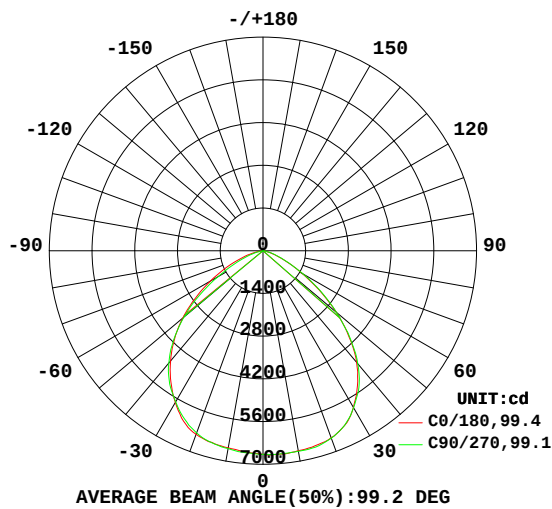


LUMINAIRE PHOTOMETRIC TEST REPORT

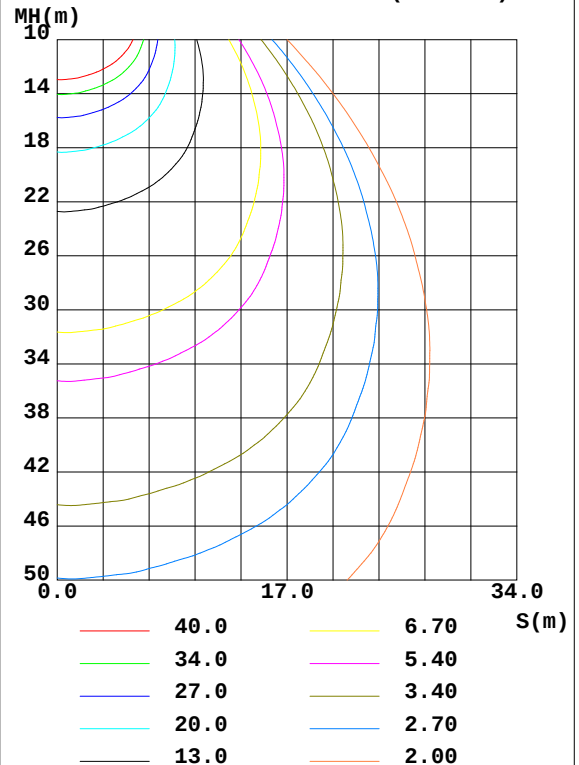
Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 146.15 lm/W			
MODEL	105W	I _{max} (cd)	6727	S/MH(C0/180)	1.27
NOMINAL POWER(W)	105	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	15455	η UP, DN(C0-180)	0.1, 49.3
NOMINAL FLUX(lm)	15454.6	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.1, 50.5
LAMPS INSIDE	1	η up(%)	0.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	99.8	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:William
Test Date:2020-09-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
Humidity:56.4%
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	6654	6665	6672	6642	6558	6513	6584	6657	0- 10	634.7	634.7	4.11, 4.11
20	6528	6547	6536	6522	6404	6366	6357	6467	10- 20	1860	2495	16.1, 16.1
30	5927	5948	5937	5851	5746	5676	5718	5874	20- 30	2862	5357	34.7, 34.7
40	4776	4746	4836	4737	4713	4647	4804	4742	30- 40	3334	8691	56.2, 56.2
50	3135	3145	3148	3264	3432	3463	3377	3244	40- 50	3117	11808	76.4, 76.4
60	1466	1406	1507	1783	1995	2025	1712	1671	50- 60	2204	14012	90.7, 90.7
70	454.0	417.3	502.1	693.5	832.4	744.7	576.9	520.4	60- 70	1079	15091	97.6, 97.6
80	38.95	47.71	51.49	109.9	166.1	106.4	37.68	42.31	70- 80	313.6	15404	99.7, 99.7
90	0.5478	1.420	1.012	0.6680	0.4688	0.3130	0.3148	0.3954	80- 90	15.91	15420	99.8, 99.8
100	0.4688	0.3912	0.3148	0.3954	0.7833	0.7042	0.6314	1.028	90-100	0.5078	15421	99.8, 99.8
110	1.250	1.174	0.8637	0.7109	2.191	1.961	2.051	2.534	100-110	1.017	15422	99.8, 99.8
120	2.731	2.582	2.519	2.528	4.379	4.149	4.254	4.671	110-120	2.431	15424	99.8, 99.8
130	6.329	5.857	6.374	5.137	6.643	5.718	5.512	6.249	120-130	4.153	15428	99.8, 99.8
140	10.53	9.620	10.84	9.169	9.380	7.748	8.669	8.392	130-140	5.789	15434	99.9, 99.9
150	14.22	13.99	14.72	14.23	12.27	11.27	12.67	12.26	140-150	7.074	15441	99.9, 99.9
160	15.86	16.20	16.29	16.21	15.79	15.42	16.14	15.66	150-160	6.775	15448	100, 100
170	18.04	18.53	18.72	18.40	17.19	17.45	18.18	18.34	160-170	4.762	15453	100, 100
180	20.08	20.49	19.91	19.69	20.00	19.40	19.76	19.53	170-180	1.801	15455	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 10325 lm

%lum = 66.8%

%lamp = 66.8%

Conical surface Flux(120deg): 14012 lm

%lum = 90.7%

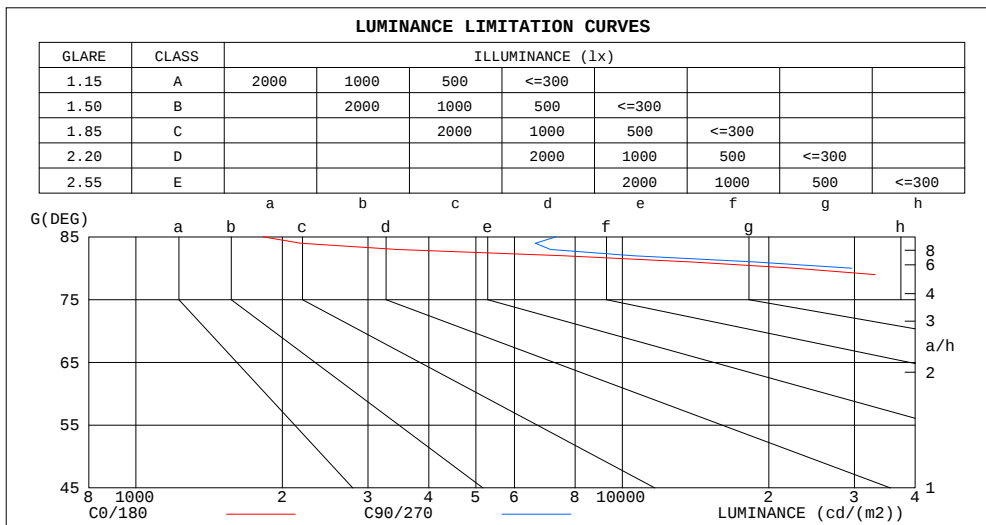
%lamp = 90.7%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:William
Test Date:2020-09-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
Humidity:56.4%
Test Distance:26.000m [K=1.4396]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 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	1825	7309
80	22542	29624
75	77475	92796
70	133410	146679
65	207191	212982
60	294651	301093
55	393870	400467
50	490177	489315
45	566843	569169

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:William
 Test Date:2020-09-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
 Humidity:56.4%
 Test Distance:26.000m [K=1.4396]
 Remarks:

WEC AND CCEC

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 lm														
NAME:					TYPE:LED					WEIGHT:N/A				
SPEC.:N/A					DIM.:					SERIAL No.:N/A				
MFR.:					SUR.:					Shielding Angle:N/A				

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.248	.141	.045	.242	.138	.044	.228	.131	.042	.216	.125	.040	.205	.119	.038	
2.0	.244	.133	.041	.238	.131	.040	.226	.126	.039	.216	.121	.038	.206	.116	.037	
3.0	.232	.124	.037	.227	.121	.037	.217	.117	.036	.208	.114	.035	.199	.110	.034	
4.0	.219	.114	.033	.214	.112	.033	.206	.109	.033	.197	.106	.032	.190	.103	.031	
5.0	.206	.105	.030	.202	.104	.030	.194	.101	.030	.187	.099	.029	.180	.096	.029	
6.0	.194	.097	.028	.190	.096	.028	.183	.094	.027	.177	.092	.027	.171	.090	.027	
7.0	.183	.090	.026	.179	.089	.025	.173	.088	.025	.167	.086	.025	.162	.084	.025	
8.0	.172	.084	.024	.169	.083	.024	.164	.082	.023	.158	.080	.023	.153	.079	.023	
9.0	.163	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.146	.074	.021	
10.0	.154	.074	.021	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.020	

ρ _{CC}	80%			70%			50%			30%			10%			0
ρ _W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{fC}	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	.178	.158	.141	.152	.136	.121	.104	.094	.084	.060	.054	.049	.019	.017	.016	
2.0	.168	.134	.106	.143	.115	.091	.098	.080	.064	.057	.046	.037	.018	.015	.012	
3.0	.159	.116	.081	.136	.100	.071	.094	.069	.049	.054	.041	.029	.017	.013	.010	
4.0	.151	.102	.065	.130	.088	.056	.089	.061	.039	.052	.036	.023	.017	.012	.008	
5.0	.144	.091	.052	.124	.079	.046	.085	.055	.032	.049	.032	.019	.016	.011	.006	
6.0	.137	.083	.044	.118	.072	.038	.081	.050	.027	.047	.030	.016	.015	.010	.005	
7.0	.131	.076	.037	.113	.066	.032	.078	.046	.023	.045	.027	.014	.015	.009	.005	
8.0	.125	.070	.032	.108	.061	.028	.075	.043	.020	.043	.025	.012	.014	.008	.004	
9.0	.120	.065	.028	.103	.057	.025	.071	.040	.018	.042	.023	.010	.013	.008	.003	
10.0	.114	.061	.025	.099	.053	.022	.068	.037	.016	.040	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:William
Test Date:2020-09-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
Humidity:56.4%
Test Distance:26.000m [K=1.4396]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 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	2H	23.5	24.8	23.7	25.0	25.2	23.5	24.9	23.8	25.1	25.3
	3H	23.7	24.9	24.0	25.2	25.4	23.7	25.0	24.0	25.2	25.4
	4H	23.7	24.8	24.0	25.1	25.3	23.7	24.9	24.0	25.2	25.4
	6H	23.6	24.7	23.9	25.0	25.2	23.7	24.8	24.0	25.0	25.3
	8H	23.5	24.6	23.9	24.9	25.2	23.6	24.7	24.0	25.0	25.2
	12H	23.5	24.5	23.8	24.8	25.1	23.6	24.6	23.9	24.9	25.2
4H	2H	23.6	24.8	23.9	25.0	25.3	23.6	24.8	23.9	25.0	25.3
	3H	23.9	24.9	24.2	25.2	25.5	23.9	24.9	24.2	25.2	25.5
	4H	23.9	24.8	24.2	25.1	25.4	23.9	24.8	24.3	25.2	25.5
	6H	23.8	24.6	24.2	24.9	25.3	23.9	24.7	24.3	25.0	25.4
	8H	23.7	24.5	24.2	24.9	25.2	23.8	24.6	24.2	24.9	25.3
	12H	23.7	24.4	24.1	24.8	25.2	23.8	24.5	24.2	24.8	25.3
8H	4H	23.8	24.5	24.2	24.9	25.3	23.8	24.6	24.3	25.0	25.3
	6H	23.7	24.3	24.2	24.7	25.2	23.8	24.4	24.2	24.8	25.2
	8H	23.7	24.2	24.1	24.6	25.1	23.8	24.3	24.2	24.7	25.2
	12H	23.6	24.1	24.1	24.5	25.0	23.7	24.2	24.2	24.6	25.1
12H	4H	23.7	24.4	24.2	24.8	25.2	23.8	24.5	24.2	24.9	25.3
	6H	23.7	24.2	24.1	24.6	25.1	23.8	24.3	24.2	24.7	25.2
	8H	23.6	24.1	24.1	24.5	25.0	23.7	24.2	24.2	24.6	25.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.9 / - 1.1					+ 0.8 / - 1.1					
1.5H	+ 0.4 / - 0.4					+ 0.4 / - 0.4					
2.0H	+ 1.8 / - 2.5					+ 1.8 / - 2.6					

CIE Pub.117, 15455 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 9.5$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:William
Test Date:2020-09-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
Humidity:56.4%
Test Distance:26.000m [K=1.4396]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

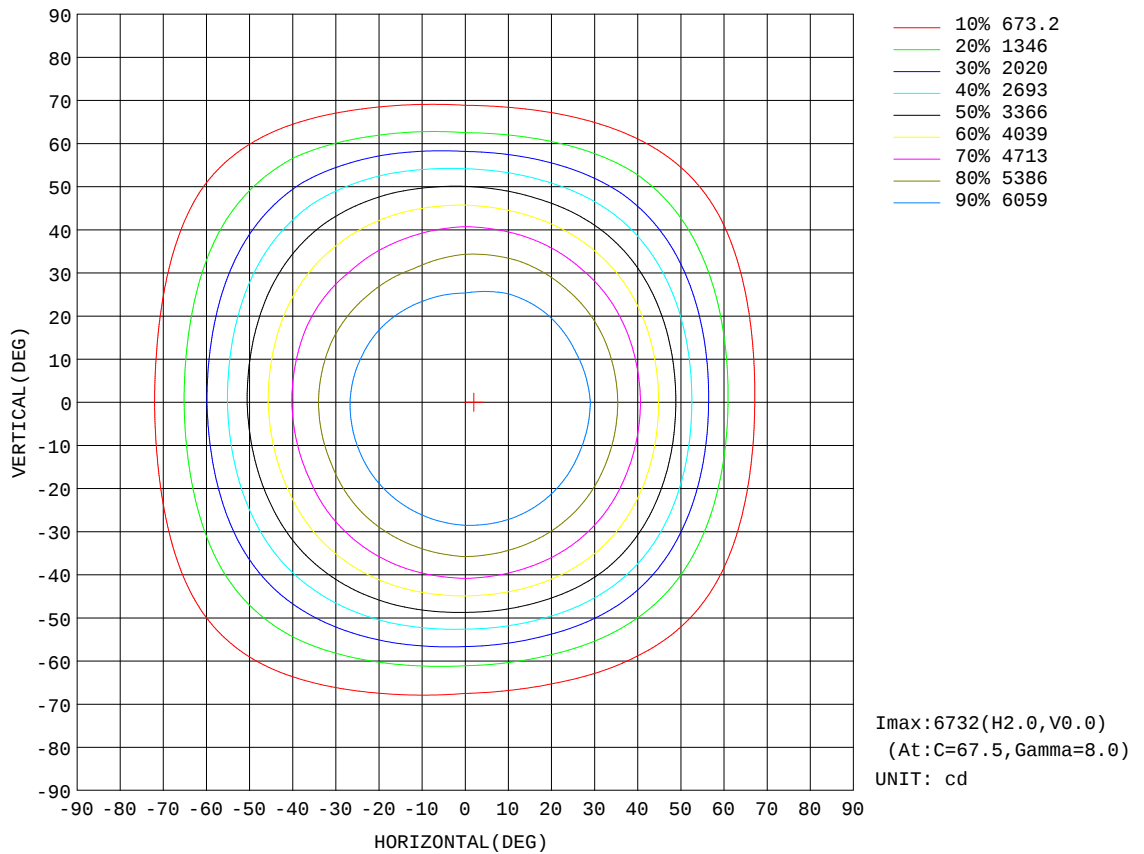
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	64	53	47	63	53	47	62	53	47	41
0.80	74	64	57	73	64	57	72	63	57	51
1.00	83	73	67	82	73	67	79	74	66	60
1.25	89	81	75	88	80	74	86	79	74	67
1.50	94	86	80	93	85	80	90	83	79	72
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	99	103	100	97	88
5.00	111	107	104	109	105	102	104	102	99	91
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:2020-09-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
 Humidity:56.4%
 Test Distance:26.000m [K=1.4396]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

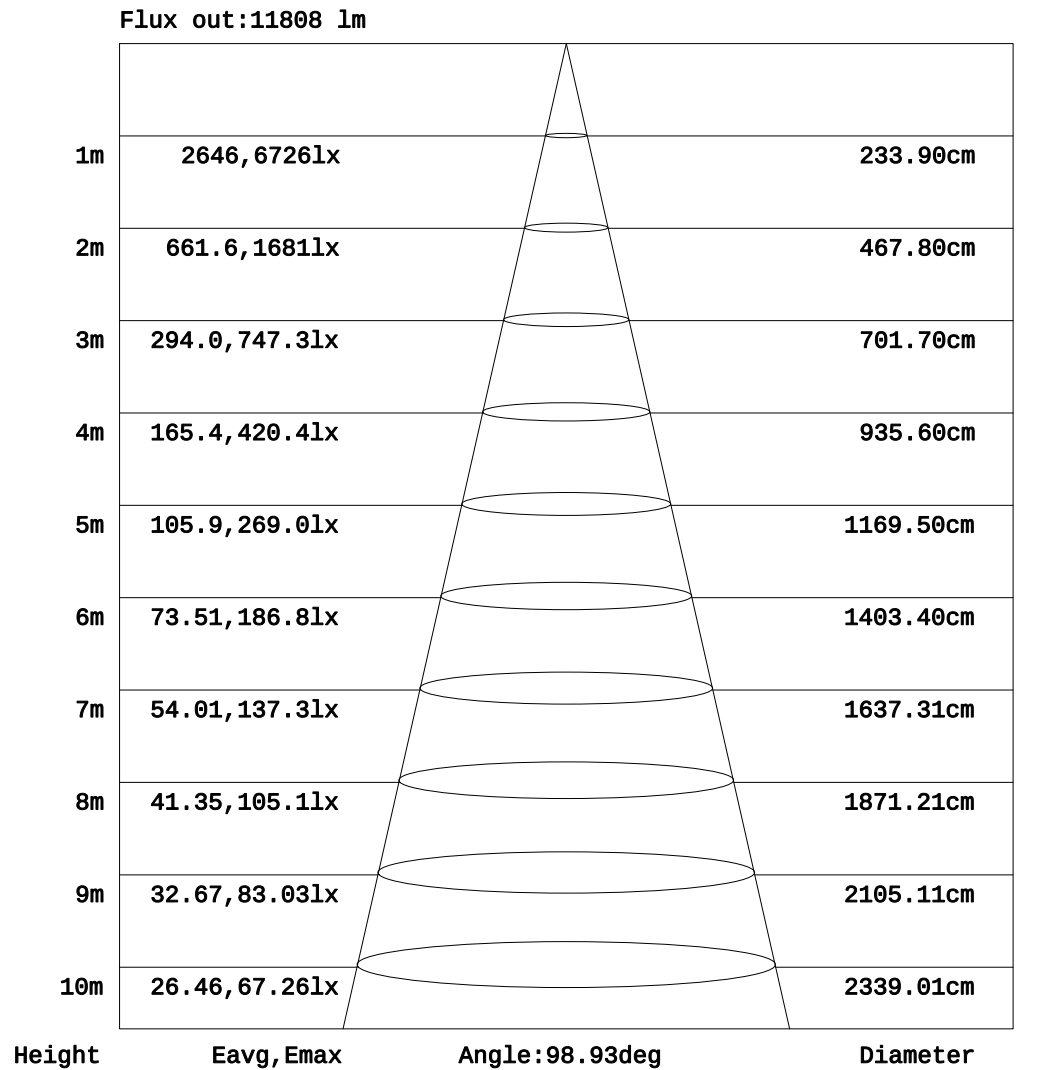


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:William
 Test Date:2020-09-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
 Humidity:56.4%
 Test Distance:26.000m [K=1.4396]
 Remarks:

AAI Figure

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 lm		
NAME:	TYPE:LED	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.:	SUR.:	Shielding Angle:N/A

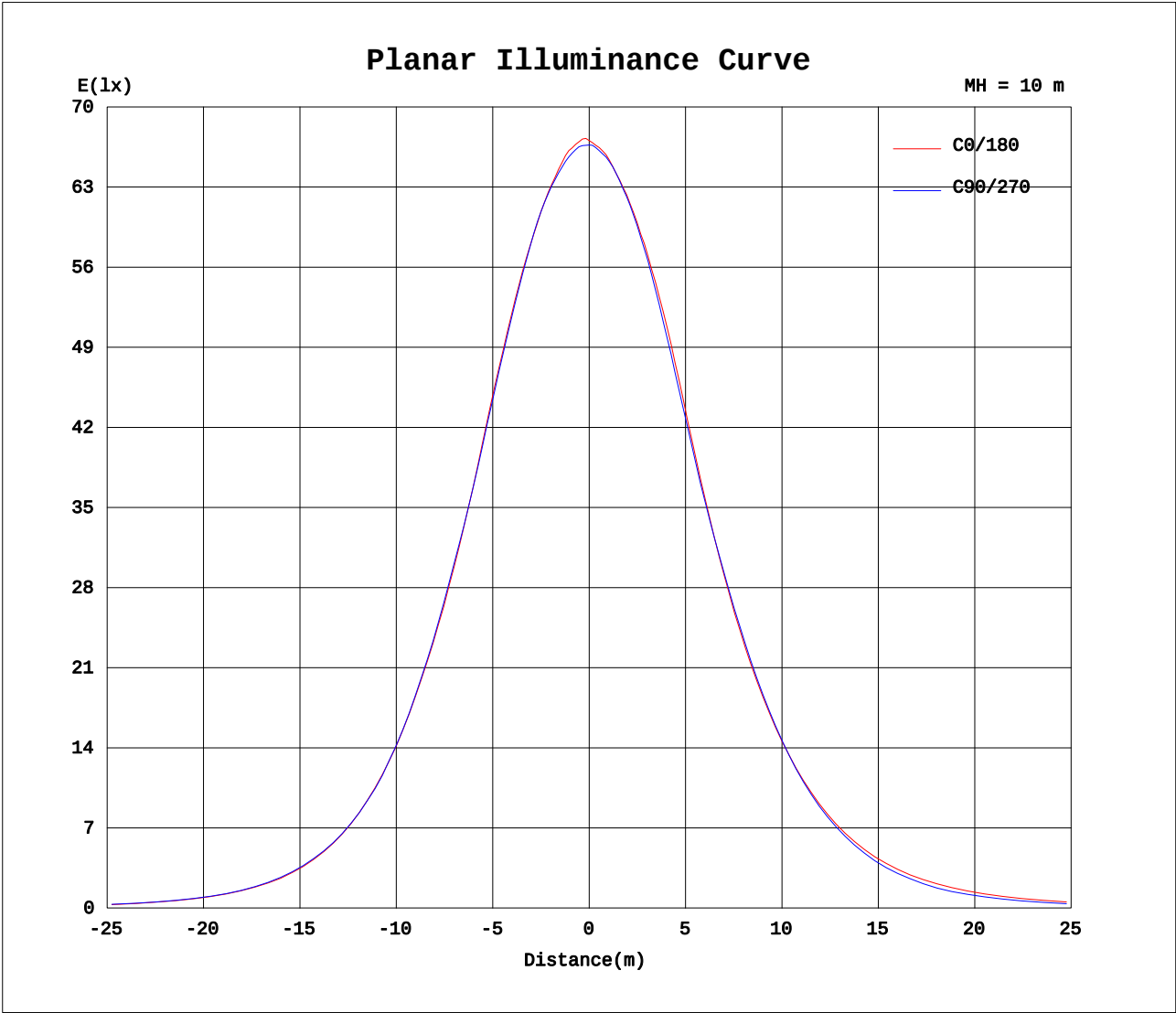


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:William
 Test Date:2020-09-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
 Humidity:56.4%
 Test Distance:26.000m [K=1.4396]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:William
Test Date:2020-09-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
Humidity:56.4%
Test Distance:26.000m [K=1.4396]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.2V I:0.4855A P:105.7W PF:0.9894 Freq:50.00Hz Lamp Flux:15454.6x1 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(DEC) γ (DEC)	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	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674	6674			
5	6687	6710	6685	6715	6680	6672	6670	6635	6627	6606	6595	6616	6645	6652	6688	6697			
10	6654	6668	6665	6715	6672	6668	6642	6618	6558	6528	6513	6556	6584	6612	6657	6692			
15	6615	6632	6644	6696	6664	6650	6625	6594	6502	6478	6457	6485	6509	6533	6583	6632			
20	6528	6545	6547	6582	6536	6539	6522	6497	6404	6370	6366	6359	6357	6402	6467	6535			
25	6321	6318	6310	6350	6319	6268	6268	6230	6166	6135	6074	6084	6084	6185	6258	6286			
30	5927	5931	5948	5965	5937	5890	5851	5818	5746	5721	5676	5658	5718	5835	5874	5924			
35	5398	5398	5409	5455	5483	5403	5346	5281	5264	5249	5162	5219	5330	5367	5364	5419			
40	4776	4751	4746	4799	4836	4795	4737	4703	4713	4720	4647	4718	4804	4780	4742	4790			
45	3988	4000	4006	4014	4028	4047	4046	4059	4105	4127	4106	4153	4149	4072	4039	4040			
50	3135	3143	3145	3144	3148	3227	3264	3337	3432	3464	3463	3461	3377	3274	3244	3196			
55	2248	2233	2234	2243	2299	2404	2488	2603	2700	2739	2759	2696	2545	2475	2435	2344			
60	1466	1414	1406	1431	1507	1641	1783	1904	1995	2011	2025	1911	1712	1696	1671	1564			
65	871	834	814	831	901	1027	1178	1292	1361	1363	1343	1195	1057	1033	1027	952			
70	454	441	417	450	502	596	694	798	832	828	745	658	577	547	520	489			
75	200	195	184	209	240	286	346	413	455	411	338	289	242	219	218	220			
80	38.9	41.1	47.7	50.6	51.5	71.5	110	150	166	149	106	61.8	37.7	39.3	42.3	44.6			
85	1.58	2.14	3.37	5.11	6.38	5.85	4.61	4.03	2.96	2.82	3.05	3.77	3.30	2.76	1.66	1.03			
90	0.55	0.71	1.42	0.91	1.01	0.72	0.67	0.80	0.47	0.31	0.31	0.31	0.31	0.32	0.40	0.48			
95	0.47	0.39	0.39	0.31	0.31	0.39	0.55	0.48	0.47	0.39	0.31	0.24	0.32	0.39	0.63	0.63			
100	0.47	0.31	0.39	0.31	0.31	0.39	0.40	0.48	0.78	0.55	0.70	0.71	0.63	0.87	1.03	1.19			
105	0.47	0.47	0.39	0.31	0.31	0.39	0.40	0.48	1.33	1.10	1.10	1.10	1.26	1.34	1.58	1.83			
110	1.25	1.49	1.17	1.02	0.86	0.63	0.71	0.79	2.19	2.11	1.96	1.97	2.05	2.29	2.53	2.78			
115	1.87	1.80	1.64	1.49	1.49	1.18	1.34	1.51	3.36	3.05	2.90	2.83	3.07	3.16	3.48	3.73			
120	2.73	2.66	2.58	2.43	2.52	2.43	2.53	2.46	4.38	4.31	4.15	4.01	4.25	4.42	4.67	4.76			
125	4.60	4.22	4.14	4.39	4.48	4.01	3.72	3.96	5.40	5.17	4.78	4.48	5.04	4.81	5.30	5.39			
130	6.33	6.26	5.86	6.29	6.37	5.60	5.14	5.62	6.64	6.03	5.72	5.36	5.51	5.61	6.25	6.19			
135	7.89	7.59	7.42	8.17	7.95	7.73	6.71	7.69	7.89	6.97	6.50	7.08	7.41	7.26	7.12	7.30			
140	10.5	10.2	9.62	10.8	10.8	10.6	9.17	10.4	9.38	8.54	7.75	8.57	8.67	8.83	8.39	8.57			
145	12.6	12.4	11.5	12.7	12.6	12.7	11.7	11.9	10.6	10.0	9.39	10.7	10.4	10.6	10.2	10.2			
150	14.2	14.2	14.0	15.0	14.7	14.7	14.2	14.0	12.3	12.0	11.3	12.4	12.7	12.4	12.3	12.1			
155	15.1	15.3	15.4	16.1	15.4	15.8	15.7	15.1	14.1	13.8	13.7	14.2	14.3	14.4	13.8	13.9			
160	15.9	16.4	16.2	16.5	16.3	16.4	16.2	16.2	15.8	15.3	15.4	16.0	16.1	15.9	15.7	15.4			
165	17.3	16.8	16.7	17.5	17.4	17.0	17.4	17.0	16.3	16.1	16.3	17.1	16.9	16.6	17.1	16.1			
170	18.0	17.9	18.5	18.7	18.7	18.1	18.4	18.5	17.2	17.3	17.5	18.1	18.2	18.0	18.3	17.2			
175	19.8	19.3	19.9	20.1	19.9	19.5	19.8	19.4	19.1	19.0	18.7	19.3	19.0	19.2	19.5	18.5			
180	20.1	19.6	20.5	20.1	19.9	19.5	19.7	19.4	20.0	20.1	19.4	20.1	19.8	19.9	19.5	19.8			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:William
Test Date:2020-09-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-R5000_V2 SYSTEM V2.0.362
Humidity:56.4%
Test Distance:26.000m [K=1.4396]
Remarks: