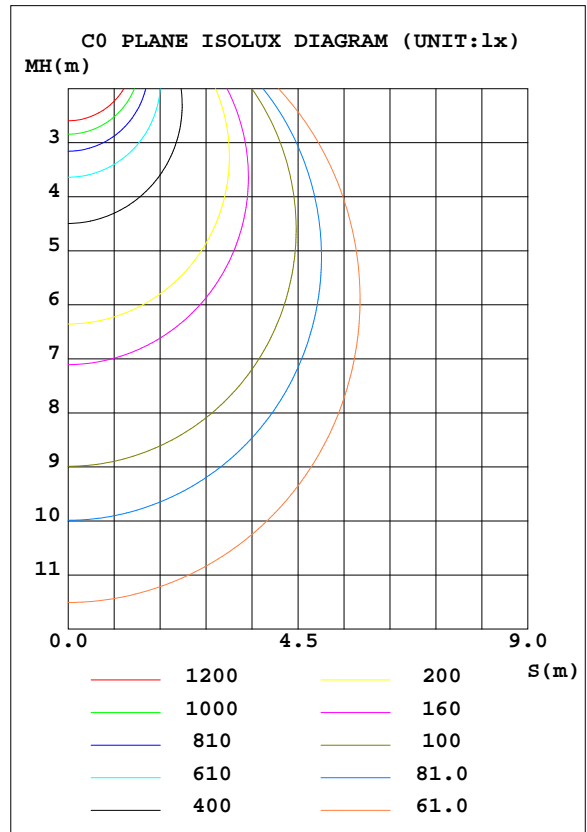
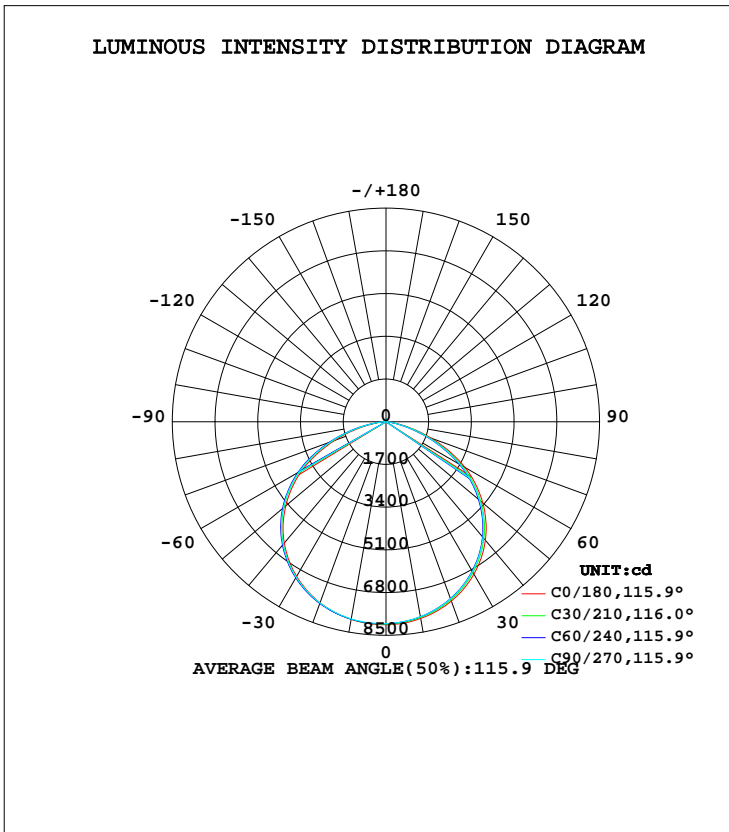


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 157.52 lm/W			
MODEL	F6019-150W	Imax(cd)	8079	S/MH(C0/180)	1.29
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	23655	η UP, DN(C0-180)	0.9, 46.9
NOMINAL FLUX(lm)	23654.5	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.0, 51.2
LAMPS INSIDE	1	η up(%)	1.9	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	98.1	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	7950	7895	7879	7876	7986	7981	7965	7931	0- 10	762.1	762.1	3.22,3.22
20	7598	7517	7501	7515	7670	7692	7678	7628	10- 20	2201	2963	12.5,12.5
30	7002	6894	6878	6913	7109	7161	7150	7082	20- 30	3384	6346	26.8,26.8
40	6152	6019	6004	6058	6299	6383	6372	6289	30- 40	4153	10499	44.4,44.4
50	5032	4864	4854	4934	5205	5337	5329	5222	40- 50	4377	14876	62.9,62.9
60	3624	3419	3408	3505	3844	4007	3996	3881	50- 60	3960	18836	79.6,79.6
70	1913	1730	1721	1826	2174	2356	2348	2220	60- 70	2846	21682	91.7,91.7
80	448.8	335.1	328.6	393.8	625.0	765.2	761.2	671.1	70- 80	1311	22993	97.2,97.2
90	40.74	41.27	41.43	41.13	54.47	56.60	56.45	54.62	80- 90	211.7	23205	98.1,98.1
100	46.98	47.66	47.76	47.24	61.26	60.07	59.86	60.28	90-100	55.10	23260	98.3,98.3
110	54.91	55.62	55.71	55.06	69.22	67.94	67.68	68.12	100-110	61.07	23321	98.6,98.6
120	63.00	63.67	63.72	63.06	77.43	76.18	75.88	76.25	110-120	65.28	23386	98.9,98.9
130	71.05	71.69	71.71	70.97	85.56	84.32	83.96	84.25	120-130	66.20	23453	99.1,99.1
140	79.25	79.81	79.75	78.97	92.97	91.77	91.34	91.53	130-140	63.24	23516	99.4,99.4
150	86.79	87.19	87.03	86.28	99.80	98.75	98.25	98.26	140-150	55.97	23572	99.6,99.6
160	94.68	94.84	94.56	93.83	104.7	103.8	103.2	103.0	150-160	44.32	23616	99.8,99.8
170	101.1	101.1	100.7	100.0	105.7	105.1	104.5	104.2	160-170	28.68	23645	100,100
180	104.0	103.8	103.4	103.0	104.2	103.8	103.3	103.0	170-180	9.816	23655	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

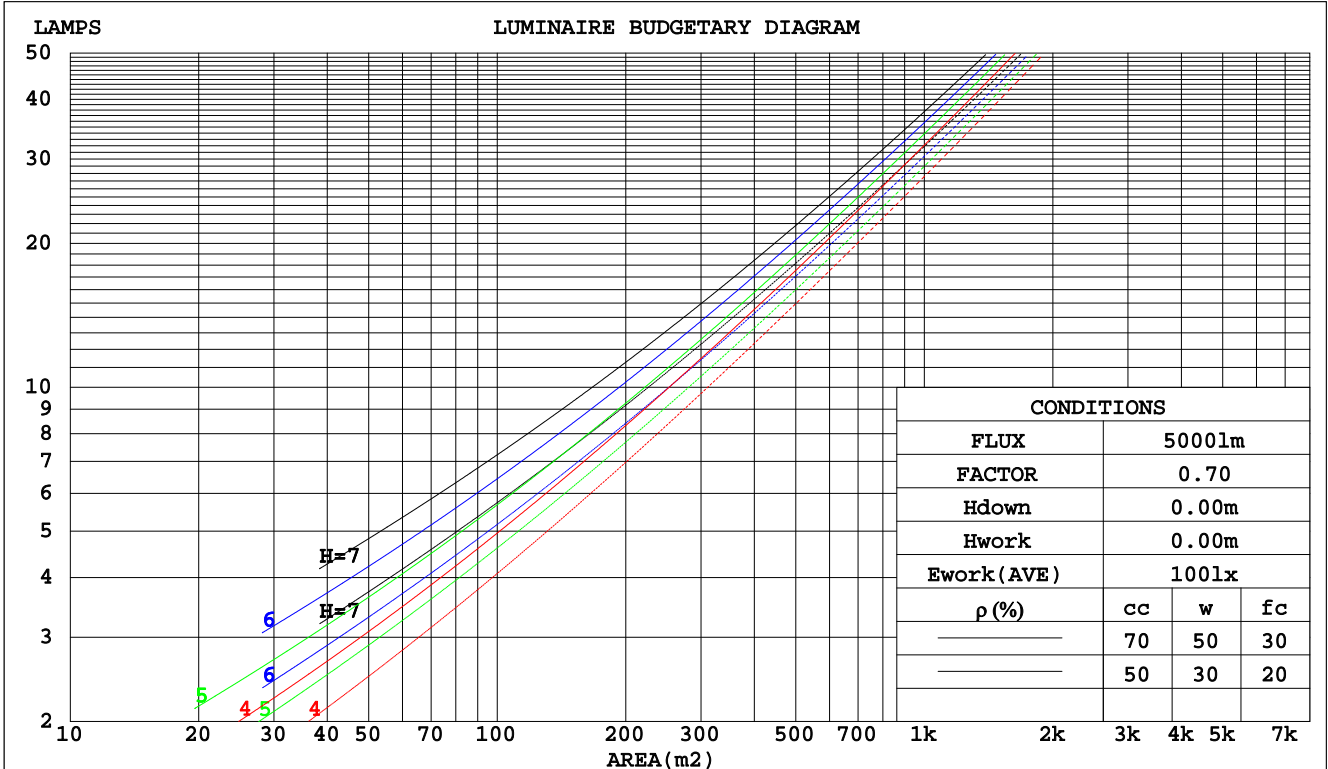
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:

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						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.04	1.00	.97	1.02	.98	.95	.97	.94	.91	.93	.91	.88	.89	.87	.85	.83
2.0	.91	.84	.79	.89	.83	.78	.85	.80	.76	.82	.77	.74	.78	.75	.72	.70
3.0	.80	.72	.66	.78	.71	.65	.75	.69	.63	.72	.67	.62	.69	.65	.61	.59
4.0	.71	.62	.55	.69	.61	.55	.67	.60	.54	.64	.58	.53	.62	.56	.52	.50
5.0	.63	.54	.48	.62	.54	.47	.60	.52	.47	.57	.51	.46	.55	.50	.45	.43
6.0	.57	.48	.42	.56	.47	.41	.54	.46	.41	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.43	.37	.51	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.33	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.31	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.26
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7312]
 Remarks:

WEC AND CCEC

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:

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	.293	.167	.053	.286	.163	.052	.271	.156	.050	.258	.149	.048	.246	.143	.046	
2.0	.281	.154	.047	.275	.151	.047	.262	.146	.045	.250	.140	.044	.240	.136	.043	
3.0	.263	.140	.042	.257	.138	.041	.246	.133	.041	.236	.129	.040	.226	.125	.039	
4.0	.244	.127	.037	.239	.125	.037	.229	.122	.036	.220	.118	.036	.211	.115	.035	
5.0	.227	.116	.033	.222	.114	.033	.213	.111	.033	.205	.108	.032	.197	.105	.032	
6.0	.211	.106	.030	.207	.104	.030	.199	.102	.030	.191	.099	.029	.184	.097	.029	
7.0	.197	.097	.028	.193	.096	.027	.186	.094	.027	.179	.092	.027	.173	.090	.026	
8.0	.184	.090	.025	.181	.089	.025	.174	.087	.025	.168	.085	.025	.163	.083	.024	
9.0	.173	.084	.023	.170	.083	.023	.164	.081	.023	.158	.079	.023	.153	.078	.022	
10.0	.163	.078	.022	.160	.077	.022	.155	.076	.021	.150	.074	.021	.145	.073	.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	.205	.205	.205	.175	.175	.175	.120	.120	.120	.069	.069	.069	.022	.022	.022	
1.0	.194	.171	.150	.166	.147	.129	.113	.101	.089	.065	.058	.052	.021	.019	.017	
2.0	.186	.147	.114	.159	.126	.099	.109	.087	.069	.063	.051	.040	.020	.016	.013	
3.0	.178	.129	.090	.153	.111	.078	.105	.077	.055	.060	.045	.032	.019	.015	.011	
4.0	.171	.116	.074	.146	.100	.064	.101	.070	.045	.058	.041	.027	.019	.013	.009	
5.0	.163	.105	.063	.140	.091	.054	.097	.064	.038	.056	.037	.023	.018	.012	.008	
6.0	.156	.097	.054	.134	.084	.047	.093	.059	.034	.054	.035	.020	.017	.011	.007	
7.0	.150	.090	.048	.129	.078	.042	.089	.055	.030	.052	.032	.018	.017	.011	.006	
8.0	.143	.084	.044	.123	.073	.038	.085	.051	.027	.050	.030	.016	.016	.010	.005	
9.0	.137	.079	.040	.118	.069	.035	.082	.048	.025	.048	.029	.015	.015	.009	.005	
10.0	.132	.075	.038	.114	.065	.033	.079	.046	.023	.046	.027	.014	.015	.009	.005	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

Uncorrected UGR Table

NAME: F6019-150W		TYPE:					WEIGHT:				
DIM.:		SPEC.:					SERIAL No.:				
MFR.:		SUR.:0.302*0.302					PROTECTION ANGLE:				
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	29.0	30.4	29.3	30.7	30.9	28.7	30.2	29.0	30.4	30.7	
3H	30.1	31.5	30.5	31.8	32.0	29.8	31.1	30.1	31.4	31.7	
4H	30.5	31.8	30.8	32.0	32.3	30.0	31.3	30.4	31.6	31.9	
6H	30.6	31.8	30.9	32.1	32.4	30.1	31.3	30.4	31.6	31.9	
8H	30.5	31.7	30.9	32.0	32.3	30.0	31.2	30.4	31.5	31.9	
12H	30.5	31.6	30.9	31.9	32.3	30.0	31.1	30.4	31.4	31.8	
4H 2H	29.4	30.7	29.8	31.0	31.3	29.2	30.5	29.6	30.8	31.1	
3H	30.7	31.9	31.1	32.2	32.5	30.4	31.5	30.8	31.9	32.2	
4H	31.1	32.1	31.5	32.5	32.9	30.7	31.7	31.1	32.1	32.5	
6H	31.3	32.2	31.7	32.5	33.0	30.8	31.7	31.2	32.1	32.5	
8H	31.3	32.1	31.7	32.5	32.9	30.8	31.6	31.2	32.0	32.4	
12H	31.2	32.0	31.7	32.4	32.9	30.7	31.5	31.2	31.9	32.4	
8H 4H	31.2	32.0	31.6	32.4	32.8	30.8	31.6	31.2	32.0	32.5	
6H	31.4	32.0	31.8	32.5	33.0	30.9	31.6	31.4	32.0	32.5	
8H	31.4	32.0	31.9	32.4	32.9	30.9	31.5	31.4	32.0	32.5	
12H	31.4	31.9	31.9	32.4	32.9	30.9	31.4	31.4	31.9	32.4	
12H 4H	31.1	31.9	31.6	32.3	32.8	30.8	31.5	31.2	31.9	32.4	
6H	31.3	31.9	31.8	32.4	32.9	30.9	31.5	31.4	32.0	32.4	
8H	31.3	31.9	31.9	32.4	32.9	30.9	31.4	31.4	31.9	32.4	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.3					
1.5H	+ 0.2 / - 0.4					+ 0.3 / - 0.5					
2.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4					

CIE Pub.117 Corrected 23655 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.0)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

UTILIZATION FACTORS TABLE

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:

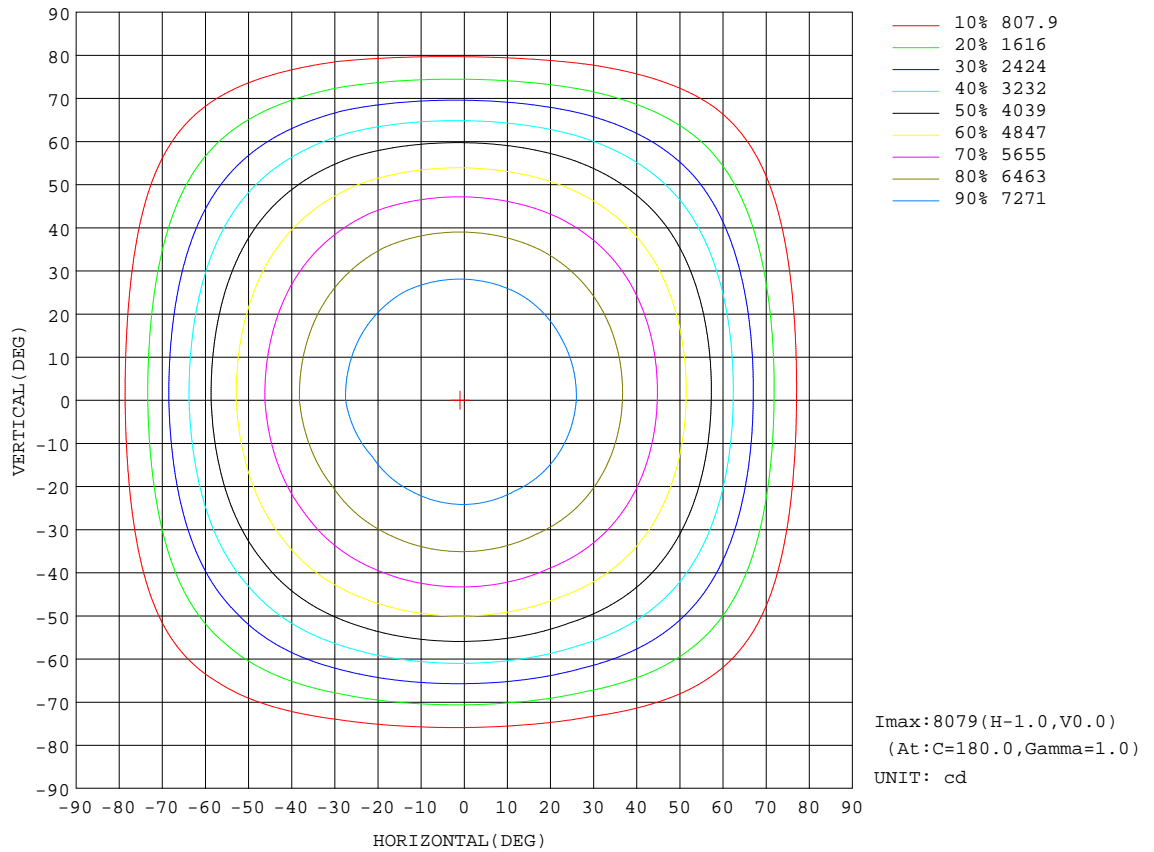
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	46	39	56	45	38	55	45	38	32
0.80	67	56	48	66	55	48	64	54	48	41
1.00	76	65	58	75	64	57	72	66	57	50
1.25	83	73	66	82	72	65	79	70	64	57
1.50	88	79	72	86	78	71	83	76	70	62
2.00	95	87	81	93	86	80	90	83	78	70
2.50	99	91	86	97	90	85	93	87	83	74
3.00	102	96	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	99	95	92	83
5.00	109	104	100	106	102	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: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

ISOCANDELA DIAGRAM

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:

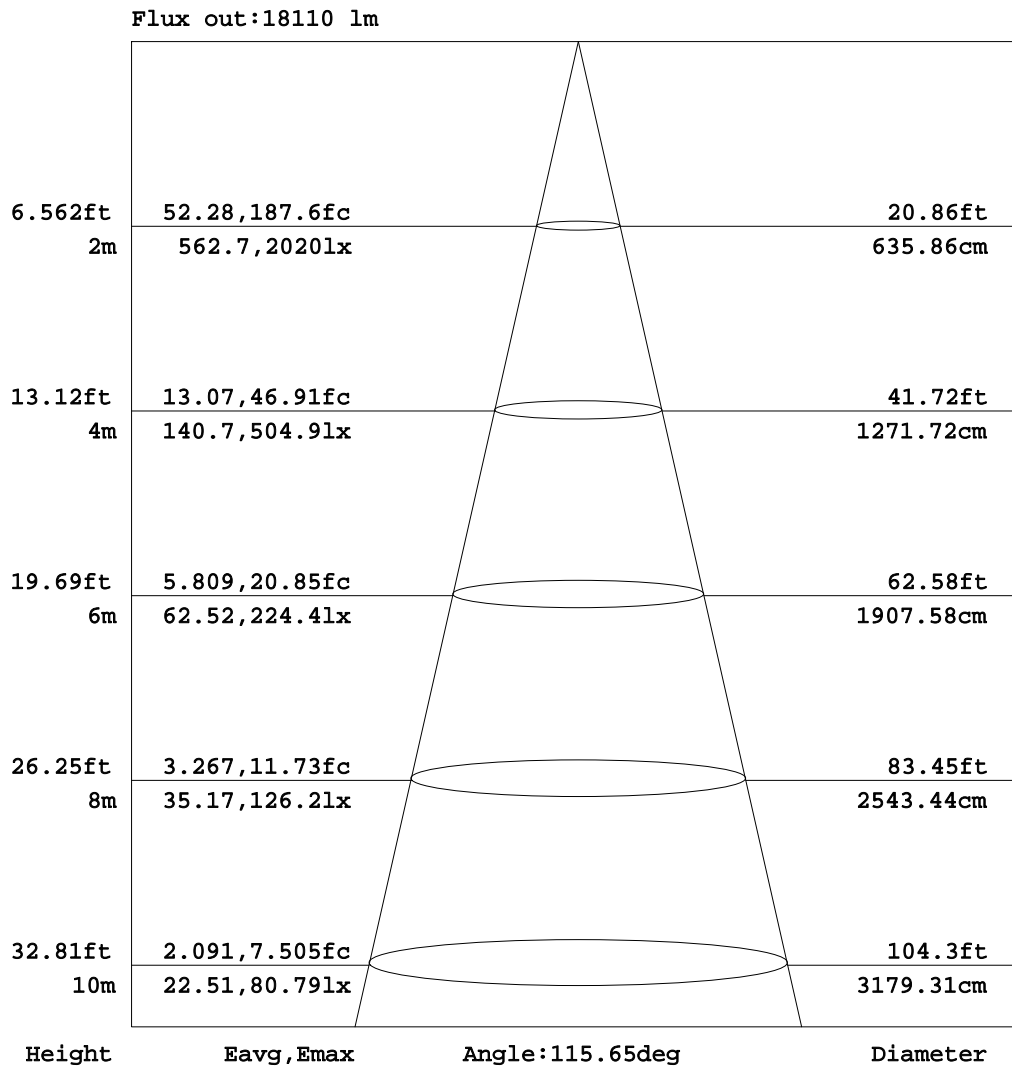


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7312]
 Remarks:

AAI Figure

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:



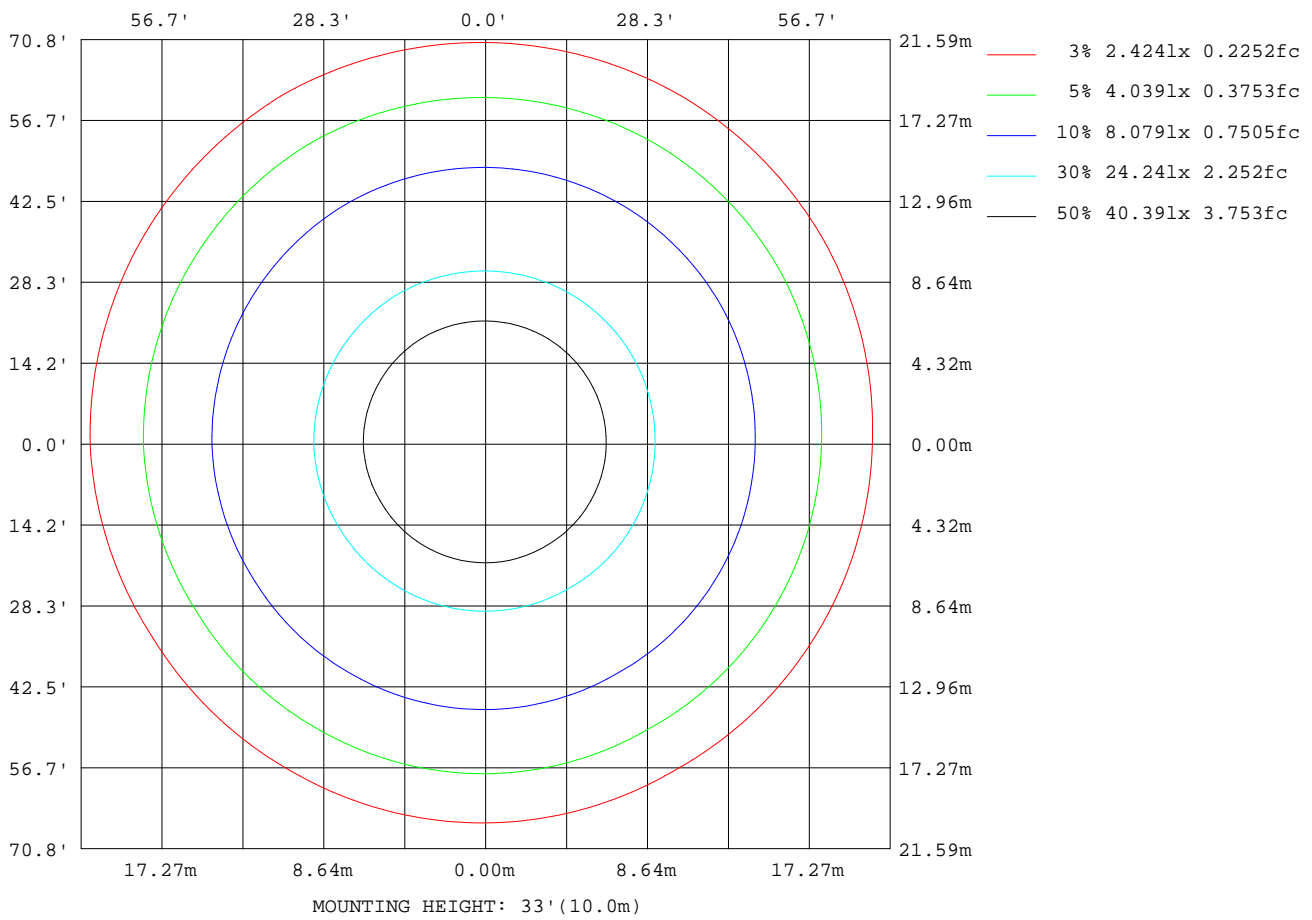
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

ISOLUX DIAGRAM

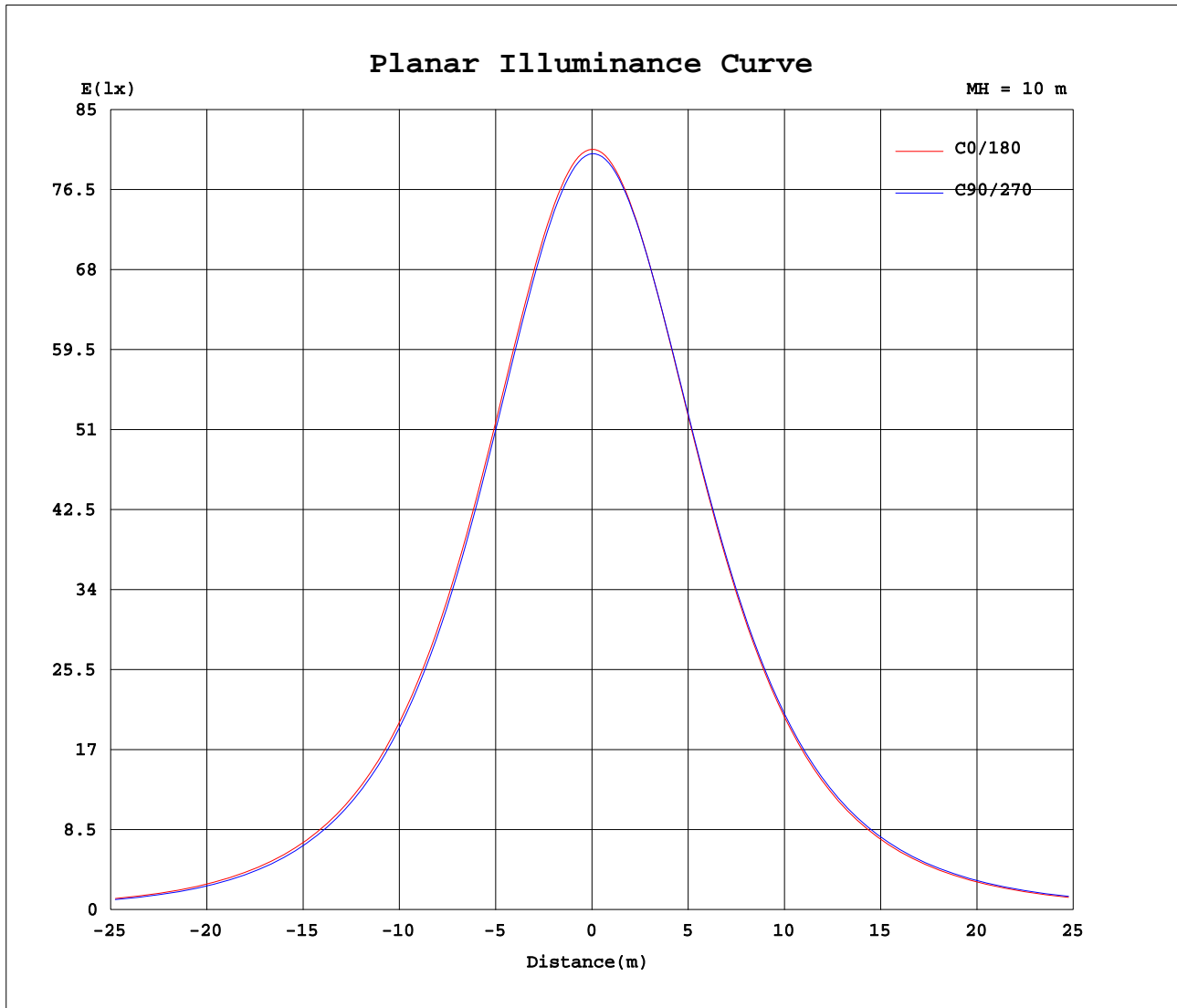
NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7312]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: F6019-150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:0.302*0.302	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG)\γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	8079	8056	8039	8032	8018	8006	8079	8056	8039	8032	8018	8006							
5	8044	8014	7988	7985	7975	7972	8061	8047	8035	8026	8010	7989							
10	7950	7912	7878	7879	7873	7879	7986	7982	7980	7965	7946	7915							
15	7802	7756	7713	7719	7715	7732	7858	7861	7868	7849	7828	7787							
20	7598	7542	7493	7501	7502	7529	7670	7685	7699	7678	7652	7605							
25	7330	7264	7207	7221	7227	7263	7420	7444	7469	7444	7415	7355							
30	7002	6927	6860	6878	6889	6936	7109	7145	7177	7150	7115	7049							
35	6610	6526	6452	6474	6489	6547	6735	6783	6825	6794	6754	6679							
40	6152	6060	5977	6004	6023	6092	6299	6358	6409	6372	6332	6246							
45	5627	5525	5422	5465	5489	5573	5790	5864	5926	5887	5840	5745							
50	5032	4920	4808	4854	4887	4980	5205	5302	5373	5329	5268	5176							
55	4366	4241	4125	4176	4213	4324	4561	4666	4748	4702	4638	4534							
60	3624	3481	3357	3408	3445	3565	3844	3960	4055	3996	3939	3822							
65	2771	2624	2504	2546	2599	2727	3025	3161	3270	3202	3137	3003							
70	1913	1791	1669	1721	1760	1892	2174	2298	2414	2348	2290	2150							
75	1098	997	880	937	961	1088	1356	1473	1577	1520	1470	1323							
80	449	365	305	329	356	432	625	718	812	761	720	622							
85	88.8	65.9	58.8	57.9	70.2	82.9	166	213	258	235	212	163							
90	40.7	41.1	41.5	41.4	41.3	40.9	54.5	55.3	57.9	56.4	55.2	54.0							
95	43.5	44.0	44.4	44.3	44.1	43.7	57.6	56.8	56.2	56.3	56.5	56.9							
100	47.0	47.4	47.9	47.8	47.5	47.0	61.3	60.4	59.8	59.9	60.0	60.5							
105	50.8	51.3	51.8	51.6	51.4	50.7	65.2	64.3	63.6	63.7	63.9	64.4							
110	54.9	55.4	55.8	55.7	55.4	54.7	69.2	68.3	67.6	67.7	67.9	68.4							
115	59.0	59.5	59.9	59.7	59.4	58.8	73.3	72.4	71.7	71.8	71.9	72.4							
120	63.0	63.5	63.9	63.7	63.4	62.7	77.4	76.5	75.9	75.9	76.0	76.5							
125	67.0	67.5	67.8	67.7	67.3	66.7	81.5	80.6	80.0	79.9	80.1	80.5							
130	71.0	71.5	71.9	71.7	71.3	70.6	85.6	84.6	84.0	84.0	84.1	84.4							
135	75.2	75.6	75.9	75.8	75.3	74.6	89.2	88.3	87.8	87.7	87.7	88.0							
140	79.2	79.7	79.9	79.8	79.3	78.6	93.0	92.1	91.5	91.3	91.4	91.7							
145	82.8	83.1	83.4	83.2	82.7	82.1	96.7	95.8	95.2	95.0	95.0	95.2							
150	86.8	87.1	87.3	87.0	86.6	86.0	99.8	99.0	98.5	98.2	98.2	98.3							
155	90.8	91.0	91.1	90.8	90.4	89.8	102	102	101	101	101	101							
160	94.7	94.9	94.8	94.6	94.1	93.5	105	104	104	103	103	103							
165	98.3	98.4	98.3	98.0	97.6	97.0	106	106	105	105	105	105							
170	101	101	101	101	100	99.8	106	105	105	104	104	104							
175	102	102	102	102	101	101	105	104	104	104	103	103							
180	104	104	104	103	103	103	104	104	104	103	103	103							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-04-18

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7312]
 Remarks: