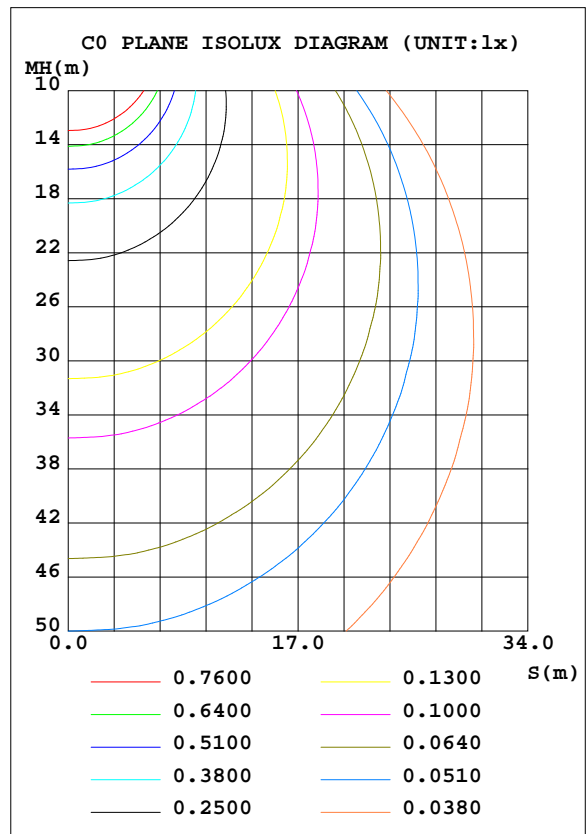
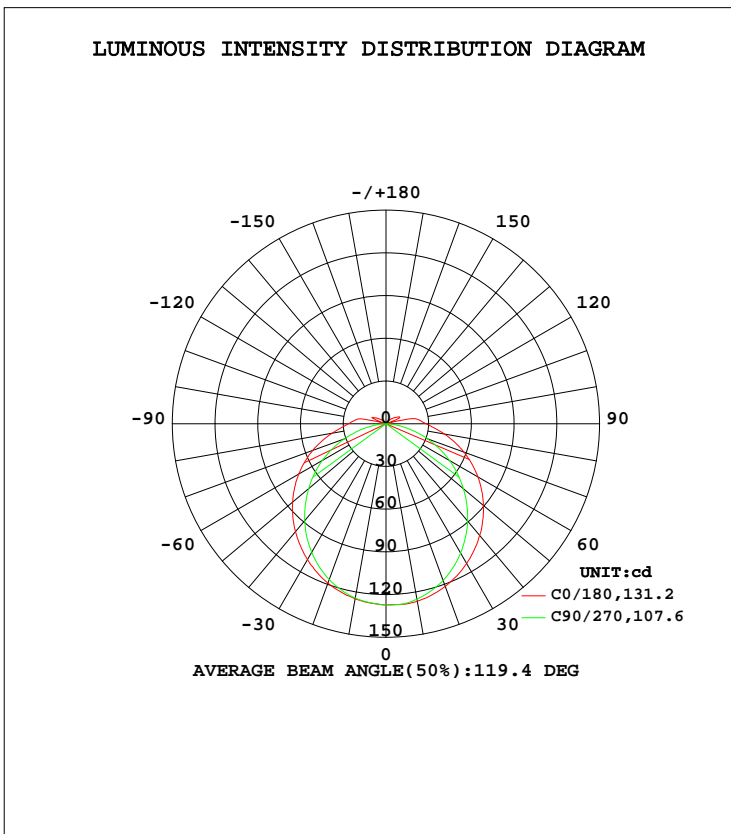


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 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			
MODEL	⌘	Imax(cd)	127.4	S/MH(C0/180)	1.29
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)		TOTAL FLUX(lm)	437.13	η UP, DN(C0-180)	3.2,47.1
NOMINAL FLUX(lm)	437.127	CIE CLASS	DIRECT	η UP, DN(C180-360)	2.9,46.7
LAMPS INSIDE	1	η up(%)	6.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		η down(%)	93.8	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	126.6	125.9	125.1	125.4	124.9	124.5	124.2	125.6	0- 10	12.06	12.06	2.76,2.76
20	121.6	119.6	117.2	118.6	119.1	117.8	116.5	119.3	10- 20	34.59	46.65	10.7,10.7
30	113.3	109.6	104.8	108.0	110.3	107.3	104.2	109.4	20- 30	52.56	99.21	22.7,22.7
40	102.4	96.64	89.21	94.69	98.90	94.11	88.85	96.66	30- 40	63.90	163.1	37.3,37.3
50	89.32	81.44	71.01	79.26	85.64	78.62	70.93	81.44	40- 50	67.67	230.8	52.8,52.8
60	74.48	64.80	51.38	62.71	70.77	61.99	51.67	65.07	50- 60	63.90	294.7	67.4,67.4
70	58.24	47.43	31.02	45.52	54.72	44.67	31.23	48.12	60- 70	53.59	348.3	79.7,79.7
80	41.63	30.51	11.69	29.10	38.45	28.07	11.85	31.27	70- 80	38.59	386.9	88.5,88.5
90	28.13	18.23	0.7449	17.75	26.39	16.51	0.2203	18.31	80- 90	23.25	410.1	93.8,93.8
100	20.90	7.460	0.5154	5.901	19.99	4.517	0	7.197	90-100	14.25	424.4	97.1,97.1
110	2.666	6.120	0.2945	5.713	2.196	5.231	0	6.076	100-110	3.826	428.2	98,98
120	9.602	4.433	0.2209	4.081	8.322	3.024	0	4.006	110-120	4.640	432.8	99,99
130	5.952	2.511	0.0736	2.080	4.676	1.105	0	1.777	120-130	2.823	435.6	99.7,99.7
140	2.984	0.9592	0	0.6681	1.707	0	0	0.1463	130-140	1.180	436.8	99.9,99.9
150	0.8939	0.0738	0	0	0	0	0	0	140-150	0.2777	437.1	100,100
160	0	0	0	0	0	0	0	0	150-160	0.0210	437.1	100,100
170	0	0	0	0	0	0	0	0	160-170	0	437.1	100,100
180	0	0	0	0	0	0	0	0	170-180	0	437.1	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 196.97 lm

%lum = 45.1%  
%lamp = 45.1%

Conical surface Flux(120deg): 294.69 lm

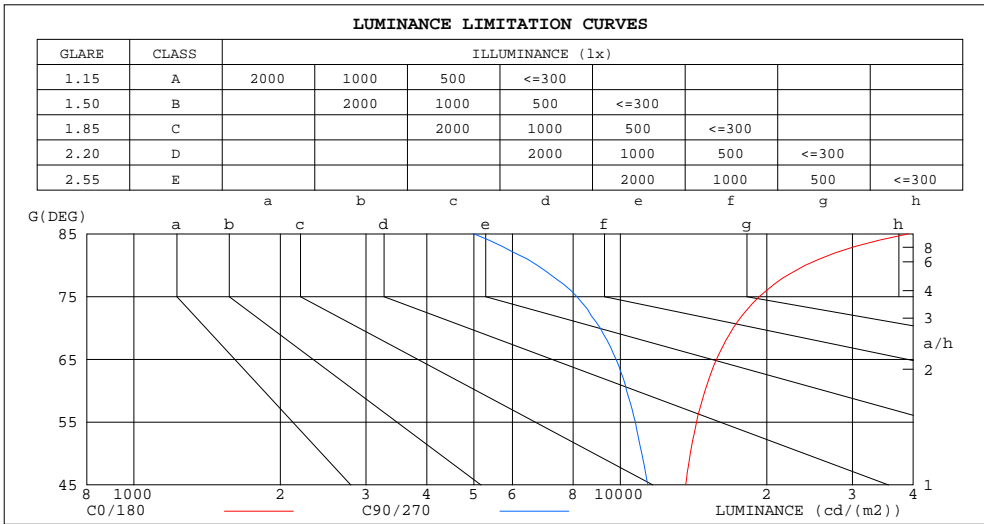
%lum = 67.4%  
%lamp = 67.4%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.5DEG  
Operators:William  
Test Date:2020-06-05

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity:56.4%  
Test Distance:26.000m [K=1.3952]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	39090	5001
80	24020	6744
75	19302	8136
70	17062	9087
65	15773	9796
60	14927	10298
55	14347	10736
50	13924	11070
45	13620	11382

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks:

WEC AND CCEC

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 lm														
NAME:					TYPE:LED					WEIGHT:N/A				
SPEC.:N/A					DIM.:					SERIAL No.:N/A				
MFR.:					SUR.:					Shielding Angle:N/A				

ρcc	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	.357	.203	.064	.348	.198	.063	.331	.190	.061	.315	.182	.058	.301	.174	.056	
2.0	.319	.175	.054	.311	.171	.053	.296	.164	.051	.282	.158	.049	.269	.152	.048	
3.0	.288	.153	.046	.280	.150	.045	.267	.145	.044	.254	.139	.043	.243	.134	.042	
4.0	.261	.136	.040	.255	.133	.039	.243	.129	.038	.231	.124	.037	.221	.120	.037	
5.0	.239	.122	.035	.233	.120	.035	.222	.116	.034	.212	.112	.033	.203	.108	.033	
6.0	.220	.110	.032	.215	.109	.031	.205	.105	.031	.196	.102	.030	.187	.099	.029	
7.0	.204	.101	.029	.199	.099	.028	.190	.096	.028	.182	.093	.027	.174	.090	.027	
8.0	.189	.093	.026	.185	.091	.026	.177	.089	.025	.170	.086	.025	.162	.083	.024	
9.0	.177	.086	.024	.173	.084	.024	.166	.082	.023	.159	.080	.023	.152	.077	.022	
10.0	.166	.080	.022	.162	.078	.022	.156	.076	.021	.149	.074	.021	.143	.072	.021	

ρcc	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	.238	.238	.238	.203	.203	.203	.139	.139	.139	.080	.080	.080	.025	.025	.025	
1.0	.231	.203	.178	.198	.174	.153	.135	.120	.106	.078	.069	.062	.025	.022	.020	
2.0	.224	.180	.143	.192	.155	.123	.131	.107	.086	.076	.062	.050	.024	.020	.016	
3.0	.216	.162	.120	.185	.140	.104	.127	.097	.073	.073	.057	.043	.024	.018	.014	
4.0	.208	.150	.105	.179	.129	.091	.123	.090	.064	.071	.053	.038	.023	.017	.012	
5.0	.200	.139	.094	.172	.121	.082	.119	.084	.058	.069	.049	.034	.022	.016	.011	
6.0	.193	.131	.087	.166	.114	.076	.114	.080	.053	.066	.047	.032	.021	.015	.010	
7.0	.186	.124	.081	.160	.108	.071	.111	.076	.050	.064	.045	.030	.021	.015	.010	
8.0	.179	.119	.077	.154	.103	.067	.107	.072	.048	.062	.043	.028	.020	.014	.009	
9.0	.173	.114	.074	.149	.099	.064	.103	.069	.046	.060	.041	.027	.019	.013	.009	
10.0	.167	.110	.071	.144	.095	.062	.100	.067	.044	.058	.040	.026	.019	.013	.009	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 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	22.0	23.5	22.4	23.8	24.2	20.6	22.1	20.9	22.4	22.7
3H	24.3	25.7	24.7	26.0	26.4	22.0	23.4	22.4	23.8	24.1
4H	25.4	26.7	25.8	27.1	27.5	22.6	23.9	23.0	24.3	24.7
6H	26.6	27.9	27.1	28.3	28.7	23.0	24.2	23.4	24.6	25.0
8H	27.3	28.5	27.7	28.9	29.3	23.1	24.3	23.5	24.7	25.1
12H	28.0	29.1	28.4	29.6	30.0	23.1	24.3	23.5	24.7	25.1
4H 2H	22.6	23.9	23.0	24.3	24.7	21.5	22.8	21.9	23.2	23.6
3H	25.1	26.2	25.5	26.6	27.1	23.2	24.3	23.6	24.8	25.2
4H	26.4	27.5	26.9	27.9	28.4	23.9	25.0	24.4	25.4	25.9
6H	27.8	28.8	28.3	29.2	29.7	24.4	25.4	24.9	25.9	26.4
8H	28.6	29.5	29.1	29.9	30.5	24.6	25.5	25.1	26.0	26.5
12H	29.4	30.2	29.9	30.7	31.3	24.7	25.5	25.2	26.0	26.6
8H 4H	26.7	27.6	27.2	28.1	28.6	24.6	25.5	25.1	26.0	26.5
6H	28.4	29.1	28.9	29.6	30.2	25.4	26.2	26.0	26.7	27.3
8H	29.3	30.0	29.9	30.5	31.1	25.8	26.4	26.3	27.0	27.6
12H	30.4	31.0	31.0	31.6	32.2	26.0	26.6	26.6	27.2	27.8
12H 4H	26.7	27.5	27.2	28.0	28.6	24.8	25.6	25.3	26.1	26.7
6H	28.5	29.1	29.0	29.7	30.3	25.8	26.5	26.4	27.0	27.6
8H	29.5	30.1	30.1	30.7	31.3	26.3	26.8	26.8	27.4	28.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.4				

CIE Pub.117, 437.1 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -2.9)

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

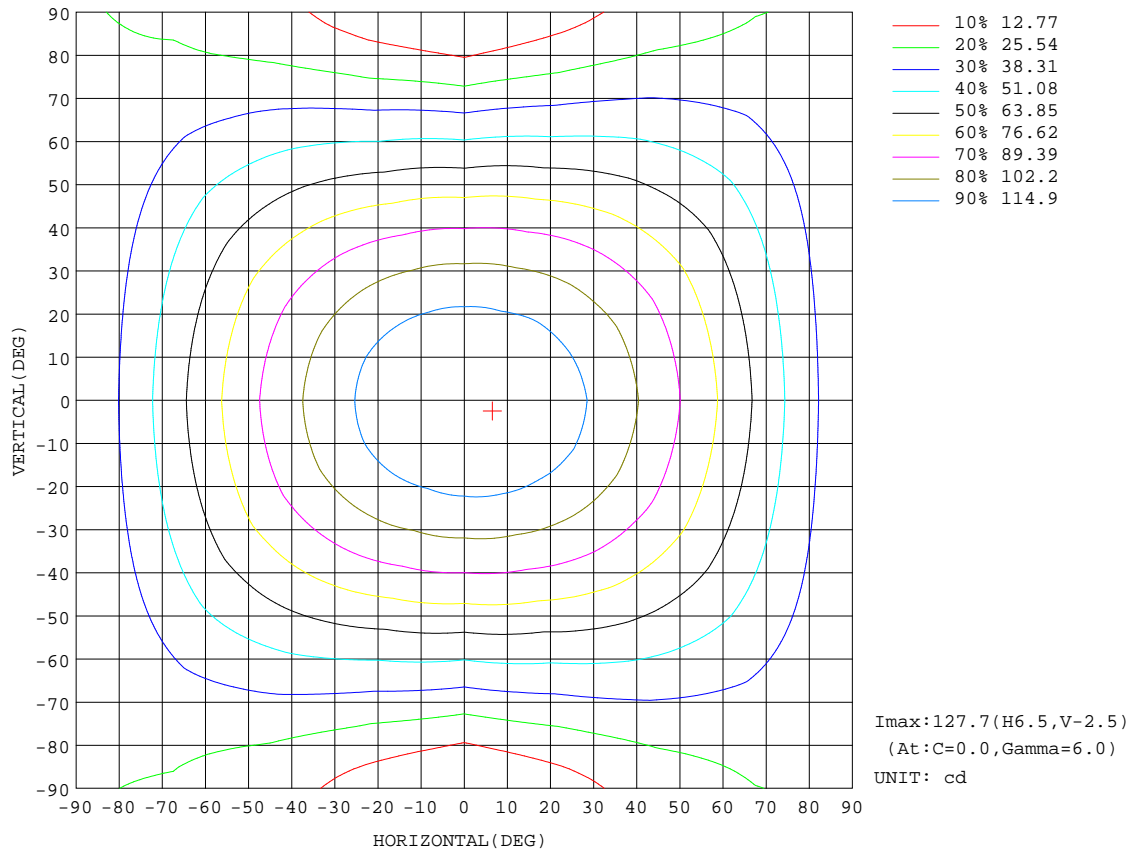
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	53	41	34	52	41	34	51	40	34	27
0.80	63	50	43	62	50	42	59	49	42	35
1.00	71	59	51	69	58	50	67	59	50	42
1.25	78	66	58	76	65	58	73	63	57	48
1.50	83	72	64	81	71	63	77	68	62	53
2.00	90	80	72	88	78	72	83	76	70	60
2.50	94	85	78	92	83	77	87	80	74	65
3.00	98	89	83	95	87	81	90	84	79	69
4.00	102	95	89	99	93	88	94	89	84	74
5.00	105	99	94	102	96	92	96	92	88	77
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:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

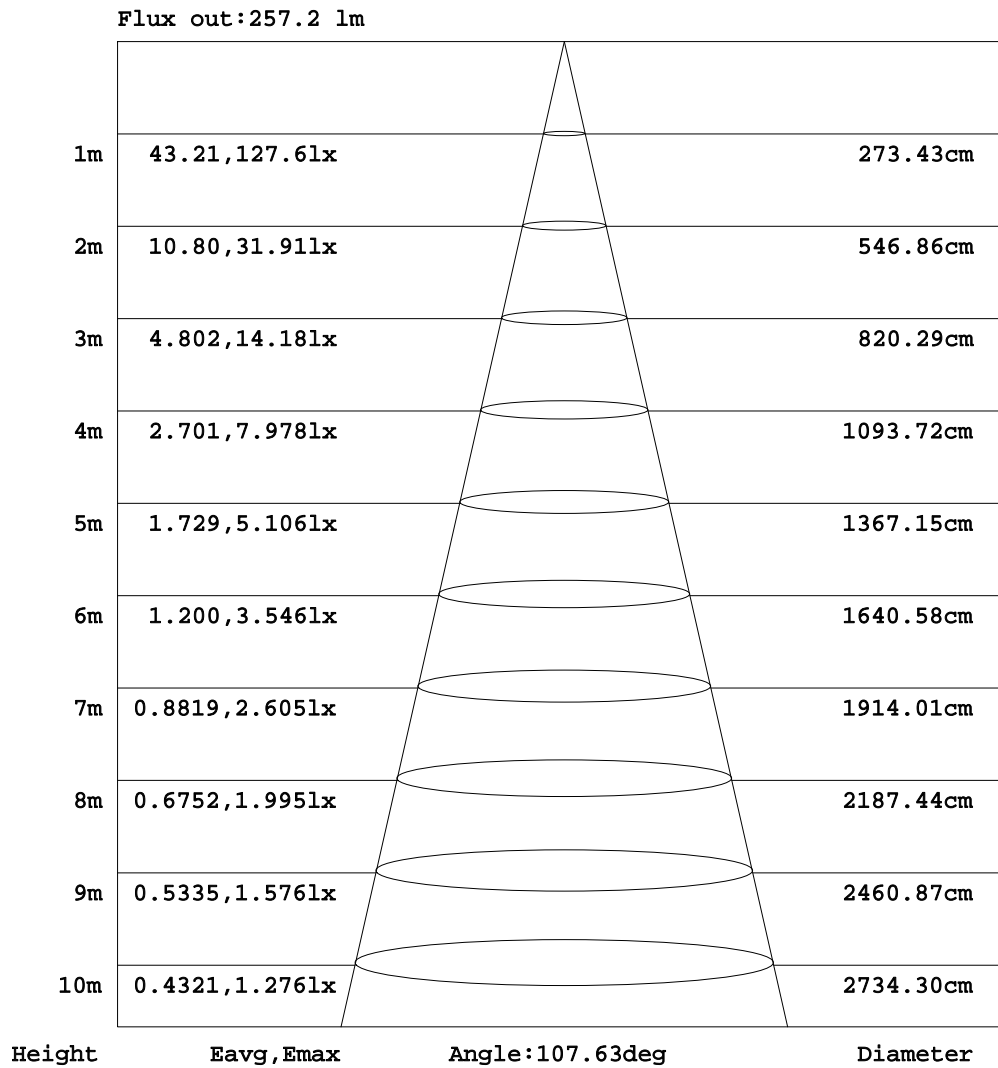


C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 24.5DEG  
 Operators: William  
 Test Date: 2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity: 56.4%  
 Test Distance: 26.000m [K=1.3952]  
 Remarks:

AAI Figure

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A



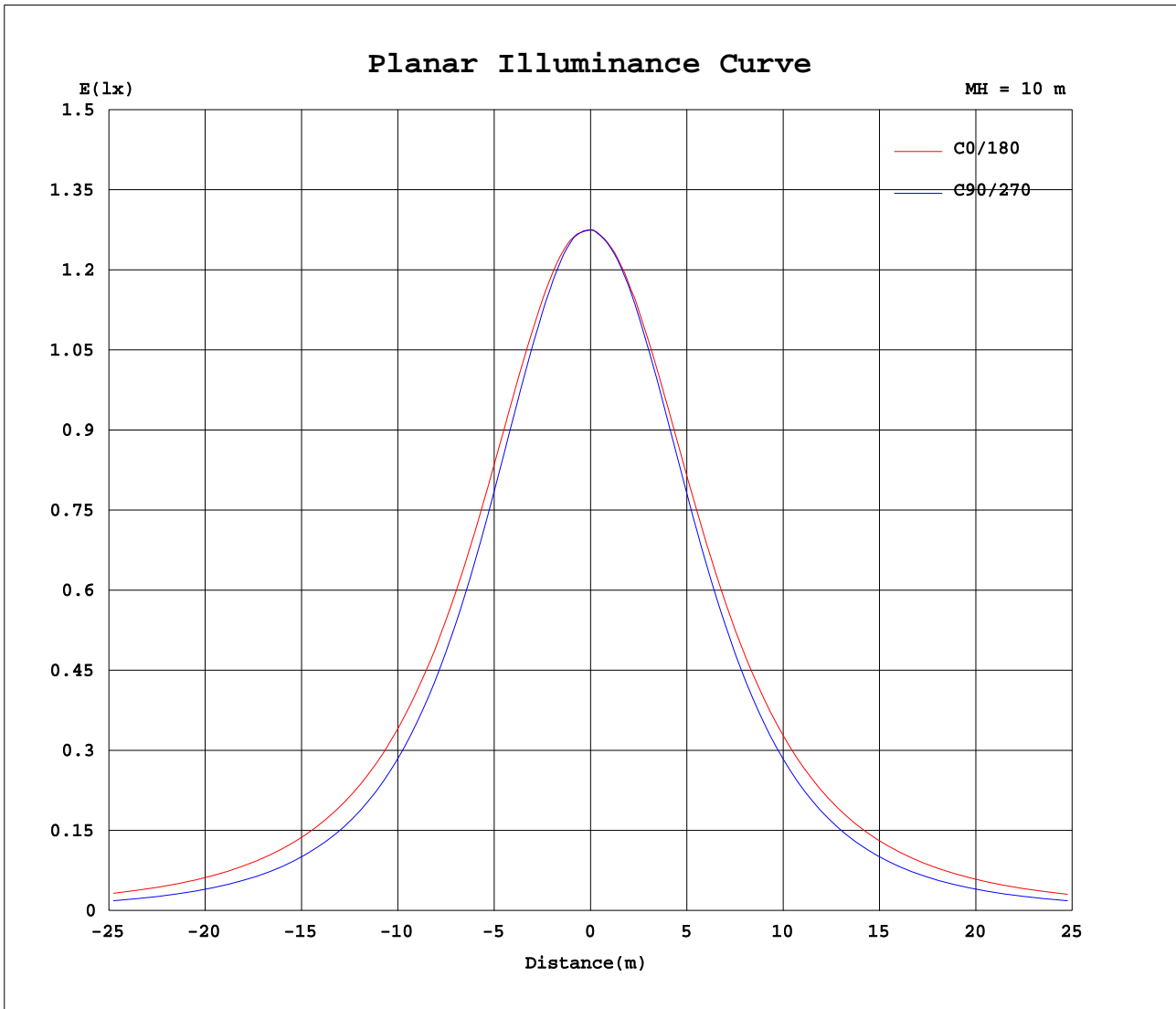
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks:



Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 24.5DEG  
Operators: William  
Test Date: 2020-06-05

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity: 56.4%  
Test Distance: 26.000m [K=1.3952]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:0V I:0A P:0W PF:0.0000 Freq:0Hz Lamp Flux:437.127x1 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	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127			
5	127	127	127	127	127	127	127	127	126	126	126	126	126	127	127	127			
10	127	126	126	126	125	125	125	126	125	125	125	125	124	125	126	126			
15	125	124	123	123	122	122	123	123	122	122	122	121	121	122	123	124			
20	122	121	120	118	117	118	119	120	119	119	118	117	117	118	119	121			
25	118	117	115	113	111	112	114	115	115	114	113	111	111	112	115	117			
30	113	112	110	107	105	106	108	110	110	109	107	105	104	106	109	112			
35	108	107	103	99.4	97.3	98.7	102	105	105	103	101	98.0	97.0	99.4	103	107			
40	102	100	96.6	91.6	89.2	90.9	94.7	98.4	98.9	97.3	94.1	90.1	88.8	91.7	96.7	101			
45	96.1	93.9	89.3	83.4	80.3	82.5	87.2	91.6	92.6	90.5	86.6	81.7	80.1	83.6	89.2	94.4			
50	89.3	86.7	81.4	74.4	71.0	73.8	79.3	84.3	85.6	83.2	78.6	72.8	70.9	75.0	81.4	87.4			
55	82.1	79.2	73.3	65.4	61.5	64.6	71.0	77.0	78.4	75.8	70.4	63.9	61.5	66.0	73.4	79.8			
60	74.5	71.2	64.8	56.3	51.4	55.5	62.7	69.0	70.8	67.7	62.0	54.7	51.7	56.9	65.1	72.1			
65	66.5	63.0	56.3	46.9	41.3	46.0	54.1	60.9	62.8	59.8	53.4	45.3	41.5	47.5	56.6	63.8			
70	58.2	54.7	47.4	37.5	31.0	36.7	45.5	52.7	54.7	51.5	44.7	36.0	31.2	38.3	48.1	55.6			
75	49.9	46.4	38.8	28.5	21.0	27.6	37.1	44.2	46.5	43.3	36.2	26.9	21.2	29.1	39.5	47.2			
80	41.6	38.2	30.5	20.1	11.7	19.4	29.1	36.2	38.4	35.3	28.1	18.6	11.8	20.8	31.3	38.9			
85	34.0	30.8	23.3	13.0	4.35	12.6	22.3	29.2	31.4	28.1	21.1	11.6	4.26	13.6	23.9	31.1			
90	28.1	25.2	18.2	8.41	0.74	8.27	17.8	24.5	26.4	23.5	16.5	7.14	0.22	8.54	18.3	25.2			
95	24.6	21.9	15.4	5.41	0.59	5.36	14.9	21.3	23.1	20.2	13.6	3.86	0.07	5.45	15.3	21.6			
100	20.9	18.1	7.46	2.36	0.52	2.30	5.90	17.1	20.0	16.5	4.52	1.54	0.00	2.23	7.20	17.8			
105	3.73	1.18	1.99	2.14	0.52	2.08	2.14	0.45	2.67	0.07	3.16	1.33	0.00	1.71	3.04	0.65			
110	2.67	4.65	6.12	1.62	0.29	1.56	5.71	4.78	2.20	5.63	5.23	0.88	0.00	1.26	6.08	5.54			
115	10.7	9.43	5.46	1.18	0.22	0.97	5.12	9.04	10.7	8.54	4.13	0.15	0.00	0.66	5.11	9.41			
120	9.60	8.04	4.43	0.88	0.22	0.60	4.08	7.49	8.32	6.78	3.02	0.00	0.00	0.07	4.01	7.56			
125	7.67	6.35	3.47	0.59	0.08	0.37	3.04	5.86	6.39	5.15	1.98	0.00	0.00	0.00	2.89	5.93			
130	5.95	4.87	2.51	0.22	0.07	0.15	2.08	4.38	4.68	3.54	1.11	0.00	0.00	0.00	1.78	4.44			
135	4.39	3.47	1.70	0.07	0.07	0.15	1.19	3.05	3.27	2.36	0.29	0.00	0.00	0.00	1.03	2.89			
140	2.98	2.36	0.96	0.00	0.00	0.00	0.67	1.93	1.71	1.18	0.00	0.00	0.00	0.00	0.15	1.55			
145	1.86	1.40	0.37	0.00	0.00	0.00	0.22	0.97	0.74	0.22	0.00	0.00	0.00	0.00	0.00	0.52			
150	0.89	0.74	0.07	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.30	0.15	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			
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	0.00	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	0.00	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	0.00	0.00			
175	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			
180	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			

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:William  
 Test Date:2020-06-05

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:56.4%  
 Test Distance:26.000m [K=1.3952]  
 Remarks: