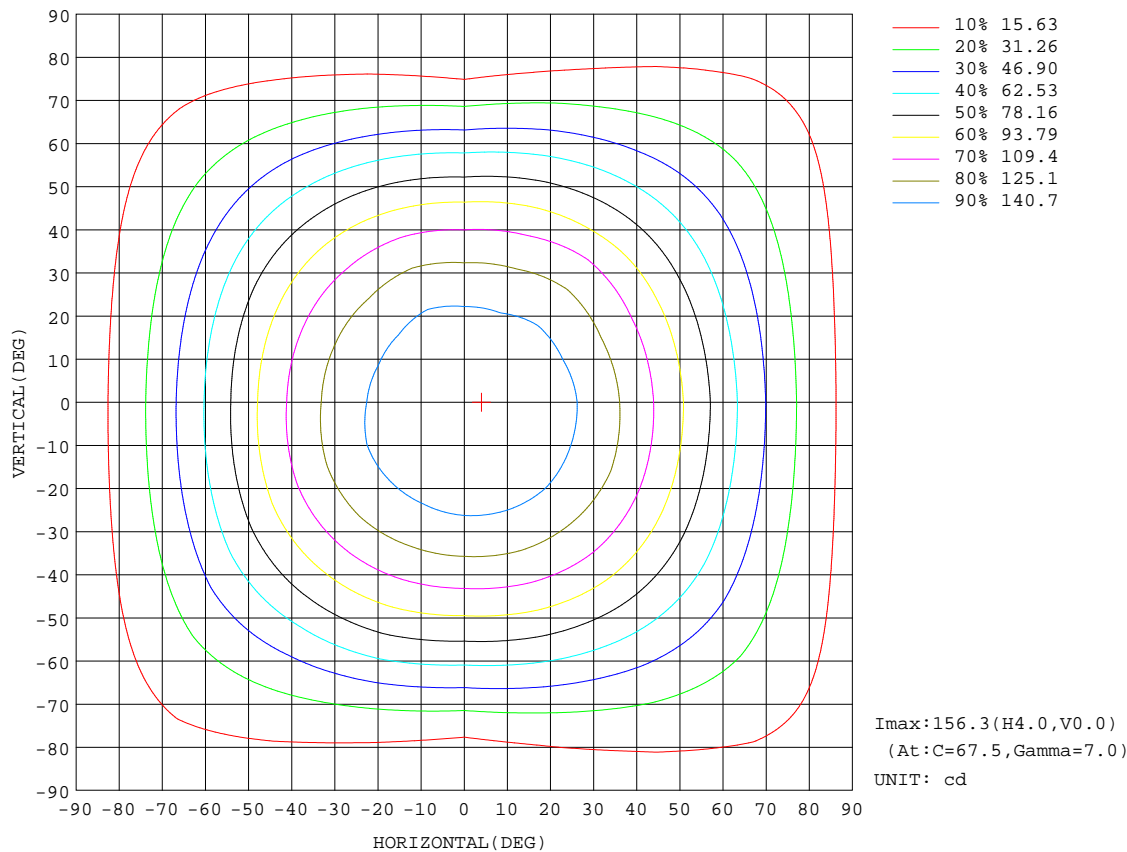
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	39	56	45	38	55	45	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	64	57	72	65	56	49
1.25	82	72	65	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	82	74	69	61
2.00	94	86	79	92	84	78	88	82	76	68
2.50	98	90	84	96	89	83	91	86	81	72
3.00	101	94	89	99	93	87	94	89	85	76
4.00	105	99	95	103	97	93	98	94	90	80
5.00	108	103	99	105	101	97	100	96	93	83
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:2024-01-04

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=1.5110]
 Remarks:

ISOCANDELA DIAGRAM

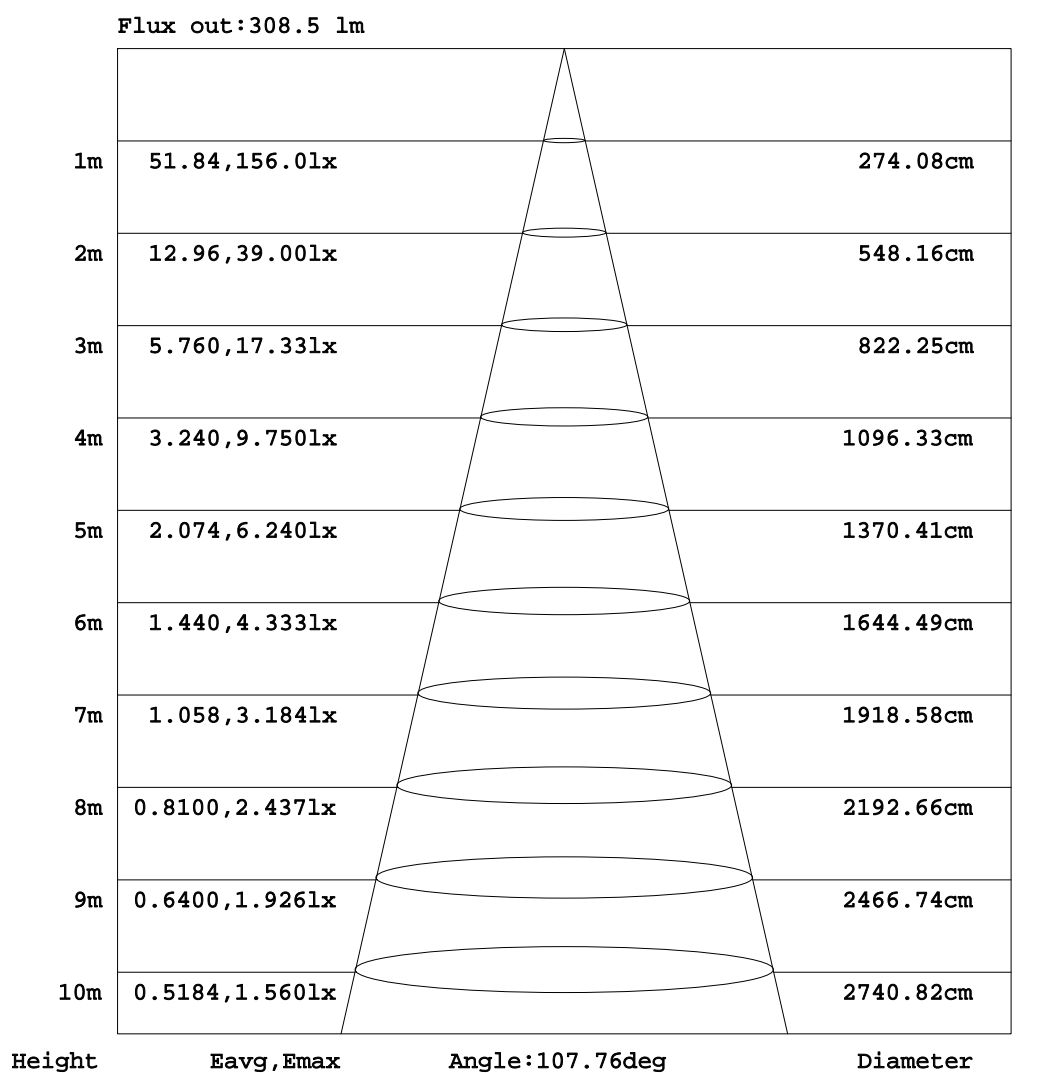
Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



C Range: 0 - 360DEG	γ Range: 0 - 180DEG
C Interval: 22.5DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Temperature:24.9DEG	Humidity:60%
Operators:Zero huang	Test Distance:26.000m [K=1.5110]
Test Date:2024-01-04	Remarks:

AAI Figure

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

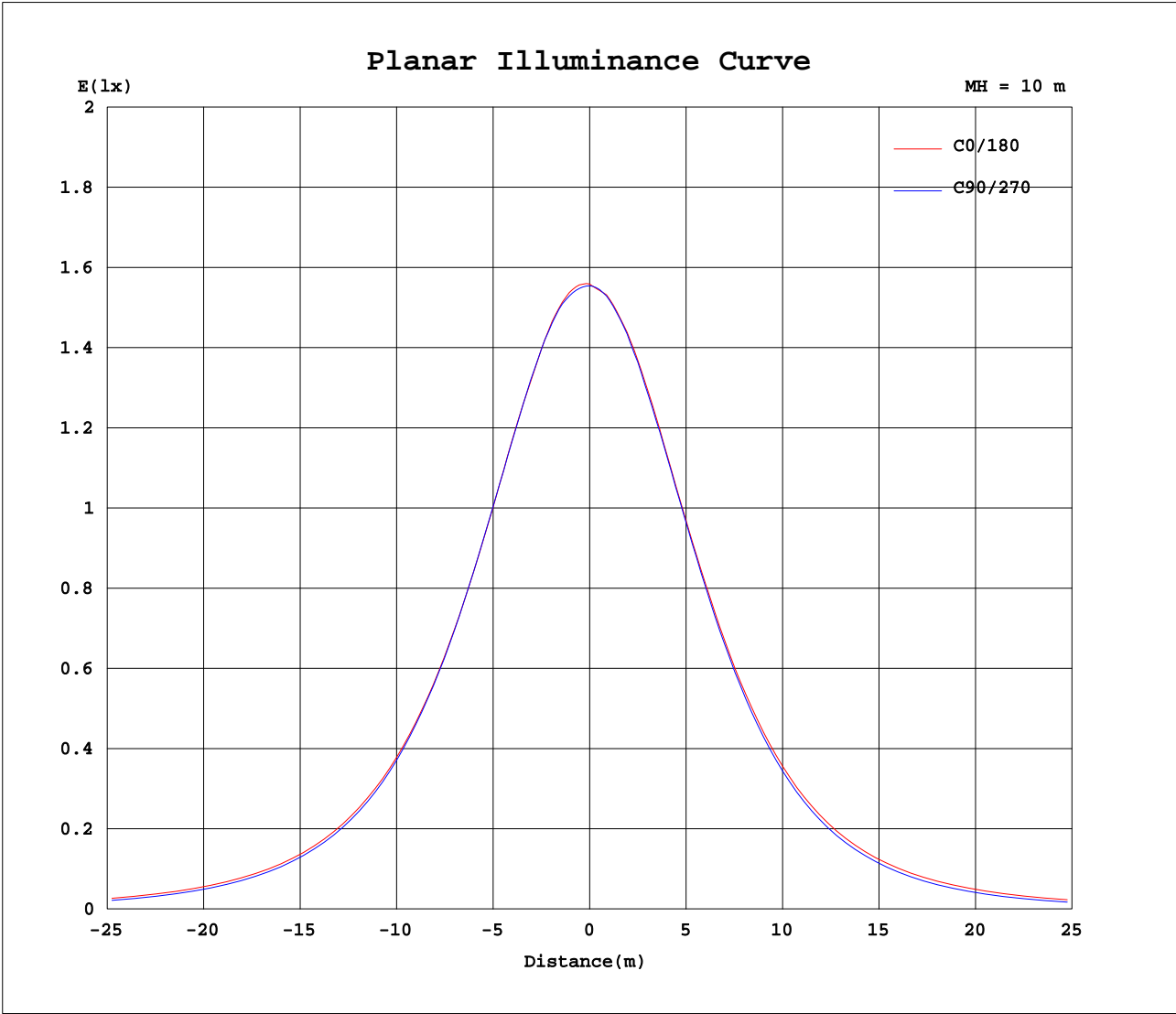


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2024-01-04

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=1.5110]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2024-01-04

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=1.5110]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.004V I:0.1592A P:3.8224W PF:1.0000 Freq:0Hz Lamp Flux:452.942x1 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	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156			
5	156	156	156	156	156	156	156	156	155	154	154	155	155	155	155	155			
10	155	155	155	155	155	154	154	154	152	152	152	152	152	152	153	153			
15	152	152	153	153	152	151	151	150	149	148	148	149	148	149	150	150			
20	148	148	150	149	148	147	147	146	144	143	143	144	143	144	145	146			
25	142	143	144	144	142	141	140	140	137	137	137	138	137	137	140	140			
30	135	136	137	136	135	134	133	132	130	129	129	131	129	130	133	133			
35	127	129	129	128	127	126	125	124	122	121	120	122	120	122	125	124			
40	117	120	119	118	117	116	114	114	112	111	110	111	109	112	115	115			
45	107	108	109	107	105	105	104	103	101	99.6	99.1	98.5	97.5	99.9	103	104			
50	95.5	96.6	96.3	95.1	92.6	93.1	91.9	91.6	88.5	87.8	86.5	85.5	84.3	87.3	89.9	92.1			
55	83.1	83.8	83.1	81.8	79.3	80.3	79.3	78.8	75.7	75.2	73.3	72.0	70.6	74.0	76.6	79.4			
60	70.7	71.0	69.7	68.0	65.4	66.7	65.4	66.0	63.2	61.8	59.6	58.1	56.1	60.3	63.3	67.1			
65	58.3	58.5	56.3	54.0	50.5	52.1	51.5	53.2	51.0	48.7	46.7	44.1	41.5	46.5	50.1	54.4			
70	46.5	46.5	43.7	39.7	35.5	37.7	39.0	41.3	39.5	37.1	34.0	31.0	27.5	33.3	38.0	42.8			
75	35.6	35.3	32.1	27.4	21.8	25.0	28.0	30.3	29.0	26.7	23.1	19.6	15.3	21.5	27.0	31.9			
80	25.6	25.2	22.1	17.0	11.1	15.2	18.6	21.1	19.6	17.7	14.1	10.9	6.49	12.2	17.7	22.2			
85	17.1	16.6	13.7	9.62	4.30	8.25	11.5	13.5	12.5	10.6	8.02	5.31	1.14	6.05	10.7	14.3			
90	10.9	10.4	8.05	4.90	0.99	4.43	7.22	8.69	7.85	6.61	4.71	2.70	0.00	2.67	5.66	8.40			
95	0.86	0.62	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.18	0.00	0.35	0.00	0.00			
100	0.09	0.34	1.64	0.00	0.00	0.00	1.63	1.69	0.89	1.32	1.95	1.14	0.00	0.69	2.49	2.49			
105	3.42	3.01	2.61	0.87	0.00	0.34	2.49	3.18	4.62	4.22	3.41	1.66	0.00	0.69	2.83	4.03			
110	3.84	3.27	2.88	1.14	0.00	0.43	2.75	3.60	5.04	4.73	3.49	1.66	0.00	0.69	2.83	4.29			
115	4.10	3.79	2.88	1.40	0.00	0.43	2.75	4.12	5.30	4.73	3.49	1.66	0.09	0.69	2.83	4.29			
120	4.27	4.05	3.05	1.49	0.00	0.43	2.75	4.12	5.38	4.73	3.49	1.66	0.18	0.69	2.83	4.21			
125	4.53	4.13	3.06	1.57	0.00	0.52	2.83	4.12	5.38	4.73	3.49	1.66	0.18	0.52	2.83	4.21			
130	4.53	4.21	3.06	1.57	0.00	0.43	2.92	4.29	5.38	4.73	3.49	1.57	0.18	0.17	2.83	4.21			
135	4.53	4.22	3.06	1.15	0.00	0.35	2.92	4.38	5.38	4.73	3.41	0.18	0.18	0.09	2.66	4.21			
140	4.53	4.22	3.06	0.00	0.00	0.35	2.92	4.46	5.30	4.65	3.41	0.26	0.18	0.09	2.66	4.21			
145	4.53	4.22	3.06	0.00	0.00	0.35	2.92	4.46	4.96	4.65	3.32	1.13	0.18	0.09	1.80	3.95			
150	4.53	4.22	2.01	0.17	0.00	0.35	0.00	4.46	4.70	4.39	3.14	0.96	0.18	0.09	0.00	3.09			
155	3.93	3.45	0.00	0.18	0.00	0.35	1.28	1.66	4.36	4.04	0.00	0.69	0.18	0.17	0.09	0.00			
160	0.00	0.00	0.44	0.00	0.00	0.35	1.29	0.75	0.00	0.09	1.83	0.34	0.17	0.17	0.09	0.08			
165	0.26	0.60	0.26	0.00	0.00	0.35	0.95	1.89	1.71	1.46	1.22	0.09	0.00	0.17	0.09	0.00			
170	0.09	0.00	0.09	0.00	0.00	0.26	0.69	1.03	0.34	0.34	0.17	0.00	0.00	0.17	0.17	0.00			
175	0.09	0.00	0.00	0.00	0.09	0.26	0.43	0.69	0.00	0.09	0.09	0.00	0.00	0.17	0.17	0.09			
180	0.09	0.00	0.00	0.00	0.26	0.17	0.09	0.00	0.09	0.09	0.00	0.00	0.00	0.17	0.17	0.09			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.9DEG
 Operators:Zero huang
 Test Date:2024-01-04

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=1.5110]
 Remarks: