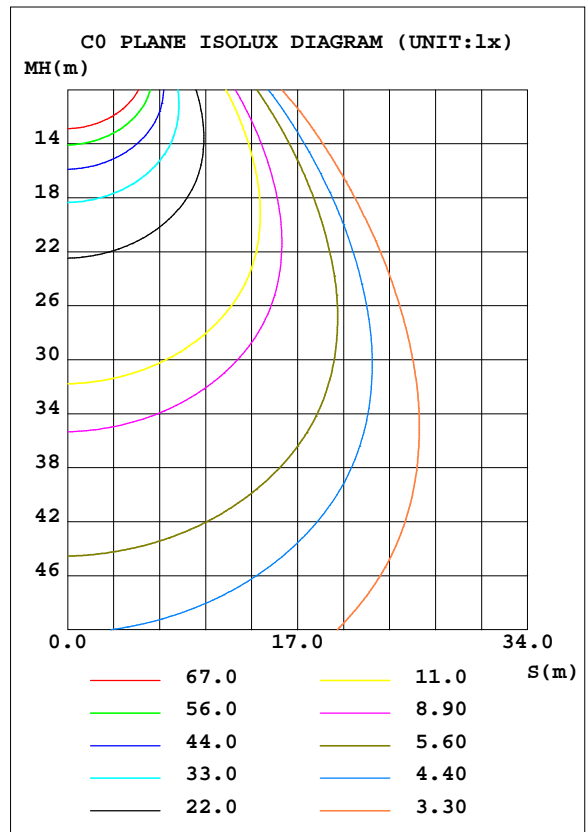
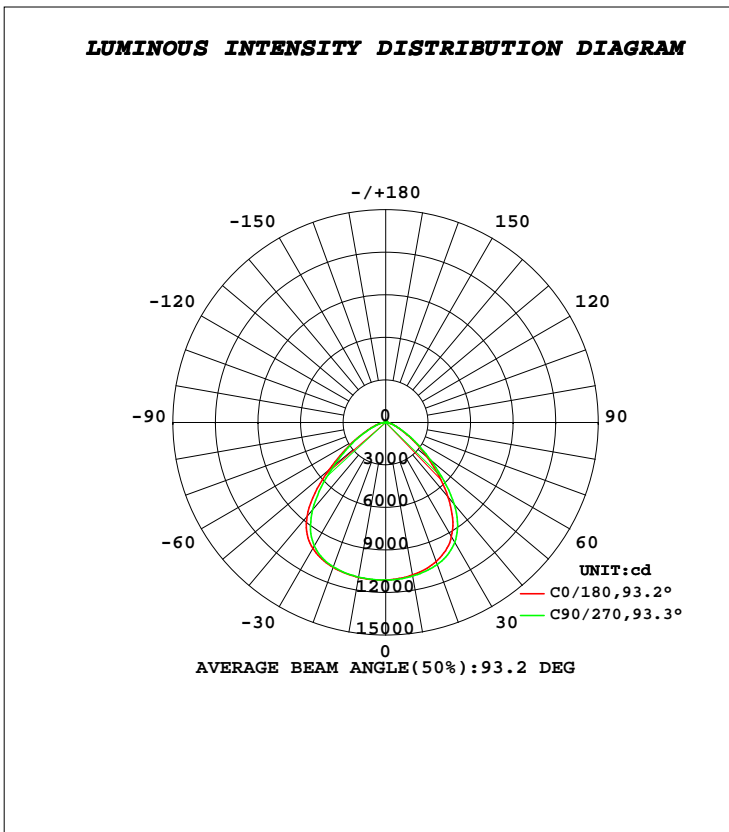


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 167.27 lm/W			
MODEL		I _{max} (cd)	11135	S/MH(C0/180)	1.23
NOMINAL POWER(W)	146	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	24522	η UP, DN(C0-180)	0.8,46.5
NOMINAL FLUX(lm)	24522.2	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.9,51.8
LAMPS INSIDE	1	η up(%)	1.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.6	η down(%)	98.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity:65.0%
Test Distance:6.242m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1092	1096	1100	1101	1109	1110	1107	1102	0- 10	1057	1057	4.31,4.31
20	1043	1055	1066	1068	1087	1091	1083	1068	10- 20	3081	4138	16.9,16.9
30	929.3	955.5	975.4	986.4	1027	1024	1006	979.6	20- 30	4776	8914	36.4,36.4
40	684.2	723.4	751.7	764.8	862.5	835.3	800.2	765.4	30- 40	5585	14499	59.1,59.1
50	388.1	395.7	417.0	423.9	524.3	497.5	480.9	463.2	40- 50	4698	19198	78.3,78.3
60	177.1	187.2	190.2	194.4	254.2	239.3	239.0	236.0	50- 60	2869	22067	90,90
70	70.65	71.52	73.12	75.83	101.9	96.88	92.42	95.20	60- 70	1390	23457	95.7,95.7
80	16.96	18.43	19.84	20.00	34.95	32.96	30.05	29.16	70- 80	550.9	24008	97.9,97.9
90	2.219	2.163	2.102	2.066	2.578	2.643	2.689	2.717	80- 90	109.4	24118	98.3,98.3
100	3.344	3.262	3.175	3.106	3.643	3.743	3.818	3.865	90-100	31.85	24149	98.5,98.5
110	4.665	4.571	4.465	4.374	4.927	5.046	5.141	5.195	100-110	43.68	24193	98.7,98.7
120	6.050	5.951	5.837	5.729	6.306	6.423	6.516	6.585	110-120	54.34	24247	98.9,98.9
130	7.384	7.291	7.175	7.066	7.652	7.768	7.860	7.922	120-130	61.37	24309	99.1,99.1
140	8.573	8.494	8.401	8.300	8.883	8.972	9.039	9.091	130-140	62.81	24372	99.4,99.4
150	9.699	9.639	9.571	9.488	9.975	10.04	10.07	10.10	140-150	58.10	24430	99.6,99.6
160	11.00	10.94	10.89	10.81	11.10	11.15	11.16	11.16	150-160	48.03	24478	99.8,99.8
170	12.13	12.11	12.06	12.00	12.11	12.15	12.13	12.11	160-170	32.70	24510	100,100
180	12.57	12.57	12.54	12.50	12.57	12.58	12.54	12.50	170-180	11.76	24522	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT: lm		

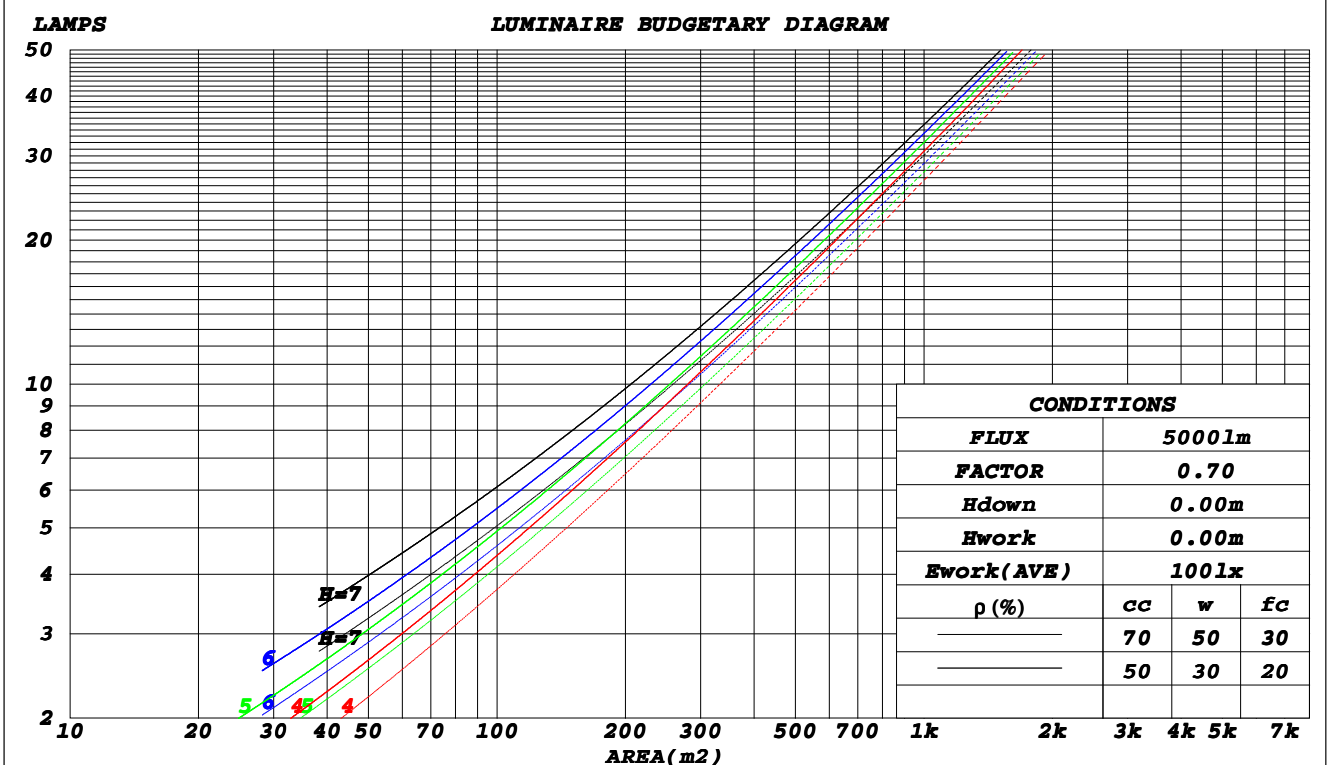
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-08-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity:65.0%
Test Distance:6.242m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:

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						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	1.01	1.01	1.01	.98
1.0	1.07	1.03	1.00	1.04	1.01	.98	.90	.97	.95	.96	.94	.92	.92	.90	.89	.87
2.0	.96	.90	.85	.94	.88	.84	.90	.86	.82	.86	.83	.80	.83	.80	.78	.76
3.0	.86	.79	.73	.84	.78	.73	.81	.76	.71	.78	.74	.70	.75	.72	.68	.66
4.0	.77	.70	.64	.76	.69	.63	.73	.67	.62	.71	.66	.61	.69	.64	.60	.58
5.0	.70	.62	.56	.69	.61	.56	.66	.60	.55	.64	.59	.54	.63	.58	.54	.52
6.0	.64	.56	.50	.63	.55	.50	.61	.54	.49	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.50	.45	.57	.50	.44	.56	.49	.44	.54	.48	.44	.53	.47	.43	.41
8.0	.53	.46	.40	.53	.45	.40	.51	.44	.40	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.42	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.42	.36	.33	.31



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-08-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.269
 Humidity: 65.0%
 Test Distance: 6.242m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:

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	.247	.140	.044	.239	.136	.043	.225	.129	.041	.213	.123	.039	.201	.116	.038	
2.0	.239	.131	.040	.233	.128	.039	.221	.123	.038	.209	.117	.037	.199	.113	.035	
3.0	.227	.121	.036	.221	.118	.036	.211	.114	.035	.201	.110	.034	.192	.106	.033	
4.0	.214	.111	.033	.209	.109	.032	.200	.106	.032	.191	.102	.031	.183	.099	.030	
5.0	.201	.103	.030	.197	.101	.029	.189	.098	.029	.181	.095	.028	.173	.093	.028	
6.0	.190	.095	.027	.186	.094	.027	.178	.091	.027	.171	.089	.026	.165	.087	.026	
7.0	.179	.088	.025	.175	.087	.025	.168	.085	.025	.162	.083	.024	.156	.081	.024	
8.0	.169	.082	.023	.166	.082	.023	.160	.080	.023	.154	.078	.022	.148	.076	.022	
9.0	.160	.077	.022	.157	.076	.021	.151	.075	.021	.146	.073	.021	.141	.072	.021	
10.0	.151	.073	.020	.149	.072	.020	.144	.070	.020	.139	.069	.020	.135	.068	.019	

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	.203	.203	.203	.174	.174	.174	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.189	.169	.152	.161	.145	.131	.110	.100	.090	.064	.058	.053	.020	.019	.017	
2.0	.178	.145	.117	.152	.125	.101	.104	.086	.071	.060	.050	.041	.019	.016	.013	
3.0	.169	.127	.093	.145	.109	.081	.099	.076	.057	.057	.044	.033	.018	.014	.011	
4.0	.161	.113	.076	.138	.098	.066	.095	.068	.047	.055	.040	.028	.018	.013	.009	
5.0	.154	.102	.064	.132	.089	.056	.091	.062	.040	.053	.036	.023	.017	.012	.008	
6.0	.147	.094	.056	.126	.081	.048	.087	.057	.034	.051	.033	.020	.016	.011	.007	
7.0	.141	.087	.049	.121	.075	.043	.084	.053	.030	.049	.031	.018	.016	.010	.006	
8.0	.135	.081	.044	.116	.070	.038	.080	.049	.027	.047	.029	.016	.015	.010	.005	
9.0	.130	.076	.040	.112	.066	.035	.077	.046	.025	.045	.027	.015	.015	.009	.005	
10.0	.124	.072	.037	.107	.062	.032	.074	.044	.023	.043	.026	.014	.014	.009	.005	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-08-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
 Humidity:65.0%
 Test Distance:6.242m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm										
NAME: 150W					TYPE:			WEIGHT:		
DIM.:					SPEC.:			SERIAL No.:027		
MFR.: 150W					SUR.:			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	25.3	26.6	25.5	26.8	27.0	25.5	26.9	25.8	27.1	27.3
3H	25.5	26.7	25.9	27.0	27.3	25.8	27.0	26.1	27.3	27.5
4H	25.6	26.7	25.9	27.0	27.3	25.9	27.0	26.2	27.3	27.5
6H	25.6	26.6	25.9	26.9	27.2	25.9	26.9	26.2	27.2	27.5
8H	25.5	26.6	25.9	26.9	27.2	25.8	26.8	26.2	27.1	27.5
12H	25.5	26.5	25.9	26.8	27.1	25.8	26.8	26.1	27.1	27.4
4H 2H	25.4	26.5	25.7	26.8	27.1	25.6	26.8	25.9	27.0	27.3
3H	25.8	26.8	26.1	27.1	27.4	26.0	27.0	26.4	27.3	27.6
4H	25.9	26.8	26.3	27.1	27.5	26.1	27.0	26.5	27.3	27.7
6H	25.9	26.7	26.3	27.1	27.5	26.1	26.9	26.6	27.3	27.7
8H	25.9	26.6	26.3	27.0	27.4	26.1	26.9	26.6	27.2	27.7
12H	25.9	26.5	26.3	26.9	27.3	26.1	26.8	26.5	27.2	27.6
8H 4H	25.9	26.6	26.3	27.0	27.4	26.1	26.8	26.5	27.2	27.6
6H	25.9	26.5	26.4	26.9	27.4	26.2	26.7	26.6	27.2	27.6
8H	25.9	26.4	26.4	26.9	27.4	26.2	26.7	26.6	27.1	27.6
12H	25.9	26.3	26.4	26.8	27.3	26.1	26.6	26.6	27.0	27.6
12H 4H	25.8	26.5	26.3	26.9	27.3	26.0	26.7	26.5	27.1	27.5
6H	25.9	26.4	26.4	26.9	27.3	26.1	26.6	26.6	27.1	27.6
8H	25.9	26.3	26.4	26.8	27.3	26.1	26.6	26.6	27.0	27.6
Variations with the observer position at spacings:										
S = 1.0H	+ 1.0 / - 1.2					+ 0.9 / - 1.2				
1.5H	+ 0.6 / - 0.6					+ 0.6 / - 0.7				
2.0H	+ 1.9 / - 1.9					+ 2.0 / - 2.0				

CIE Pub.117 Corrected 24522 lm Total Lamp Luminous Flux.(8log(F/F0) = 11.1)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity:65.0%
Test Distance:6.242m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:

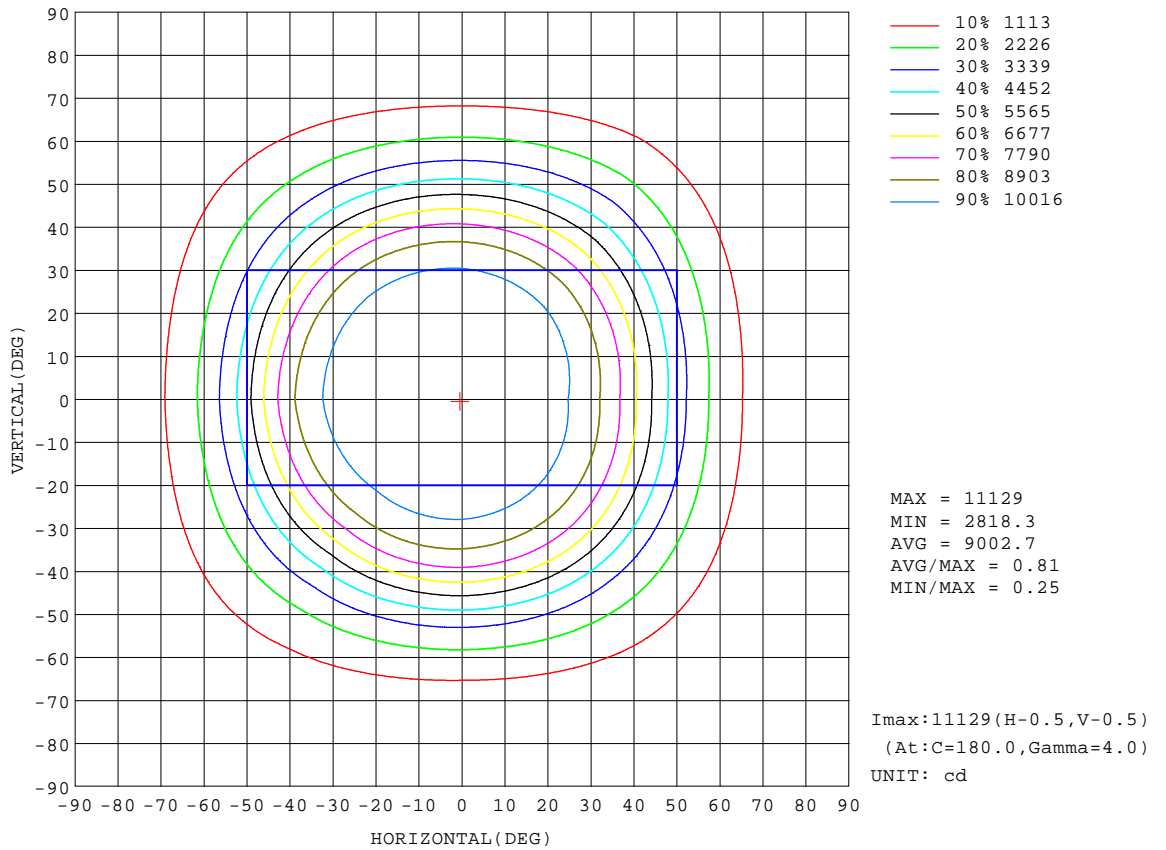
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	66	56	50	65	55	49	64	55	49	44
0.80	76	66	60	75	66	60	73	65	59	53
1.00	84	75	69	83	74	68	80	75	68	62
1.25	90	82	76	89	81	76	86	80	75	68
1.50	95	87	81	93	86	81	90	84	79	73
2.00	100	94	88	98	92	88	95	90	86	79
2.50	103	97	92	101	96	91	97	93	89	82
3.00	106	100	96	104	99	95	100	96	93	85
4.00	109	104	101	107	103	99	102	99	96	88
5.00	111	107	104	108	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-08-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity:65.0%
Test Distance:6.242m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:



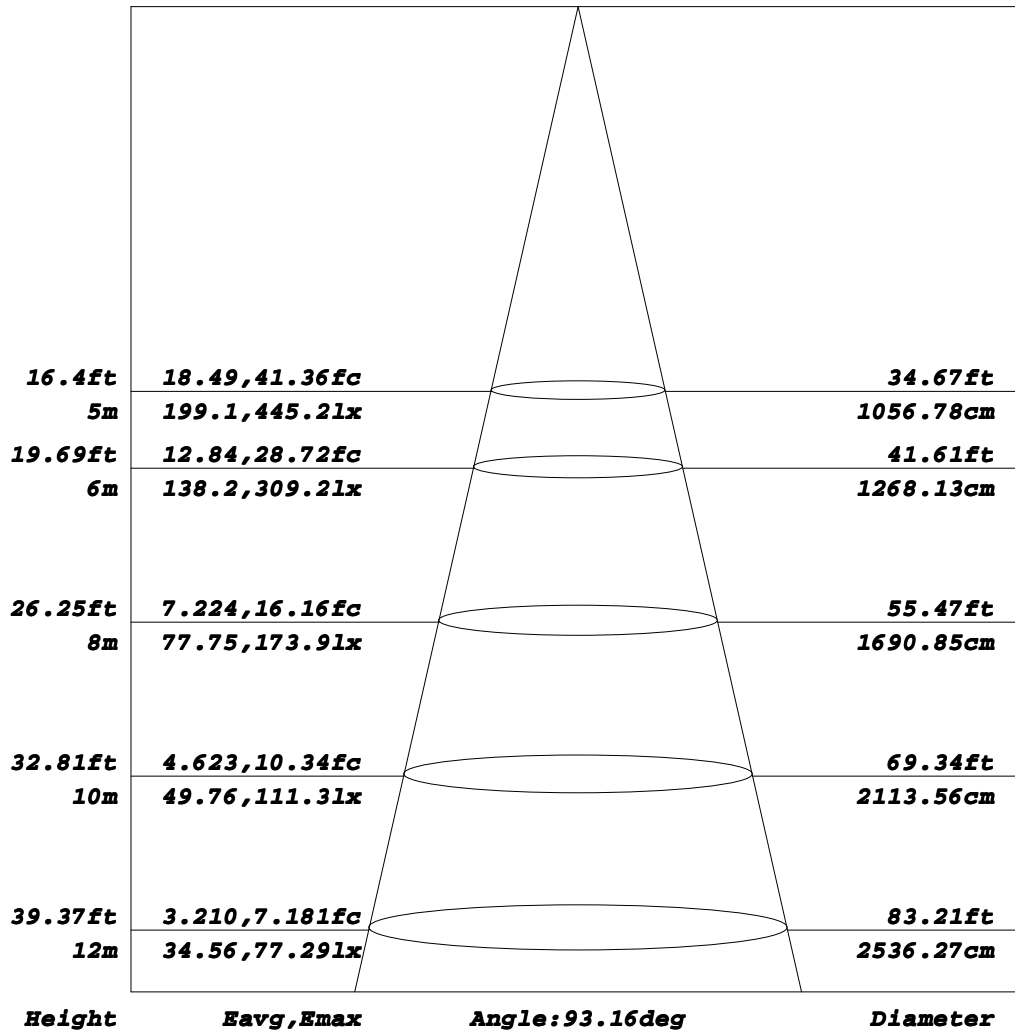
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity:65.0%
Test Distance:6.242m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:

Flux out:17978 lm



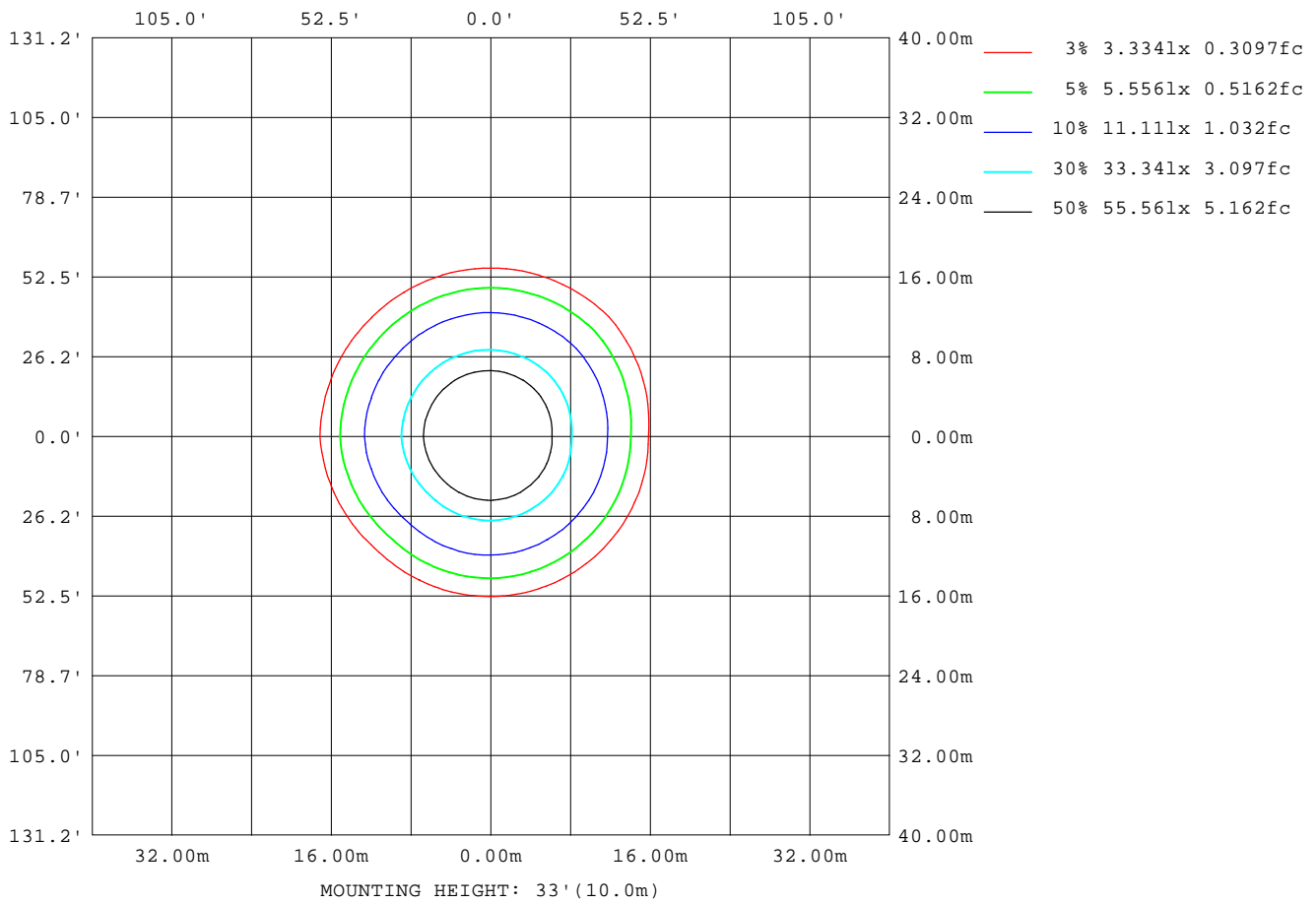
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity: 65.0%
Test Distance: 6.242m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

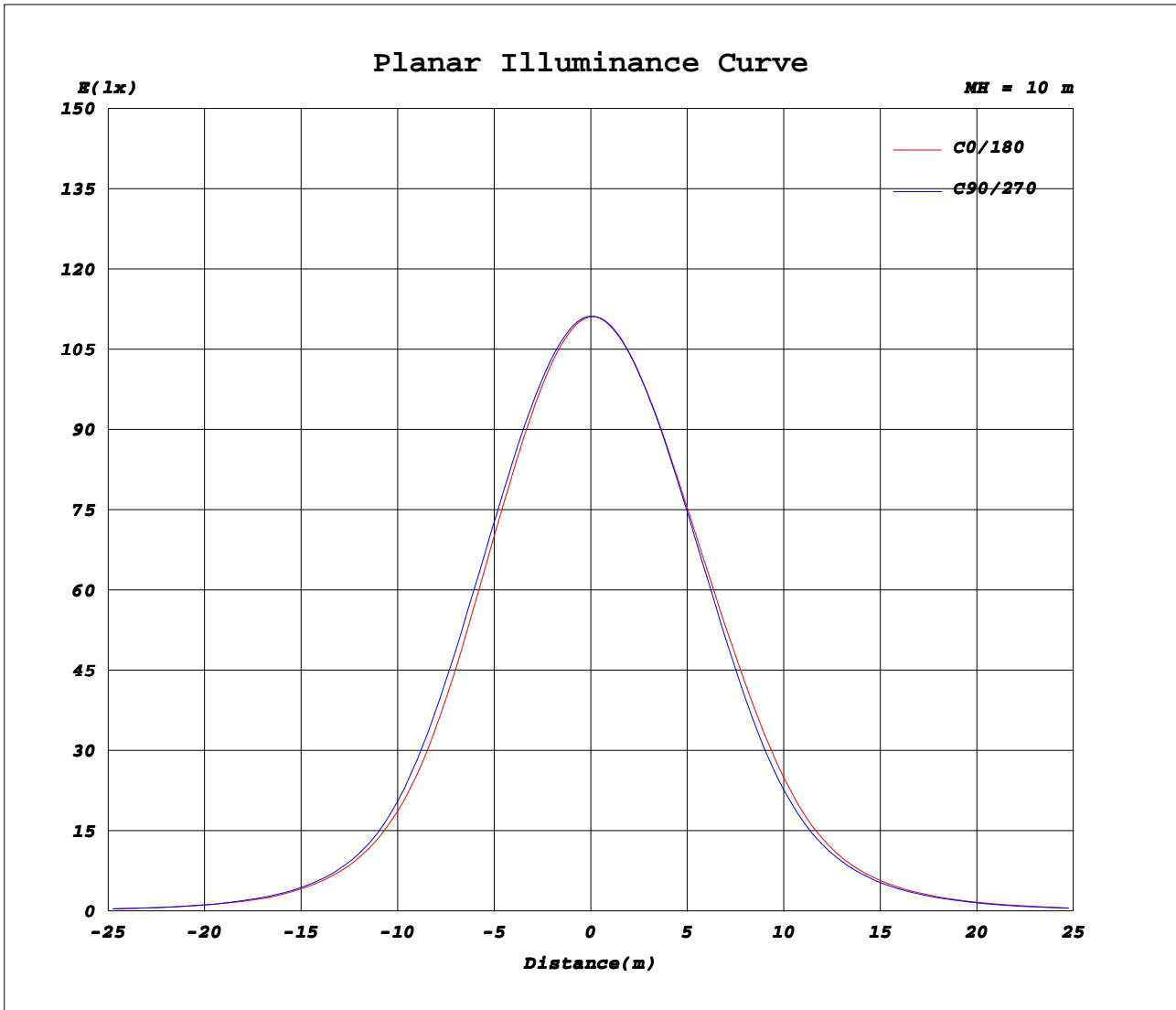
Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity: 65.0%
Test Distance: 6.242m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity: 65.0%
Test Distance: 6.242m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.6V I:0.6790A P:146.6W PF:0.9780 Lamp Flux:24522.2x1 lm		
NAME: 150W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:027
MFR.: 150W	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: x10cd

C (DEG) \ γ (DEG)	0	45	90	135	180	225	270	315											
0	1112	1112	1112	1112	1112	1112	1112	1112											
5	1105	1106	1108	1109	1113	1113	1111	1109											
10	1092	1096	1100	1101	1109	1110	1107	1102											
15	1073	1081	1087	1088	1101	1104	1099	1089											
20	1043	1055	1066	1068	1087	1091	1083	1068											
25	999	1016	1031	1037	1064	1066	1055	1034											
30	929	955	975	986	1027	1024	1006	980											
35	823	859	886	902	966	952	925	891											
40	684	723	752	765	862	835	800	765											
45	531	557	582	588	707	676	642	612											
50	388	396	417	424	524	497	481	463											
55	273	276	289	295	370	351	345	340											
60	177	187	190	194	254	239	239	236											
65	114	117	115	123	160	155	151	151											
70	70.7	71.5	73.1	75.8	102	96.9	92.4	95.2											
75	39.6	41.2	42.5	43.9	63.8	62.1	57.9	58.0											
80	17.0	18.4	19.8	20.0	35.0	33.0	30.0	29.2											
85	2.91	3.43	3.84	4.05	13.5	12.8	11.6	11.2											
90	2.22	2.16	2.10	2.07	2.58	2.64	2.69	2.72											
95	2.75	2.68	2.61	2.55	3.06	3.15	3.22	3.25											
100	3.34	3.26	3.17	3.11	3.64	3.74	3.82	3.86											
105	3.99	3.90	3.80	3.72	4.27	4.38	4.45	4.51											
110	4.67	4.57	4.47	4.37	4.93	5.05	5.14	5.19											
115	5.36	5.26	5.15	5.05	5.60	5.73	5.81	5.89											
120	6.05	5.95	5.84	5.73	6.31	6.42	6.52	6.59											
125	6.74	6.63	6.52	6.41	6.99	7.11	7.20	7.27											
130	7.38	7.29	7.17	7.07	7.65	7.77	7.86	7.92											
135	7.99	7.91	7.80	7.69	8.28	8.39	8.47	8.53											
140	8.57	8.49	8.40	8.30	8.88	8.97	9.04	9.09											
145	9.13	9.06	8.98	8.89	9.43	9.51	9.56	9.61											
150	9.70	9.64	9.57	9.49	9.97	10.0	10.1	10.1											
155	10.3	10.3	10.2	10.1	10.5	10.6	10.6	10.6											
160	11.0	10.9	10.9	10.8	11.1	11.1	11.2	11.2											
165	11.6	11.6	11.5	11.5	11.6	11.7	11.7	11.7											
170	12.1	12.1	12.1	12.0	12.1	12.1	12.1	12.1											
175	12.4	12.4	12.4	12.4	12.4	12.5	12.4	12.4											
180	12.6	12.6	12.5	12.5	12.6	12.6	12.5	12.5											

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-08-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.269
Humidity: 65.0%
Test Distance: 6.242m [K=1.0000]
Remarks: