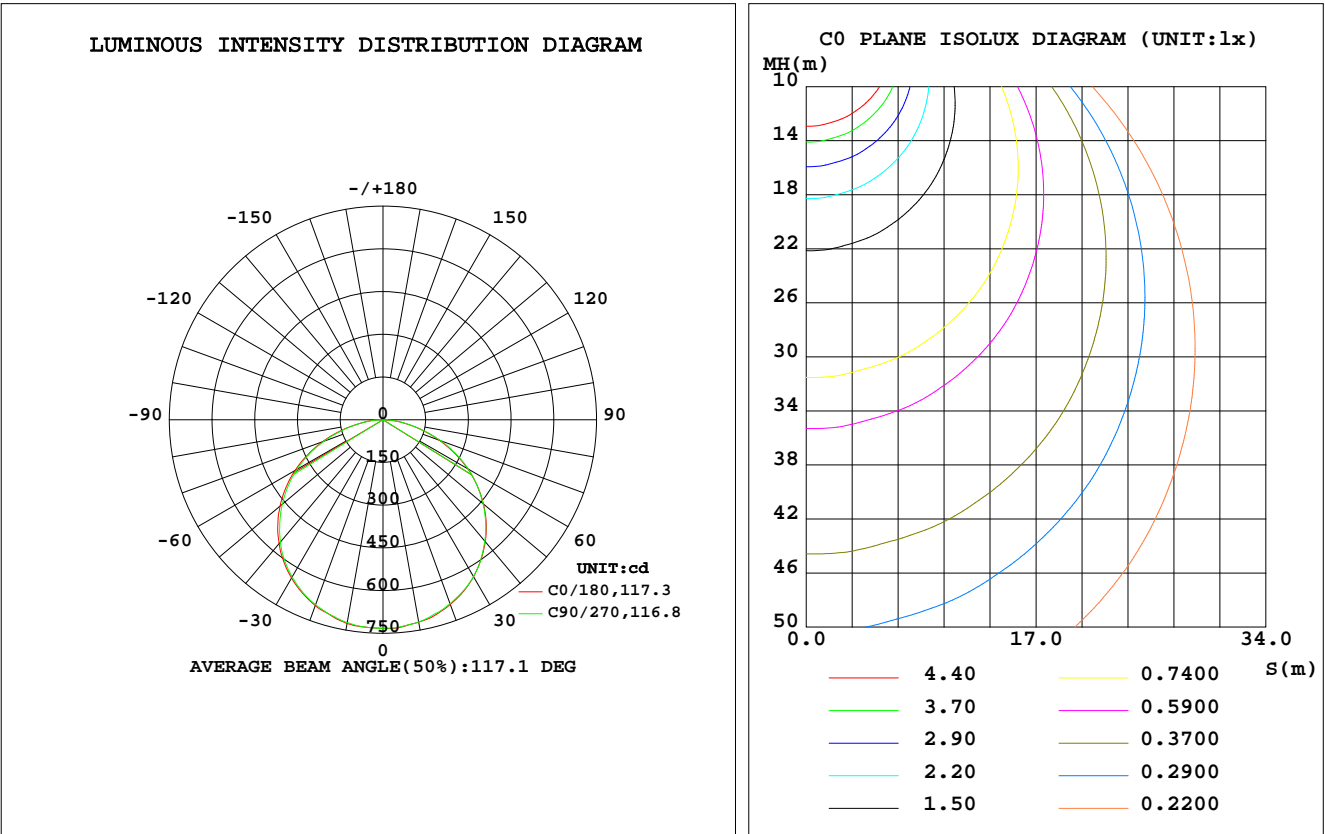


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 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: 119.11 lm/W			
PX RIBBON MODEL	17.5W ONOFF 1M IP20	I _{max} (cd)	733.2	S/MH(C0/180)	1.30
NOMINAL POWER(W)	17.5	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	2209.2	η UP,DN(C0-180)	0.1,49.5
NOMINAL FLUX(lm)	2209.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,50.2
LAMPS INSIDE	1	η up(%)	0.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	99.8	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	721.3	722.6	720.8	723.2	726.4	722.5	723.0	722.6	0- 10	69.45	69.45	3.14,3.14
20	690.4	692.4	687.5	689.6	694.7	691.0	691.4	690.3	10- 20	200.3	269.7	12.2,12.2
30	636.3	635.4	635.8	636.5	642.2	638.2	638.2	638.1	20- 30	307.3	577.1	26.1,26.1
40	558.8	556.9	556.2	558.4	567.5	566.5	560.4	567.0	30- 40	376.8	953.8	43.2,43.2
50	461.0	461.3	458.9	463.8	472.1	473.2	462.0	461.9	40- 50	397.6	1351	61.2,61.2
60	343.2	343.5	345.6	349.8	357.3	357.1	348.9	343.7	50- 60	365.3	1717	77.7,77.7
70	210.1	209.6	215.0	216.3	226.2	224.5	220.7	213.1	60- 70	280.9	1998	90.4,90.4
80	84.66	79.11	85.81	91.14	94.42	91.33	89.31	89.40	70- 80	159.5	2157	97.6,97.6
90	8.753	6.396	8.230	16.90	16.44	10.36	8.421	13.59	80- 90	47.06	2204	99.8,99.8
100	0	0	0.5285	1.552	0.0534	0.0941	1.007	0.4878	90-100	2.208	2207	99.9,99.9
110	0	0	0.3607	0.0862	0.2271	0.2570	1.248	0.3166	100-110	0.2552	2207	99.9,99.9
120	0	0	0.4068	0.0862	0.3138	0.3563	1.875	0.3820	110-120	0.2986	2207	99.9,99.9
130	0.2593	0.0872	0.4155	0.0862	0.4410	0.4209	1.875	0.4884	120-130	0.3433	2207	99.9,99.9
140	0.2595	0.0881	1.152	0.0862	0.5194	0.6699	1.875	0.6698	130-140	0.3933	2208	99.9,99.9
150	0.2596	0.2642	1.518	0.3981	0.8561	0.9704	1.875	1.035	140-150	0.4596	2208	100,100
160	0.3490	0.6152	1.607	0.4972	1.299	0.9697	1.819	1.470	150-160	0.4596	2209	100,100
170	0.5194	0.8806	3.297	1.031	1.377	0.9691	1.747	1.467	160-170	0.3457	2209	100,100
180	0.9521	1.233	3.840	1.379	1.472	0.9686	1.697	1.465	170-180	0.1442	2209	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1153.4 lm

%lum = 52.2%

%lamp = 52.2%

Conical surface Flux(120deg): 1716.8 lm

%lum = 77.7%

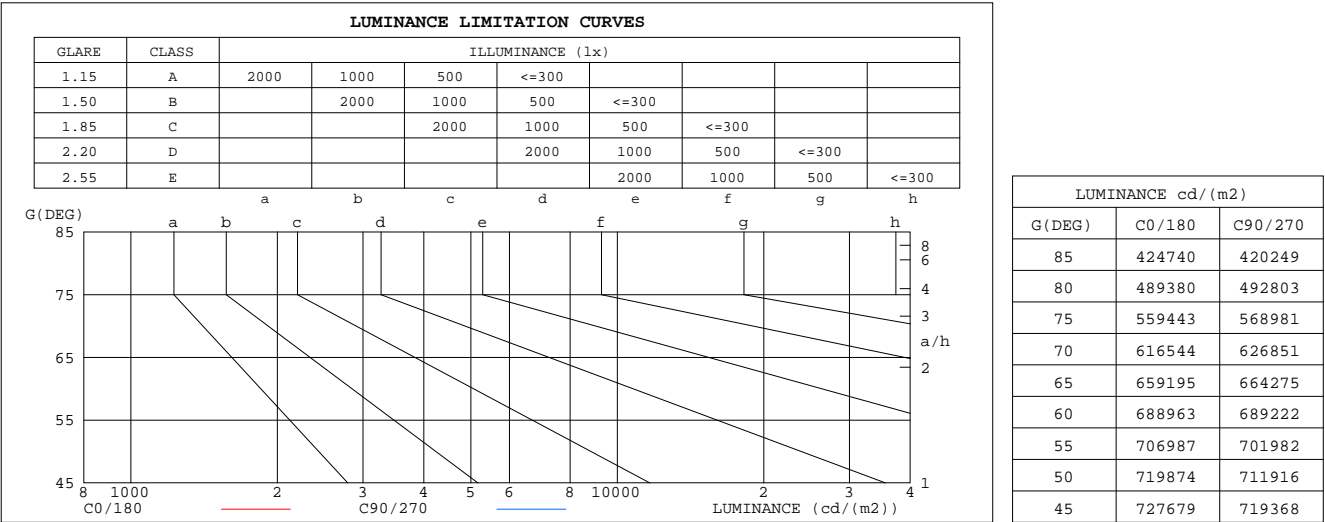
%lamp = 77.7%

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:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 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:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 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	.316	.179	.057	.308	.176	.056	.295	.169	.054	.283	.163	.052	.271	.157	.051	
2.0	.296	.162	.050	.290	.160	.049	.278	.155	.048	.267	.150	.047	.257	.145	.046	
3.0	.274	.146	.044	.268	.144	.043	.257	.140	.042	.248	.136	.042	.239	.132	.041	
4.0	.252	.131	.039	.247	.129	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037	
5.0	.233	.119	.034	.228	.117	.034	.220	.115	.034	.212	.112	.033	.205	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.204	.105	.030	.198	.103	.030	.191	.101	.030	
7.0	.201	.099	.028	.197	.098	.028	.191	.096	.028	.184	.095	.028	.179	.093	.027	
8.0	.187	.091	.026	.184	.091	.026	.178	.089	.025	.173	.087	.025	.167	.086	.025	
9.0	.175	.085	.024	.173	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.182	.158	.136	.156	.135	.117	.107	.093	.081	.061	.054	.047	.020	.017	.015	
2.0	.175	.134	.099	.149	.115	.086	.102	.080	.060	.059	.046	.035	.019	.015	.011	
3.0	.167	.116	.076	.143	.100	.065	.098	.070	.046	.057	.041	.027	.018	.013	.009	
4.0	.159	.103	.060	.137	.089	.052	.094	.062	.036	.054	.036	.022	.017	.012	.007	
5.0	.152	.092	.049	.130	.080	.042	.090	.056	.030	.052	.033	.018	.017	.011	.006	
6.0	.145	.084	.041	.124	.073	.035	.086	.051	.025	.050	.030	.015	.016	.010	.005	
7.0	.138	.077	.035	.119	.067	.030	.082	.047	.021	.048	.028	.013	.015	.009	.004	
8.0	.131	.071	.030	.113	.062	.026	.078	.043	.019	.046	.026	.011	.015	.008	.004	
9.0	.125	.066	.027	.108	.058	.023	.075	.041	.017	.044	.024	.010	.014	.008	.003	
10.0	.119	.062	.024	.103	.054	.021	.071	.038	.015	.042	.022	.009	.014	.007	.003	

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:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 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		35.7	37.2	35.9	37.4	37.6	35.7	37.2	35.9	37.4	37.6
	3H	37.2	38.6	37.5	38.8	39.1	37.2	38.6	37.5	38.8	39.1
	4H	37.7	39.1	38.0	39.3	39.6	37.8	39.1	38.1	39.4	39.6
	6H	38.1	39.4	38.4	39.7	39.9	38.1	39.4	38.5	39.7	40.0
	8H	38.2	39.5	38.6	39.7	40.0	38.3	39.5	38.6	39.8	40.1
	12H	38.3	39.5	38.6	39.8	40.1	38.3	39.5	38.7	39.8	40.1
4H	2H	36.3	37.6	36.6	37.9	38.2	36.3	37.6	36.6	37.9	38.1
	3H	37.9	39.1	38.3	39.4	39.7	38.0	39.1	38.3	39.4	39.8
	4H	38.6	39.7	39.0	40.0	40.4	38.7	39.7	39.0	40.1	40.4
	6H	39.1	40.1	39.5	40.4	40.8	39.2	40.1	39.6	40.5	40.8
	8H	39.3	40.2	39.7	40.5	40.9	39.3	40.2	39.7	40.6	41.0
	12H	39.4	40.2	39.8	40.6	41.0	39.4	40.2	39.9	40.6	41.0
8H	4H	38.9	39.8	39.3	40.1	40.5	38.9	39.8	39.3	40.2	40.6
	6H	39.5	40.2	39.9	40.6	41.1	39.5	40.3	40.0	40.7	41.1
	8H	39.7	40.4	40.2	40.8	41.3	39.7	40.4	40.2	40.8	41.3
	12H	39.9	40.4	40.4	40.9	41.4	39.9	40.5	40.4	40.9	41.4
12H	4H	38.9	39.7	39.3	40.1	40.5	38.9	39.7	39.3	40.1	40.5
	6H	39.5	40.2	40.0	40.6	41.1	39.6	40.2	40.0	40.6	41.1
	8H	39.8	40.3	40.3	40.8	41.3	39.8	40.4	40.3	40.8	41.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 2209 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:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

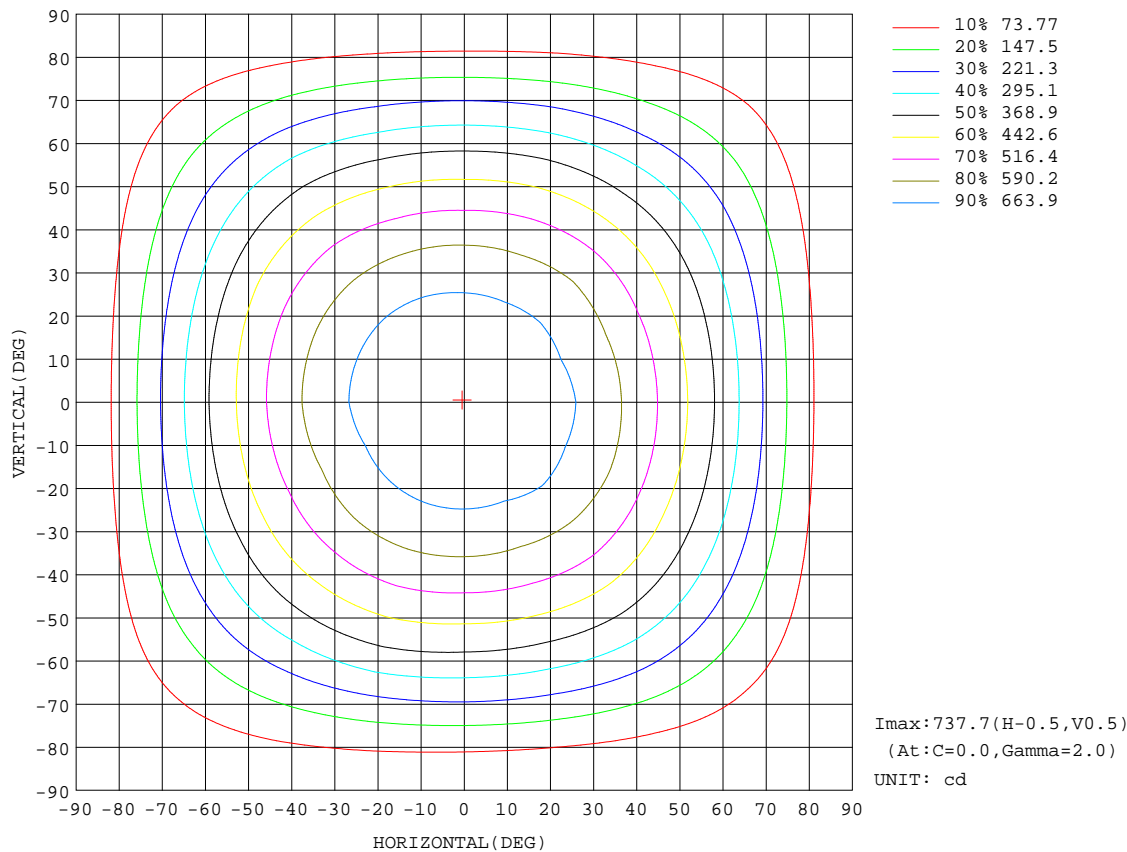
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	38	31
0.80	67	55	47	66	54	47	64	54	47	40
1.00	75	64	56	74	63	56	72	65	56	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	94	86	79	93	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	100	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	95	85
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:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



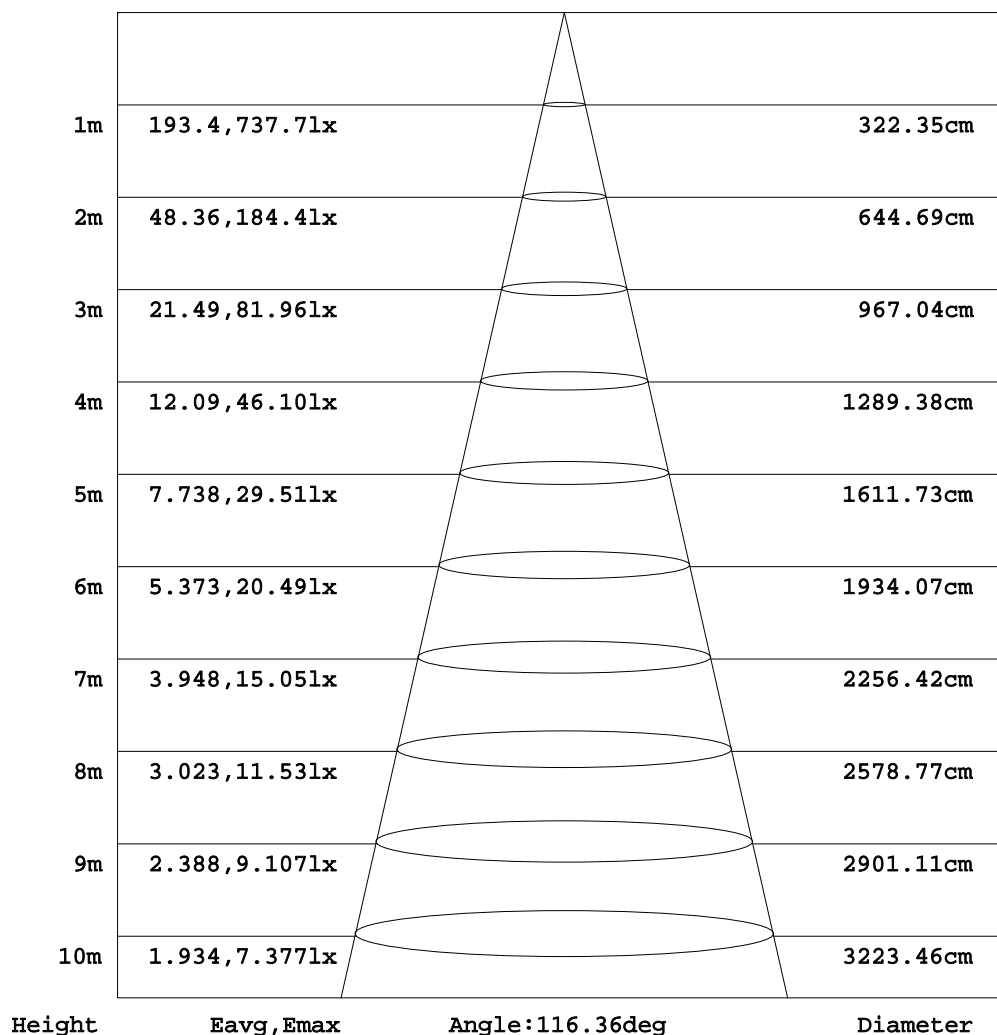
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.9DEG
Operators:Zero huang
Test Date:2024-01-04

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:

AAI Figure

Test:U:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

Flux out:1683 lm

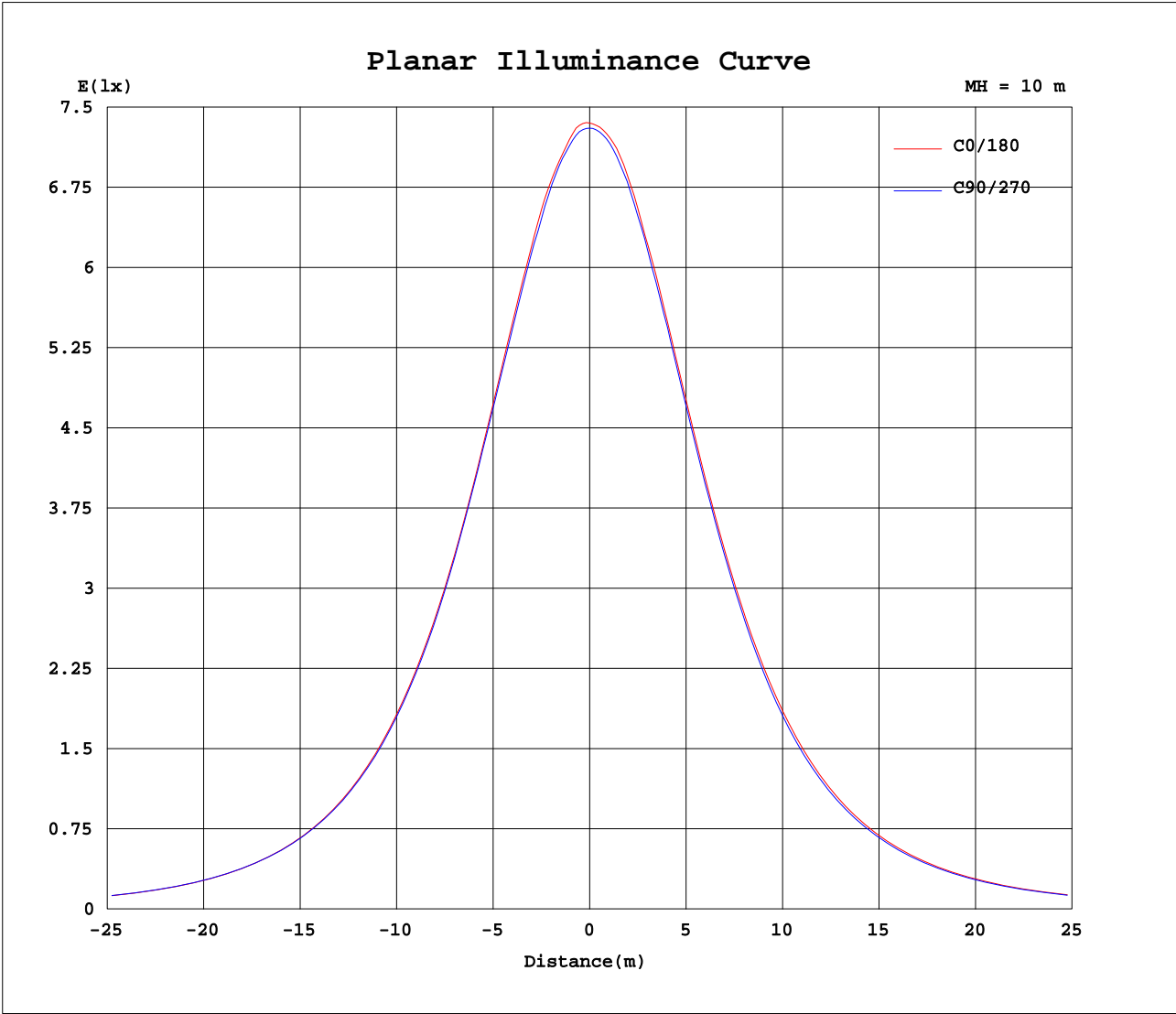


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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	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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.008V I:0.7726A P:18.548W PF:1.0000 Freq:0Hz Lamp Flux:2209.2x1 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	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732	732			
5	731	730	730	730	729	730	731	731	731	729	730	730	731	731	729	730			
10	721	723	723	720	721	722	723	723	726	722	722	723	723	723	723	721			
15	710	709	709	708	705	707	709	710	711	710	710	710	710	709	708	707			
20	690	691	692	688	688	689	690	691	695	693	691	694	691	690	690	689			
25	666	665	667	663	665	665	665	667	671	671	667	671	668	665	667	664			
30	636	635	635	632	636	636	637	638	642	643	638	644	638	634	638	635			
35	599	603	599	597	598	601	601	602	608	609	605	606	603	600	606	600			
40	559	563	557	556	556	560	558	562	568	569	567	564	560	561	567	560			
45	513	514	514	511	510	516	514	517	523	525	522	517	513	515	516	514			
50	461	459	461	460	459	467	464	467	472	478	473	467	462	465	462	461			
55	404	402	404	403	404	412	409	413	417	422	418	409	407	410	405	408			
60	343	341	343	343	346	352	350	352	357	359	357	351	349	349	344	347			
65	278	276	278	278	282	288	282	288	293	294	294	288	286	285	280	282			
70	210	208	210	211	215	217	216	221	226	227	224	221	221	220	213	216			
75	144	141	142	144	148	151	151	153	158	159	157	154	152	152	148	151			
80	84.7	79.8	79.1	81.6	85.8	90.1	91.1	92.1	94.4	94.5	91.3	91.1	89.3	90.6	89.4	90.7			
85	36.9	31.6	30.5	32.5	36.7	42.0	44.0	44.2	44.7	42.6	39.7	39.7	40.6	43.3	42.2	42.8			
90	8.75	6.44	6.40	7.27	8.23	13.7	16.9	17.6	16.4	13.1	10.4	10.9	8.42	14.3	13.6	12.6			
95	0.09	0.01	0.00	0.09	0.69	0.09	0.09	0.09	0.00	0.00	0.02	0.12	3.33	1.48	0.12	0.00			
100	0.00	0.00	0.00	0.00	0.53	0.09	1.55	1.21	0.05	0.11	0.09	0.25	1.01	0.09	0.49	0.27			
105	0.00	0.00	0.00	0.00	0.37	0.09	0.26	0.35	0.14	0.18	0.17	0.35	0.63	0.23	0.37	0.30			
110	0.00	0.00	0.00	0.00	0.36	0.09	0.09	0.09	0.23	0.24	0.26	0.44	1.25	0.43	0.32	0.33			
115	0.00	0.00	0.00	0.00	0.38	0.09	0.09	0.09	0.28	0.29	0.32	0.51	1.52	0.53	0.35	0.36			
120	0.00	0.00	0.00	0.00	0.41	0.26	0.09	0.09	0.31	0.32	0.36	0.60	1.88	0.57	0.38	0.39			
125	0.00	0.00	0.00	0.00	0.43	0.26	0.09	0.09	0.36	0.39	0.39	0.68	1.88	0.60	0.42	0.42			
130	0.26	0.08	0.09	0.00	0.42	0.26	0.09	0.09	0.44	0.45	0.42	0.96	1.88	0.82	0.49	0.48			
135	0.26	0.02	0.09	0.09	0.53	0.26	0.09	0.11	0.52	0.52	0.51	1.05	1.88	0.94	0.56	0.47			
140	0.26	0.07	0.09	0.44	1.15	0.44	0.09	0.15	0.52	0.52	0.67	1.31	1.88	1.05	0.67	0.52			
145	0.26	0.12	0.09	0.54	1.52	0.60	0.22	0.19	0.76	0.66	0.71	1.31	1.88	1.31	0.81	0.74			
150	0.26	0.17	0.26	0.63	1.52	0.78	0.40	0.23	0.86	0.88	0.97	1.31	1.88	1.59	1.03	0.95			
155	0.35	0.35	0.56	0.72	1.61	0.96	0.45	0.35	1.11	0.96	0.97	1.31	1.85	1.83	1.39	1.17			
160	0.35	0.41	0.62	0.81	1.61	1.16	0.50	0.43	1.30	0.96	0.97	1.31	1.82	2.85	1.47	1.28			
165	0.48	0.50	0.62	1.22	1.96	1.23	0.69	0.55	1.34	0.96	0.97	1.31	1.78	3.13	1.47	1.36			
170	0.52	0.68	0.88	1.52	3.30	1.29	1.03	0.67	1.38	0.96	0.97	1.31	1.75	3.59	1.47	1.38			
175	0.86	0.84	1.14	1.66	3.77	1.36	1.38	1.03	1.44	0.96	0.97	1.31	1.71	3.72	1.47	1.38			
180	0.95	0.96	1.23	1.66	3.84	1.48	1.38	1.04	1.47	0.96	0.97	1.49	1.70	3.75	1.46	1.38			

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: