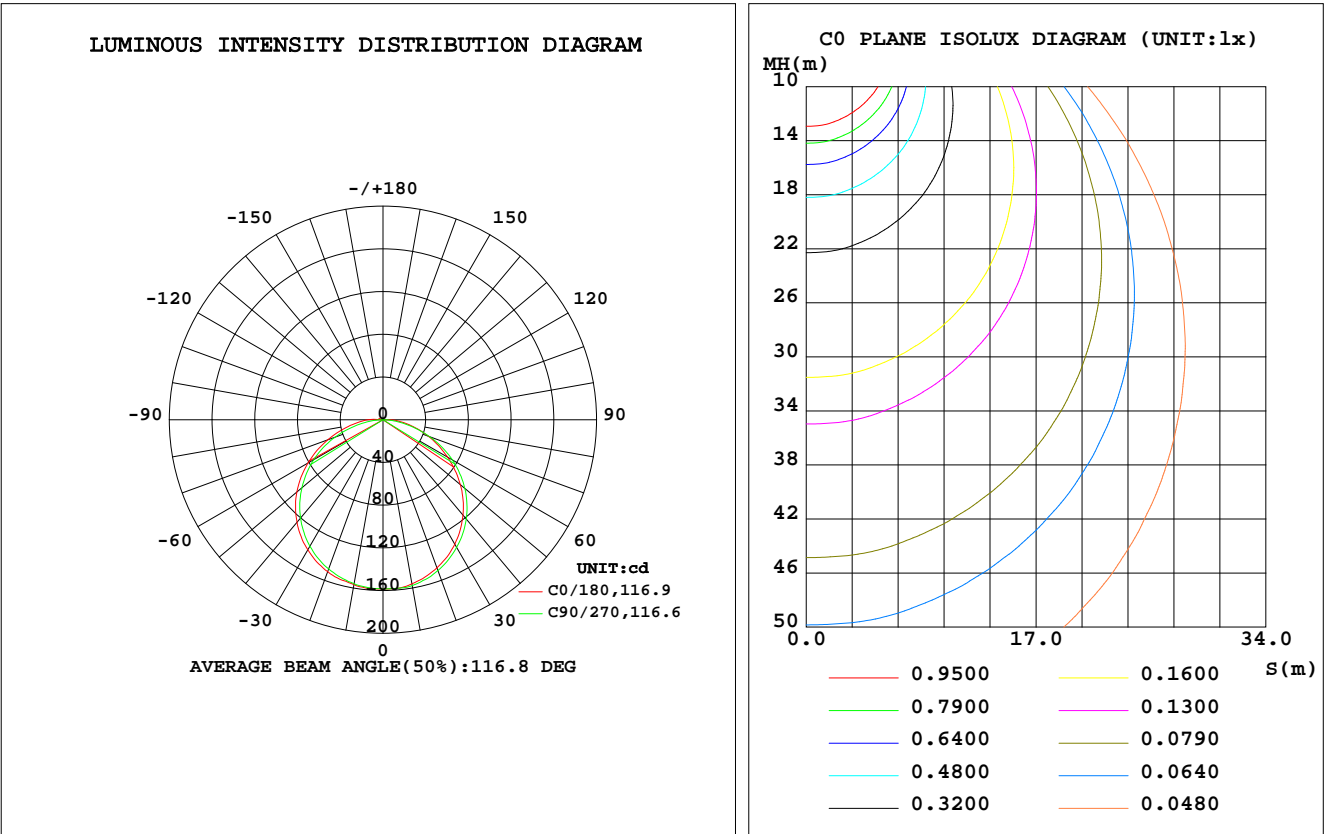


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 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: 129.31 lm/W			
PX RIBBON MODEL	840 3.5W ONOFF 1M IP20	I _{max} (cd)	158.8	S/MH(C0/180)	1.32
NOMINAL POWER(W)	3.5	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	485.40	η UP,DN(C0-180)	0.2,49.3
NOMINAL FLUX(lm)	485.399	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,50.3
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	η down(%)	99.6	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	156.0	156.0	157.7	157.4	156.8	156.8	156.0	155.3	0- 10	15.05	15.05	3.1,3.1
20	147.6	148.3	150.2	150.2	151.4	150.8	148.7	147.6	10- 20	43.39	58.44	12,12
30	134.6	135.7	137.9	138.4	140.7	140.0	136.9	135.6	20- 30	66.50	124.9	25.7,25.7
40	116.6	118.0	121.3	122.0	125.3	124.3	120.0	119.4	30- 40	81.35	206.3	42.5,42.5
50	94.56	95.76	100.0	101.8	105.3	105.3	99.02	96.96	40- 50	85.68	292.0	60.1,60.1
60	69.81	69.83	74.99	76.84	81.16	80.10	74.83	71.65	50- 60	78.51	370.5	76.3,76.3
70	45.07	42.64	46.36	49.74	55.13	50.85	47.82	45.51	60- 70	60.90	431.4	88.9,88.9
80	23.00	19.26	18.91	25.44	31.05	24.58	19.80	22.14	70- 80	36.87	468.2	96.5,96.5
90	7.840	4.701	1.699	10.12	14.23	8.419	0.4413	5.504	80- 90	15.16	483.4	99.6,99.6
100	0.2573	0	0	2.908	1.140	0	0	0	90-100	1.591	485.0	99.9,99.9
110	0	0	0	0	0.4283	0	0	0	100-110	0.3912	485.4	100,100
120	0	0	0	0	0	0	0	0	110-120	0.0077	485.4	100,100
130	0	0	0	0	0	0	0	0	120-130	0	485.4	100,100
140	0	0	0	0	0	0	0	0	130-140	0	485.4	100,100
150	0	0	0	0	0	0	0	0	140-150	0.0015	485.4	100,100
160	0	0	0	0	0	0	0	0	150-160	0.0035	485.4	100,100
170	0	0	0.0017	0	0	0	0	0	160-170	0.0032	485.4	100,100
180	0	0	0.0890	0	0	0	0	0	170-180	0.0011	485.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 249.3 lm

%lum = 51.4%

%lamp = 51.4%

Conical surface Flux(120deg): 370.47 lm

%lum = 76.3%

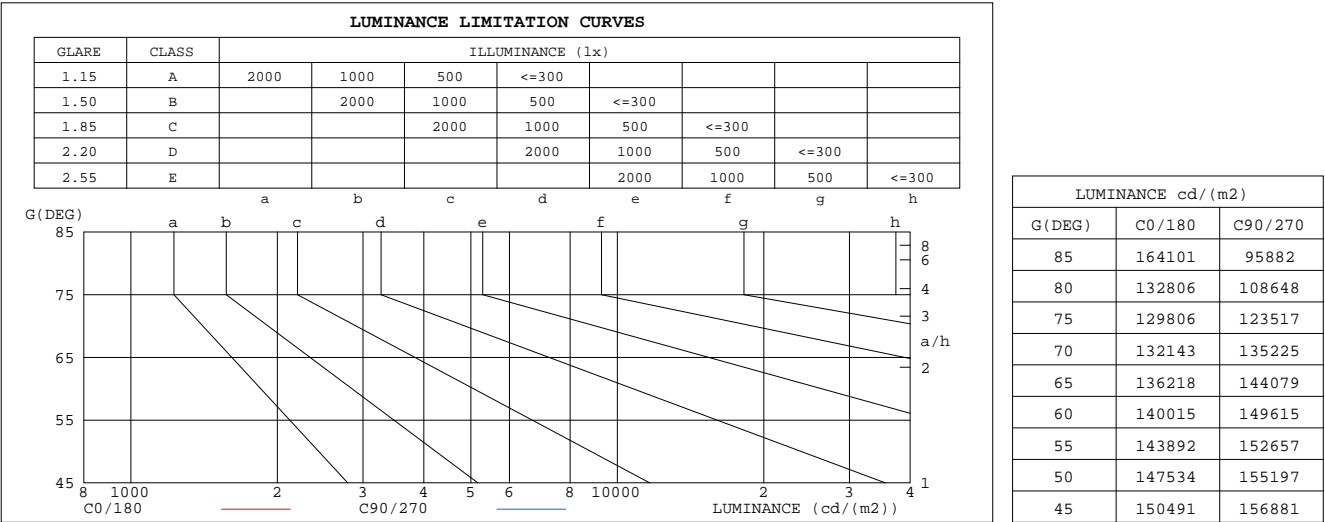
%lamp = 76.3%

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:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 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:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 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	.327	.186	.059	.320	.182	.058	.306	.176	.056	.294	.169	.054	.282	.164	.053	
2.0	.302	.166	.051	.296	.163	.050	.284	.158	.049	.273	.153	.048	.263	.149	.047	
3.0	.277	.148	.044	.272	.146	.044	.261	.141	.043	.251	.138	.042	.242	.134	.041	
4.0	.255	.132	.039	.250	.131	.039	.240	.127	.038	.231	.124	.037	.223	.121	.037	
5.0	.235	.120	.035	.230	.118	.034	.222	.115	.034	.214	.113	.034	.207	.110	.033	
6.0	.217	.109	.031	.213	.108	.031	.206	.105	.031	.199	.103	.030	.192	.101	.030	
7.0	.202	.100	.028	.198	.099	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027	
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.026	.173	.088	.025	.168	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.024	.163	.082	.023	.158	.080	.023	
10.0	.165	.079	.022	.163	.079	.022	.158	.077	.022	.153	.076	.022	.149	.075	.022	

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	.194	.194	.194	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.185	.159	.136	.158	.137	.117	.108	.094	.081	.062	.054	.047	.020	.018	.015	
2.0	.177	.135	.100	.151	.116	.086	.104	.080	.060	.060	.047	.035	.019	.015	.012	
3.0	.169	.118	.076	.145	.101	.066	.100	.070	.046	.057	.041	.027	.018	.013	.009	
4.0	.161	.104	.061	.139	.090	.053	.095	.063	.037	.055	.037	.022	.018	.012	.007	
5.0	.154	.094	.050	.132	.081	.043	.091	.057	.031	.053	.033	.018	.017	.011	.006	
6.0	.147	.086	.042	.126	.074	.036	.087	.052	.026	.050	.031	.015	.016	.010	.005	
7.0	.140	.079	.036	.120	.068	.031	.083	.048	.022	.048	.028	.013	.016	.009	.004	
8.0	.133	.073	.032	.115	.063	.028	.079	.044	.020	.046	.026	.012	.015	.009	.004	
9.0	.127	.068	.028	.109	.059	.025	.076	.042	.017	.044	.025	.010	.014	.008	.003	
10.0	.121	.064	.026	.104	.055	.022	.072	.039	.016	.042	.023	.009	.014	.008	.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:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 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	29.9	31.5	30.2	31.7	31.9	30.2	31.7	30.4	31.9	32.1	
	3H	31.5	32.9	31.8	33.1	33.4	31.7	33.1	32.0	33.3	
	4H	32.1	33.5	32.5	33.8	34.0	32.3	33.6	32.6	33.9	
	6H	32.7	34.0	33.1	34.3	34.6	32.7	34.0	33.0	34.2	
	8H	33.0	34.2	33.3	34.5	34.8	32.8	34.0	33.1	34.3	
	12H	33.2	34.4	33.6	34.7	35.0	32.9	34.1	33.2	34.4	
4H	2H	30.5	31.9	30.8	32.1	32.4	30.7	32.1	31.0	32.3	
	3H	32.2	33.4	32.6	33.7	34.0	32.4	33.6	32.7	33.9	
	4H	33.0	34.1	33.4	34.5	34.8	33.1	34.2	33.5	34.5	
	6H	33.8	34.8	34.2	35.1	35.5	33.6	34.6	34.0	34.9	
	8H	34.1	35.0	34.5	35.4	35.8	33.8	34.7	34.2	35.1	
	12H	34.4	35.3	34.9	35.7	36.1	33.9	34.8	34.4	35.2	
8H	4H	33.3	34.2	33.7	34.6	35.0	33.3	34.2	33.7	34.6	
	6H	34.2	35.0	34.7	35.4	35.8	34.0	34.8	34.5	35.2	
	8H	34.7	35.3	35.1	35.8	36.2	34.3	34.9	34.7	35.4	
	12H	35.1	35.7	35.6	36.2	36.7	34.5	35.1	35.0	35.5	
12H	4H	33.3	34.1	33.7	34.5	35.0	33.3	34.2	33.8	34.6	
	6H	34.3	34.9	34.7	35.4	35.8	34.1	34.8	34.5	35.2	
	8H	34.8	35.4	35.3	35.8	36.3	34.4	35.0	34.9	35.4	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 485.4 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -2.5$)

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:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

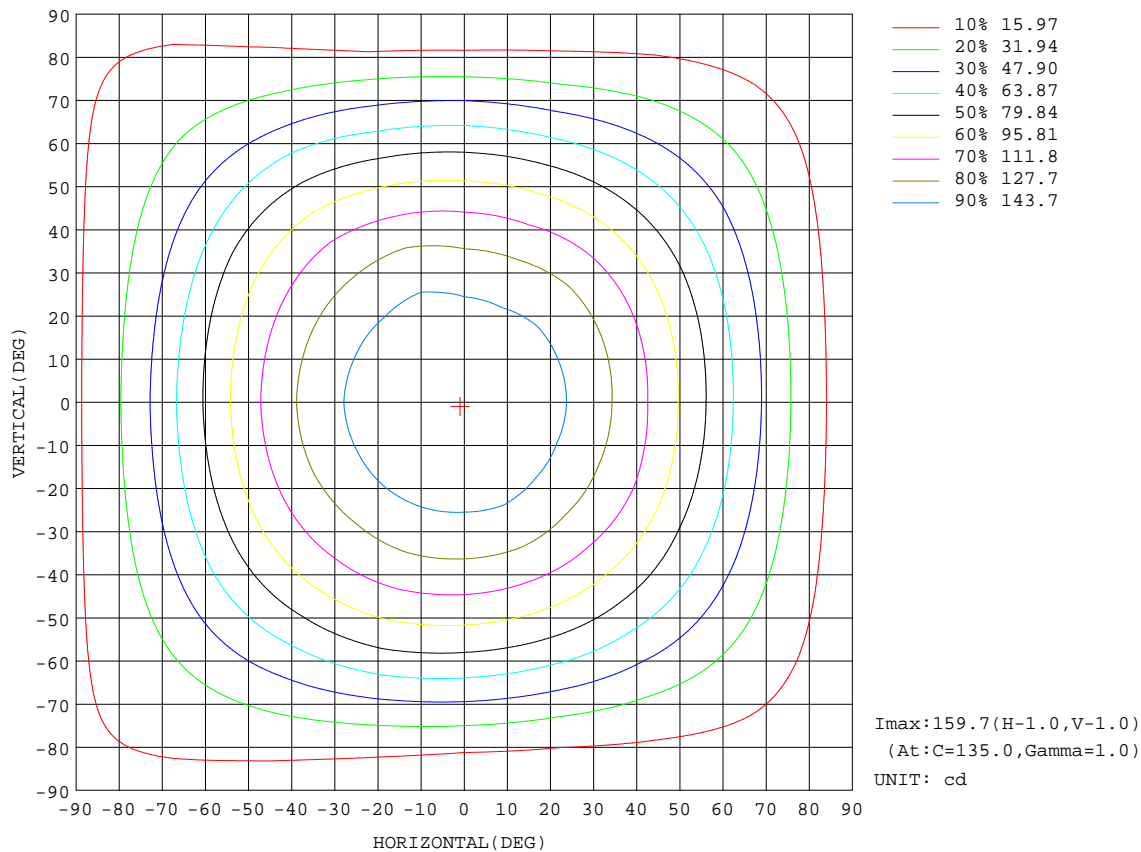
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	56	44	37	54	44	37	31
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	55	71	64	55	48
1.25	82	71	64	80	70	63	78	69	62	55
1.50	87	77	69	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	68
2.50	98	90	83	96	88	82	92	85	80	72
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	94	103	97	93	99	94	90	81
5.00	108	103	98	105	101	97	101	97	94	84
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

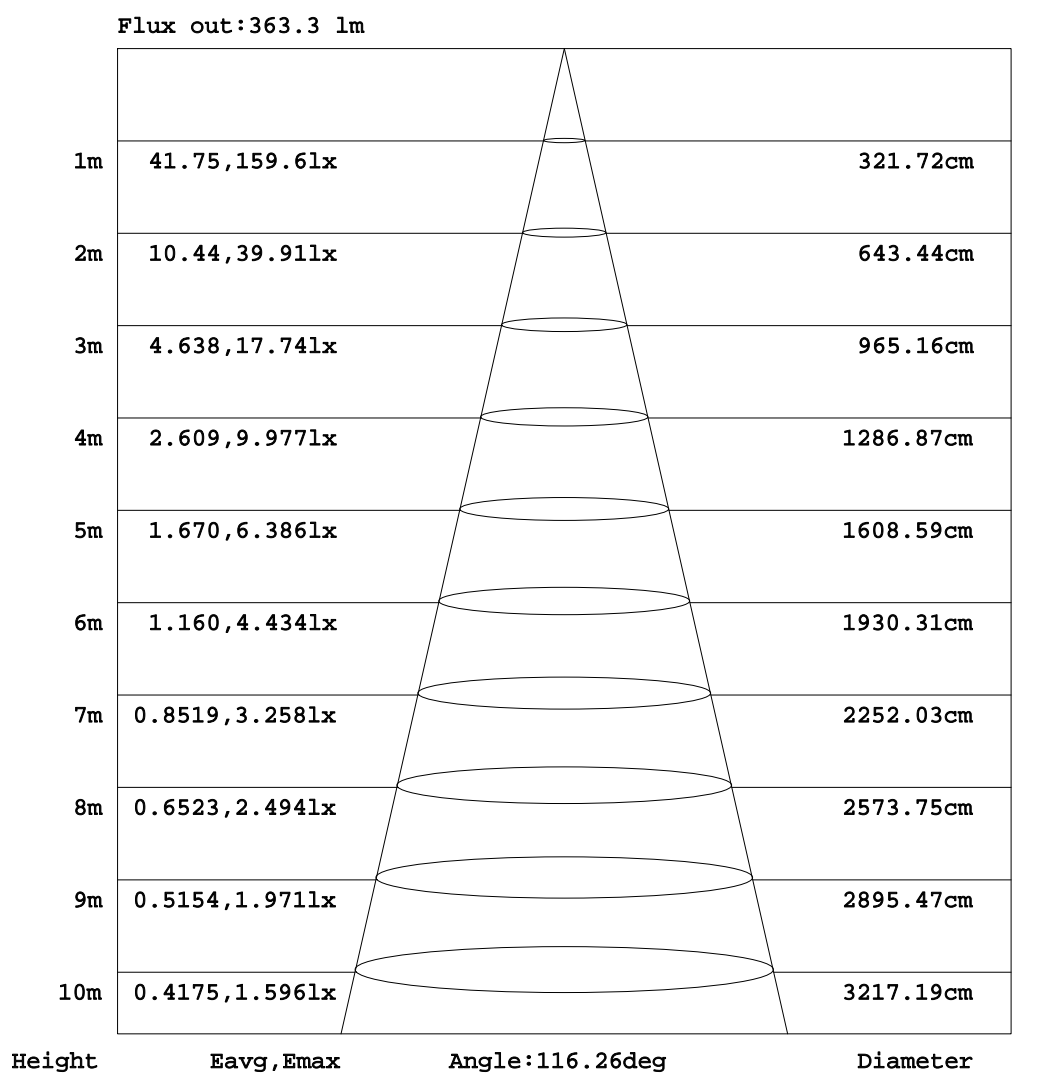
Test:U:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



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:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

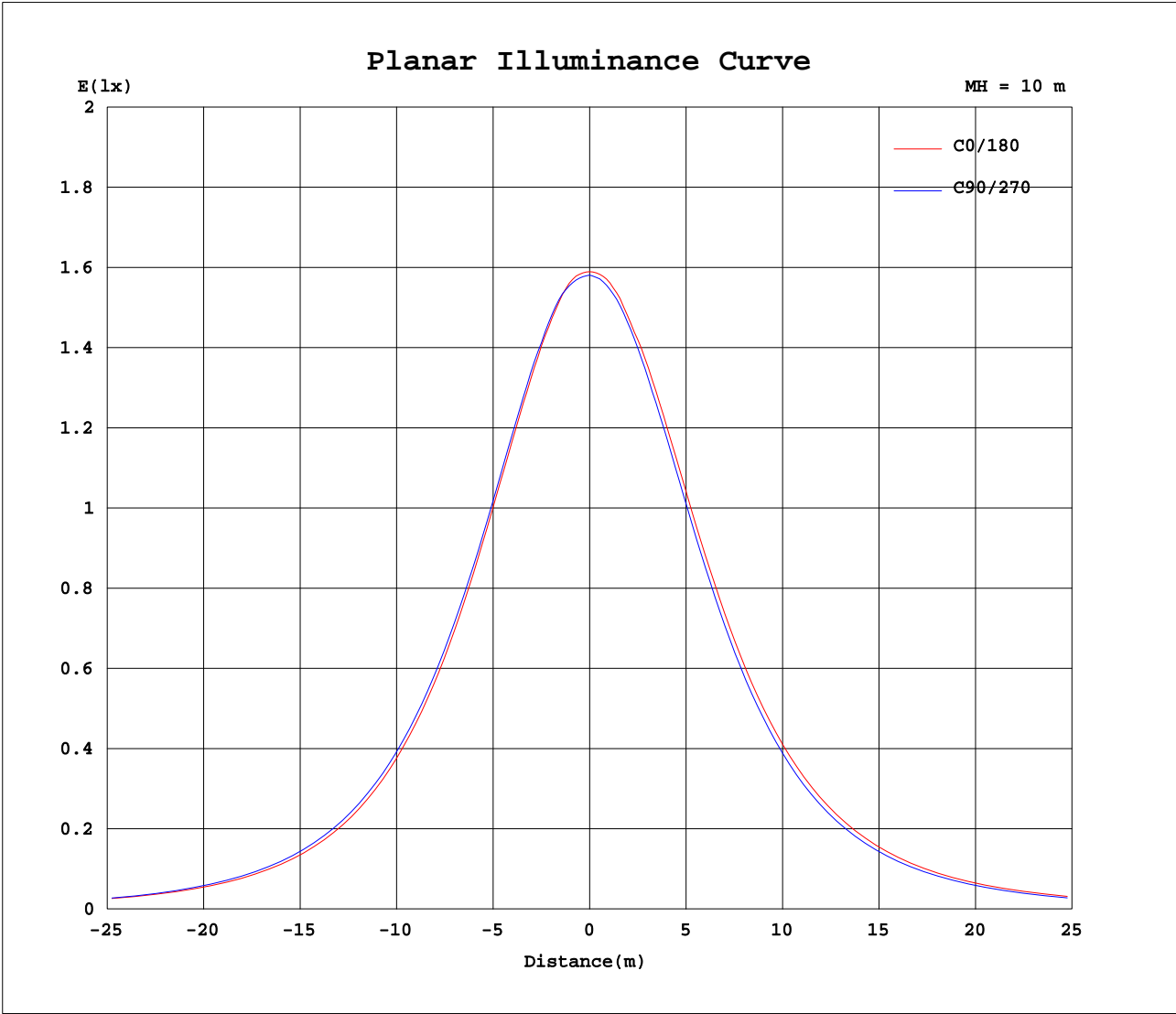


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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	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:24.006V I:0.1564A P:3.7536W PF:1.0000 Freq:0Hz Lamp Flux:485.399x1 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	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158				
5	158	158	158	158	158	158	159	159	158	158	158	158	158	158	157	157				
10	156	156	156	157	158	158	157	157	157	157	157	157	156	156	155	155				
15	152	152	153	155	155	154	154	155	155	155	154	155	153	152	152	152				
20	148	148	148	150	150	150	150	151	151	151	151	151	149	148	148	148				
25	142	142	143	144	145	146	145	146	147	146	146	147	143	142	142	142				
30	135	135	136	138	138	139	138	140	141	140	140	141	137	136	136	135				
35	126	127	127	130	130	132	131	133	134	134	133	133	129	128	128	127				
40	117	118	118	120	121	123	122	124	125	125	124	124	120	119	119	118				
45	106	109	108	109	111	113	113	115	116	116	116	113	110	108	107	108				
50	94.6	95.4	95.8	98.0	100	102	102	104	105	106	105	102	99.0	97.5	97.0	96.3				
55	82.3	82.0	83.2	85.4	87.8	90.6	90.2	92.2	93.6	94.5	93.4	89.3	87.2	85.7	84.3	84.2				
60	69.8	69.4	69.8	72.3	75.0	77.7	76.8	79.4	81.2	82.4	80.1	76.5	74.8	72.8	71.6	71.7				
65	57.4	56.5	55.9	57.9	61.0	63.5	63.3	66.3	68.3	67.5	66.9	62.9	61.7	59.1	58.5	58.9				
70	45.1	43.8	42.6	43.8	46.4	48.5	49.7	52.8	55.1	52.6	50.8	48.7	47.8	45.4	45.5	46.3				
75	33.5	32.0	30.1	29.9	32.0	34.6	37.0	39.6	42.4	40.1	36.6	34.8	33.3	32.0	33.3	34.3				
80	23.0	21.6	19.3	17.8	18.9	22.1	25.4	28.4	31.0	28.9	24.6	20.4	19.8	20.4	22.1	23.4				
85	14.3	13.1	10.7	8.46	8.38	12.6	16.1	19.1	21.5	19.5	15.2	10.1	8.57	10.7	12.6	13.7				
90	7.84	6.82	4.70	2.78	1.70	6.36	10.1	12.5	14.2	12.3	8.42	3.86	0.44	3.62	5.50	6.68				
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00				
100	0.26	0.00	0.00	0.00	0.00	0.00	2.91	3.79	1.14	0.17	0.00	0.00	0.00	0.00	0.00	0.26				
105	0.26	0.00	0.00	0.00	0.00	0.00	0.86	2.08	2.47	0.09	0.00	0.00	0.00	0.00	0.00	0.00				
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00				
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00				
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00				
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00				
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00				
175	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00				
180	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00				

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: