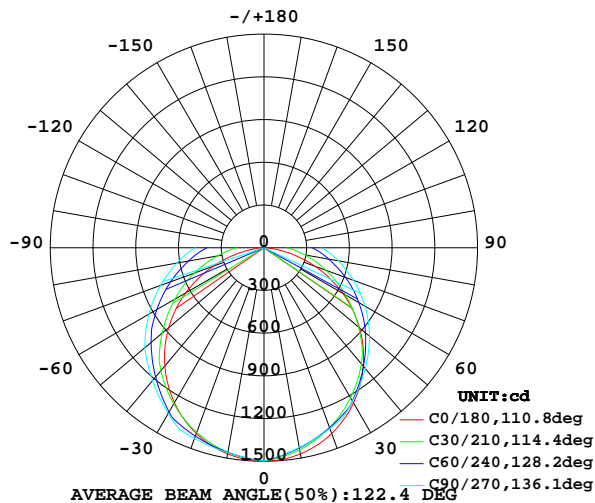


LUMINAIRE PHOTOMETRIC TEST REPORT

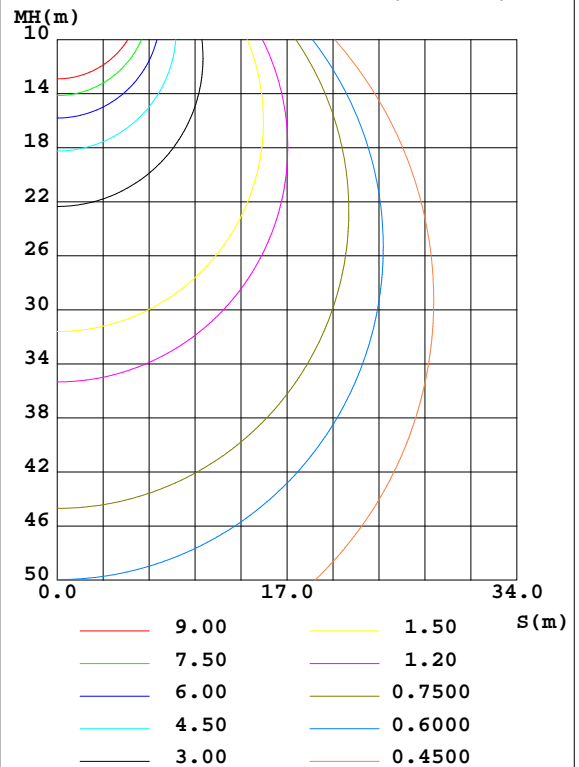
Test:U:120.4V I:0.3280A P:39.37W PF:0.9970 Lamp Flux:4963.62x1 lm		
NAME: MSS4-20/30/40/347/D10/W/35-40-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 126.06 lm/W			
MODEL	4000K	Imax(cd)	1498	S/MH(C0/180)	1.25
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.33
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	4963.6	η UP,DN(C0-180)	0.0,47.9
NOMINAL FLUX(lm)	4963.62	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

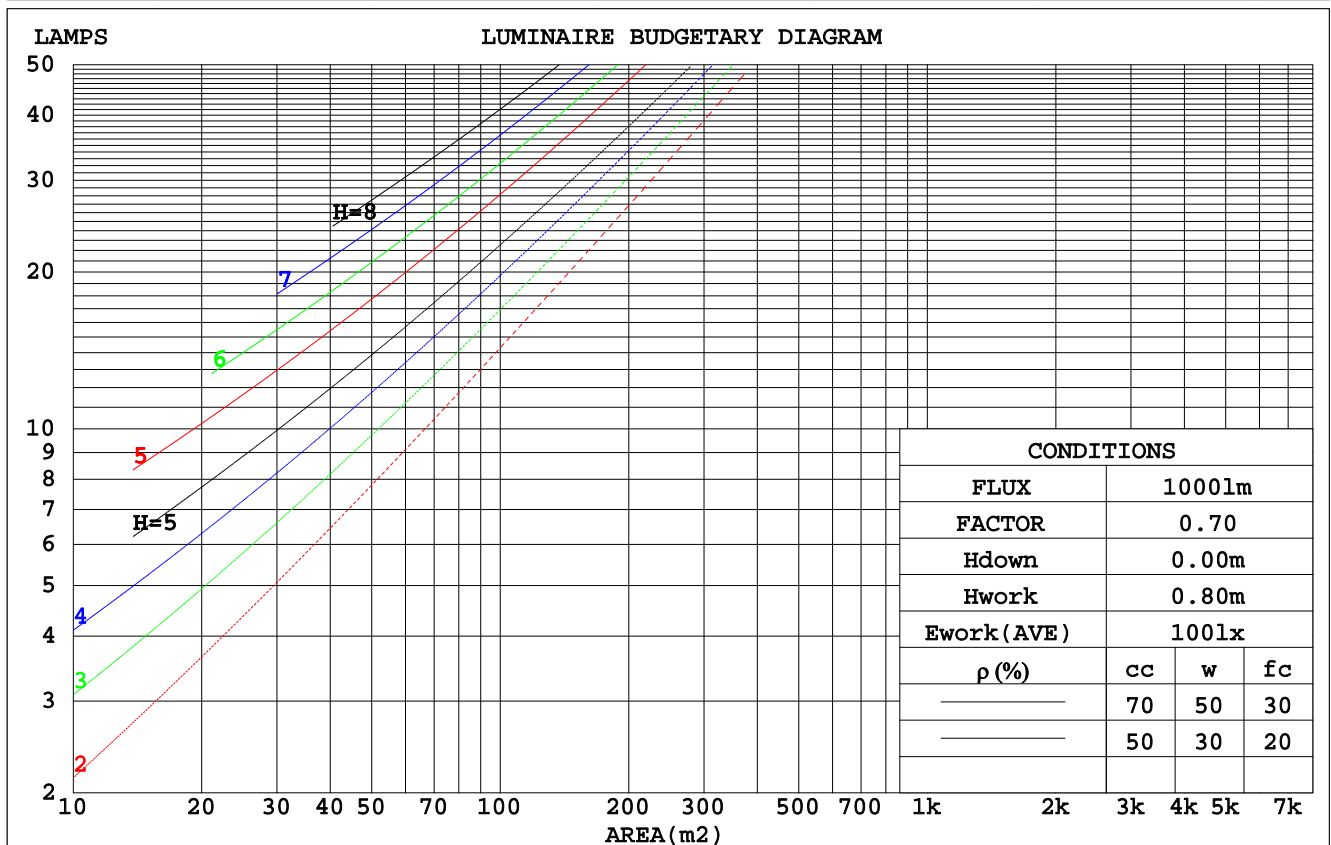
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
5	1491	1469	1461	1468	1491	1482	1480	1482	0- 5	35.50	35.50	0.72,0.72
10	1470	1433	1425	1432	1470	1458	1462	1459	5- 10	104.6	140.1	2.82,2.82
15	1436	1390	1388	1390	1436	1428	1444	1429	10- 15	169.8	309.9	6.24,6.24
20	1389	1342	1351	1341	1388	1393	1426	1394	15- 20	229.8	539.8	10.9,10.9
25	1329	1288	1314	1288	1329	1351	1408	1353	20- 25	283.4	823.1	16.6,16.6
30	1258	1231	1245	1230	1257	1305	1344	1307	25- 30	328.5	1152	23.2,23.2
35	1176	1162	1176	1161	1175	1243	1281	1246	30- 35	362.3	1514	30.5,30.5
40	1085	1073	1107	1073	1084	1157	1218	1160	35- 40	385.1	1899	38.3,38.3
45	984.3	984.1	1037	984.2	983.0	1069	1155	1073	40- 45	397.1	2296	46.3,46.3
50	875.8	894.2	968.1	895.0	874.3	980.4	1092	985.3	45- 50	398.7	2695	54.3,54.3
55	759.9	805.2	893.2	806.9	757.9	892.8	1012	898.2	50- 55	390.1	3085	62.1,62.1
60	637.7	717.4	818.3	719.9	635.4	805.3	932.3	811.2	55- 60	371.3	3456	69.6,69.6
65	510.7	628.7	743.5	631.2	508.1	708.8	852.4	715.6	60- 65	344.1	3800	76.6,76.6
70	380.9	543.3	668.6	545.9	377.9	616.2	772.5	623.8	65- 70	310.2	4110	82.8,82.8
75	252.5	461.5	593.8	464.3	249.7	527.9	692.6	536.3	70- 75	271.5	4382	88.3,88.3
80	133.9	385.2	530.8	388.2	130.9	445.3	622.6	454.4	75- 80	231.0	4613	92.9,92.9
85	40.32	321.5	467.8	325.1	38.29	375.2	552.5	383.7	80- 85	192.7	4806	96.8,96.8
90	0.9354	260.9	404.8	265.2	0.7704	308.7	482.5	316.7	85- 90	158.1	4964	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	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						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.00	.95	.90	.98	.93	.89	.93	.89	.86	.89	.86	.83	.86	.83	.80	.78
2.0	.86	.78	.71	.84	.77	.71	.80	.74	.69	.77	.72	.67	.74	.69	.66	.63
3.0	.75	.66	.58	.73	.65	.58	.70	.63	.57	.67	.61	.56	.64	.59	.55	.52
4.0	.66	.56	.49	.64	.55	.49	.62	.54	.48	.59	.53	.47	.57	.51	.46	.44
5.0	.59	.49	.42	.57	.48	.41	.55	.47	.41	.53	.46	.41	.51	.45	.40	.38
6.0	.53	.43	.36	.52	.43	.36	.50	.42	.36	.48	.41	.35	.46	.40	.35	.33
7.0	.48	.38	.32	.47	.38	.32	.45	.37	.31	.44	.37	.31	.42	.36	.31	.29
8.0	.43	.34	.28	.43	.34	.28	.41	.34	.28	.40	.33	.28	.39	.32	.28	.26
9.0	.40	.31	.25	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.23
10.0	.37	.28	.23	.36	.28	.23	.35	.28	.23	.34	.27	.23	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

WEC AND CCEC

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	.382	.217	.069	.375	.214	.068	.361	.207	.066	.349	.201	.065	.337	.195	.063	
2.0	.335	.184	.056	.329	.181	.056	.317	.176	.055	.305	.171	.054	.295	.167	.053	
3.0	.300	.159	.048	.294	.157	.047	.283	.153	.047	.273	.150	.046	.264	.146	.045	
4.0	.271	.141	.041	.266	.139	.041	.256	.136	.041	.247	.133	.040	.239	.130	.040	
5.0	.246	.126	.036	.242	.124	.036	.234	.122	.036	.226	.119	.035	.218	.117	.035	
6.0	.226	.113	.032	.222	.112	.032	.215	.110	.032	.208	.108	.032	.201	.106	.031	
7.0	.209	.103	.029	.205	.102	.029	.199	.100	.029	.192	.099	.029	.187	.097	.028	
8.0	.194	.095	.027	.191	.094	.027	.185	.092	.026	.179	.091	.026	.174	.089	.026	
9.0	.181	.087	.024	.178	.087	.024	.173	.085	.024	.168	.084	.024	.163	.083	.024	
10.0	.169	.081	.023	.167	.081	.022	.162	.079	.022	.157	.078	.022	.153	.077	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.185	.155	.129	.159	.133	.111	.108	.092	.077	.062	.053	.045	.020	.017	.014	
2.0	.178	.132	.093	.152	.113	.080	.104	.078	.056	.060	.046	.033	.019	.015	.011	
3.0	.170	.114	.070	.146	.099	.061	.100	.069	.043	.058	.040	.025	.019	.013	.008	
4.0	.162	.101	.055	.139	.088	.048	.096	.061	.034	.055	.036	.020	.018	.012	.007	
5.0	.154	.091	.045	.132	.079	.039	.091	.055	.028	.053	.032	.016	.017	.011	.005	
6.0	.146	.083	.037	.126	.072	.033	.087	.050	.023	.050	.030	.014	.016	.010	.005	
7.0	.139	.076	.032	.120	.066	.028	.083	.046	.020	.048	.027	.012	.016	.009	.004	
8.0	.132	.070	.028	.114	.061	.024	.079	.043	.017	.046	.025	.010	.015	.008	.003	
9.0	.126	.065	.024	.108	.057	.021	.075	.040	.015	.044	.024	.009	.014	.008	.003	
10.0	.120	.061	.022	.103	.053	.019	.072	.037	.014	.042	.022	.008	.014	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

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	22.8	24.4	23.0	24.6	24.8	24.0	25.6	24.2	25.8	26.0
3H	24.2	25.7	24.5	26.0	26.2	26.4	27.9	26.7	28.1	28.4
4H	24.7	26.2	25.1	26.5	26.7	27.7	29.1	28.0	29.4	29.6
6H	25.1	26.4	25.4	26.7	27.0	29.1	30.5	29.4	30.7	31.0
8H	25.1	26.5	25.5	26.8	27.1	29.9	31.2	30.2	31.5	31.8
12H	25.1	26.4	25.5	26.7	27.1	30.8	32.1	31.2	32.4	32.7
4H 2H	23.7	25.1	24.0	25.4	25.6	24.6	26.0	24.9	26.3	26.6
3H	25.4	26.7	25.7	27.0	27.3	27.2	28.5	27.6	28.8	29.1
4H	26.1	27.3	26.5	27.6	27.9	28.7	29.9	29.1	30.2	30.6
6H	26.6	27.7	27.0	28.0	28.4	30.4	31.4	30.8	31.8	32.2
8H	26.7	27.7	27.1	28.1	28.5	31.3	32.3	31.7	32.7	33.1
12H	26.8	27.7	27.2	28.1	28.5	32.4	33.3	32.8	33.7	34.1
8H 4H	26.9	27.9	27.3	28.3	28.7	29.1	30.1	29.5	30.5	30.8
6H	27.8	28.6	28.2	29.0	29.5	31.0	31.9	31.5	32.3	32.7
8H	28.1	28.9	28.6	29.3	29.7	32.2	32.9	32.6	33.4	33.8
12H	28.3	29.0	28.8	29.4	29.9	33.5	34.2	34.0	34.6	35.1
12H 4H	27.2	28.1	27.6	28.5	28.9	29.1	30.0	29.5	30.4	30.8
6H	28.2	29.0	28.7	29.4	29.9	31.2	31.9	31.6	32.4	32.8
8H	28.7	29.4	29.2	29.8	30.3	32.4	33.1	32.9	33.5	34.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.1 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 4964 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.6)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

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	54	42	35	53	42	35	52	41	34	28
0.80	64	51	43	63	51	43	61	50	43	35
1.00	72	60	52	71	59	51	68	61	51	43
1.25	79	67	59	77	66	59	74	65	58	50
1.50	84	73	65	82	72	64	79	70	63	55
2.00	91	81	74	89	80	73	85	77	71	63
2.50	95	86	79	93	85	78	89	82	76	67
3.00	99	90	84	96	89	83	92	86	81	71
4.00	103	96	90	101	94	89	96	91	86	77
5.00	106	100	95	103	98	93	98	94	90	80
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004						Suspended			SHRNOM = 1.25	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Conical surface Flux(90deg):

2296 lm

%lum = 46.3%

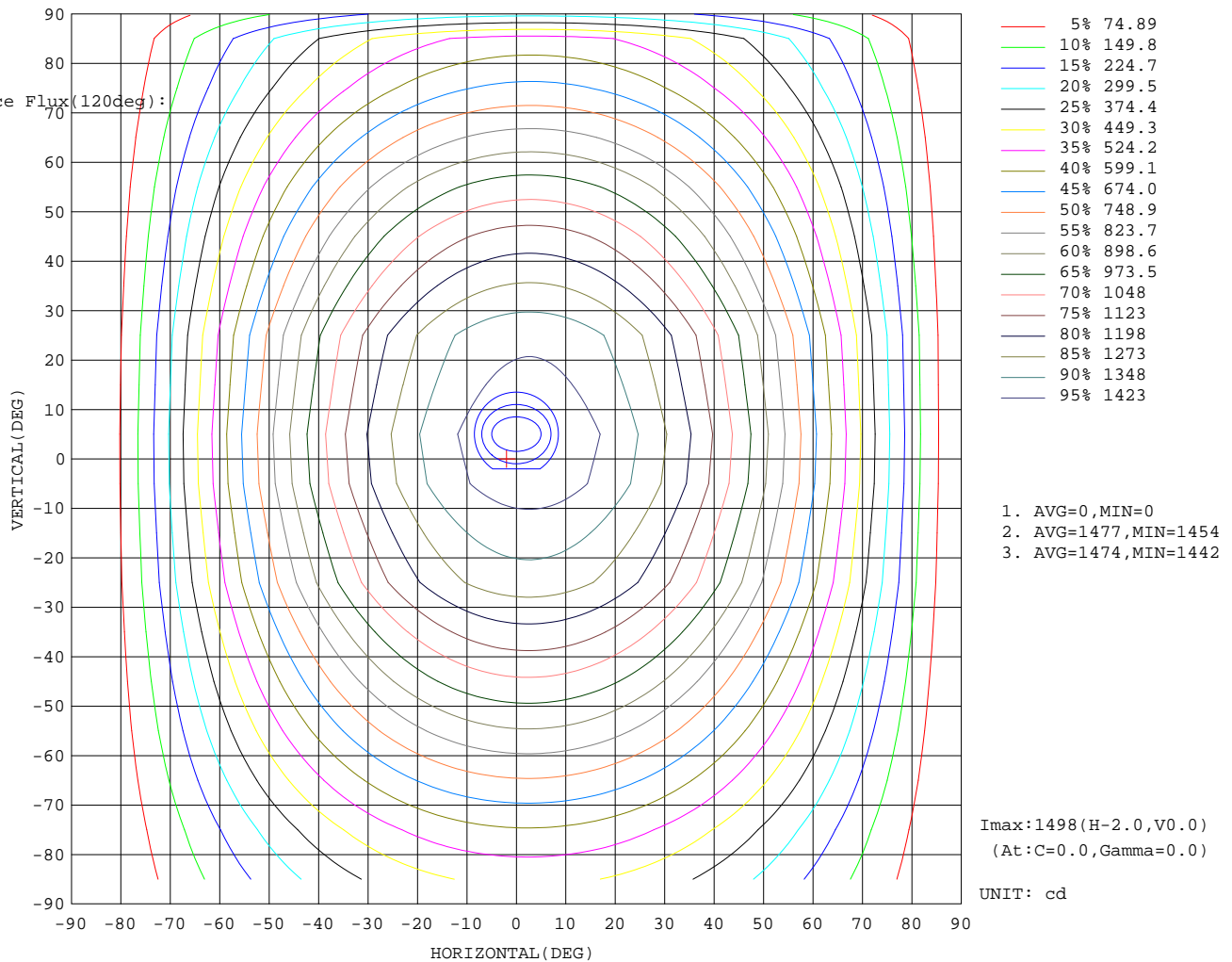
%lamp = 46.3%

Conical surface Flux(120deg):

3456 lm

%lum = 69.6%

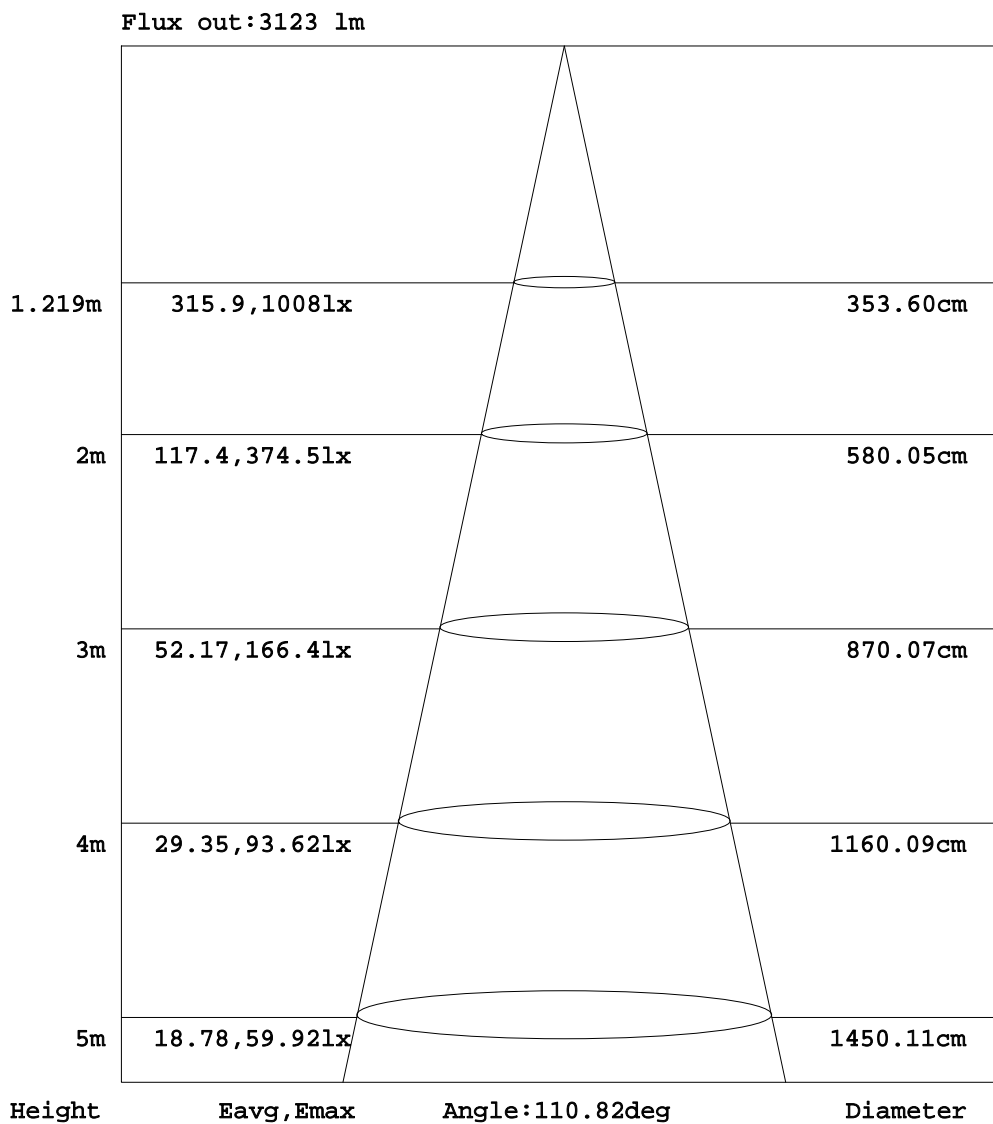
%lamp = 69.6%



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

AAI Figure

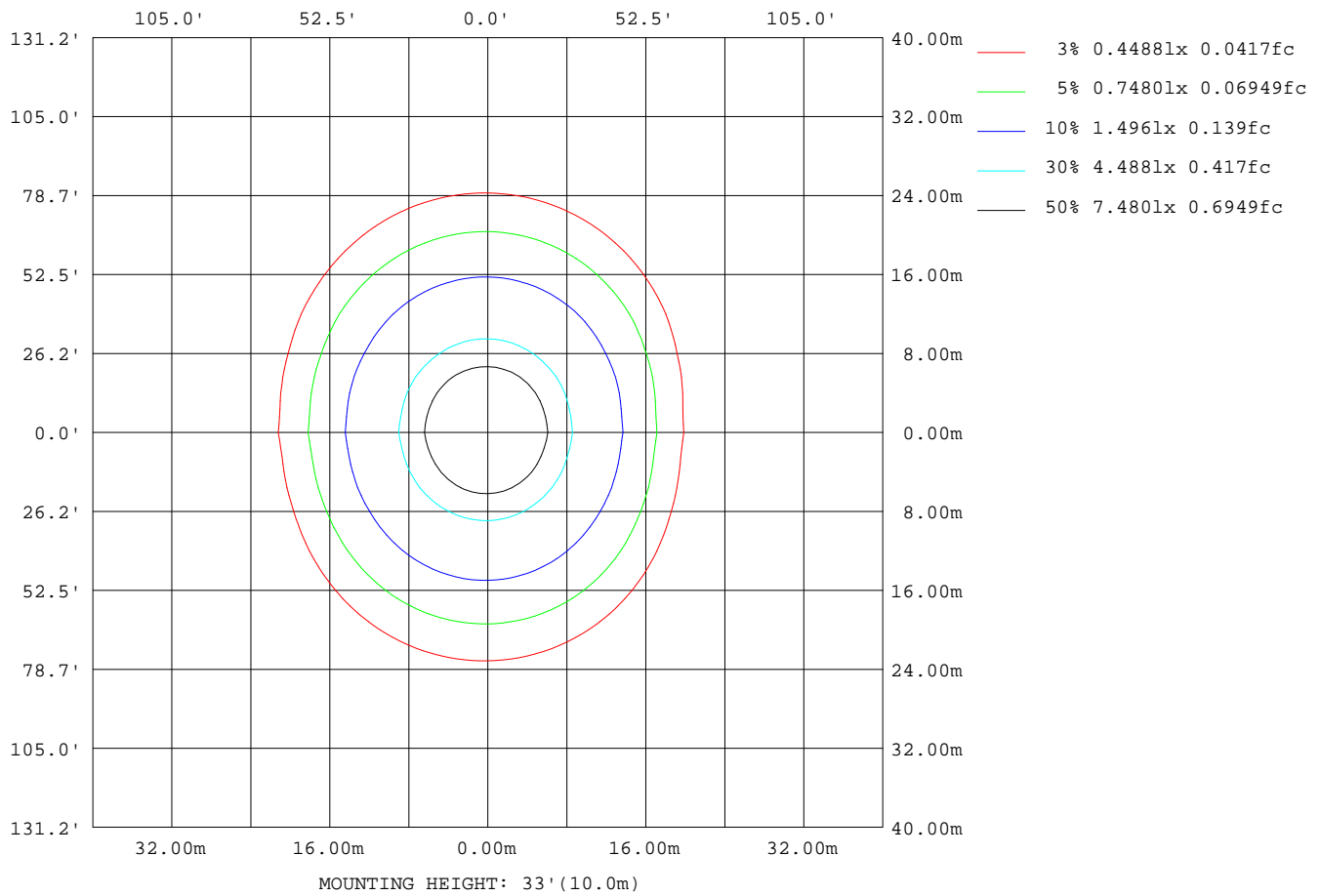


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:120.4V I:0.3280A P:39.37W PF:0.9970 Lamp Flux:4963.62x1 lm		
NAME: MRS4-40/D10/U/40	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

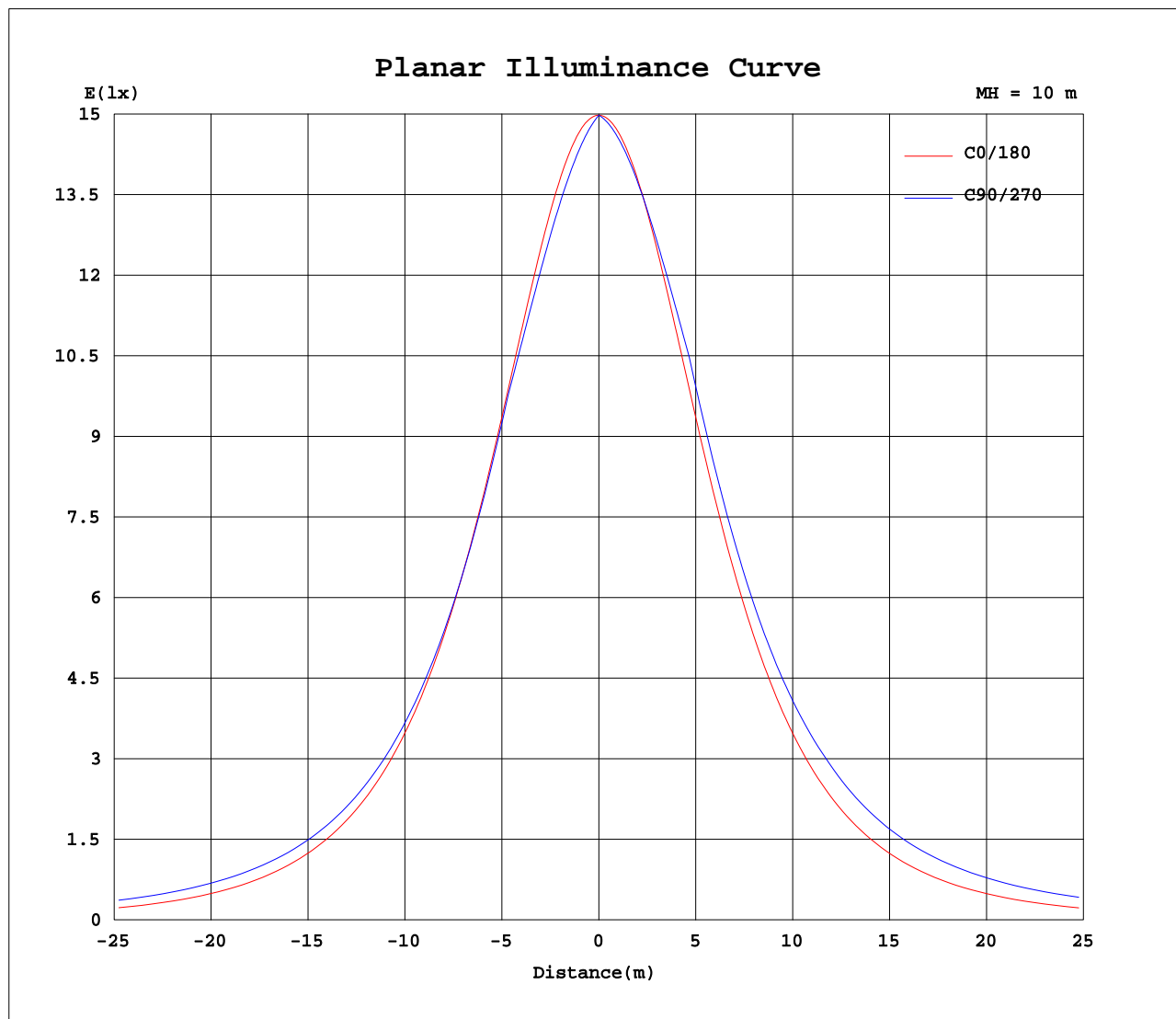
AvgL	cd/m2
L_0~180(65)av	19015
L_0~180(75)av	15304
L_0~180(85)av	7115
L_90~270(65)av	29786
L_90~270(75)av	39205
L_90~270(85)av	92343
L_45(65)av	25050
L_45(75)av	30325
L_45(85)av	63603

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity: 65.0%
Test Distance: 8.800m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--2

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: cd

[illegible]

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--4

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```