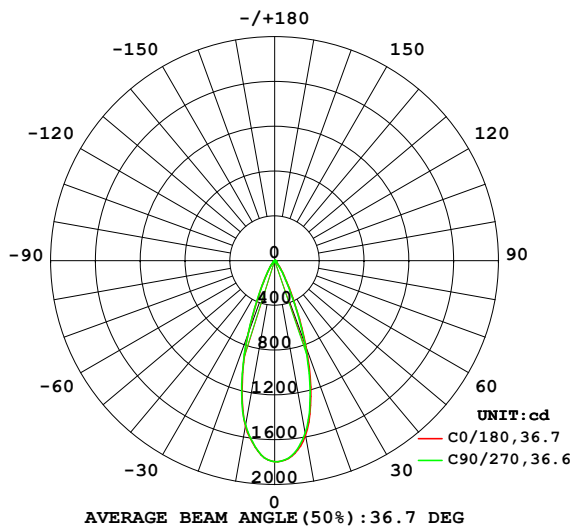


LUMINAIRE PHOTOMETRIC TEST REPORT

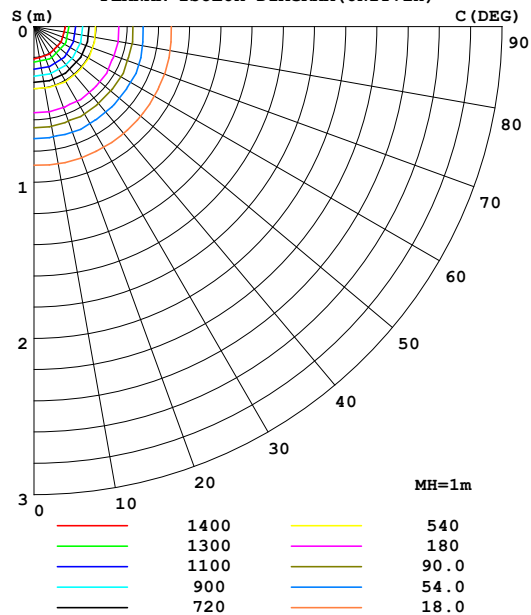
Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 76.16 lm/W			
MODEL		I _{max} (cd)	1798	S/MH(C0/180)	0.56
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.57
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	764.47	η UP,DN(C0-180)	0.0,52.4
NOMINAL FLUX(lm)	764.468	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,47.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	240.27	η down(%)	100.0	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM(UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2023-09-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity:65.0%
 Test Distance:3.090m [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	1587	1581	1566	1556	1502	1489	1496	1558	0- 10	159.3	159.3	20.8,20.8
20	823.6	851.9	795.4	753.5	686.3	688.1	701.1	778.0	10- 20	322.2	481.5	63,63
30	215.5	227.9	199.3	168.9	158.6	155.9	163.4	184.5	20- 30	184.3	665.8	87.1,87.1
40	53.98	55.58	50.48	43.79	39.73	39.85	42.32	47.49	30- 40	60.56	726.3	95,95
50	15.31	15.40	14.77	13.94	13.01	12.98	13.74	14.75	40- 50	18.86	745.2	97.5,97.5
60	8.882	8.551	8.421	8.277	7.899	7.763	8.349	8.999	50- 60	9.700	754.9	98.7,98.7
70	4.480	4.148	4.170	4.320	4.296	4.228	4.543	4.764	60- 70	6.249	761.1	99.6,99.6
80	1.402	1.219	1.221	1.352	1.508	1.387	1.064	1.347	70- 80	2.962	764.1	100,100
90	0.0154	0.0077	0.0145	0.0032	0.0029	0.0016	0.0058	0.0048	80- 90	0.3661	764.5	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 738.25 lm

%lum = 96.6%

%lamp = 96.6%

Conical surface Flux(130deg): 758.47 lm

%lum = 99.2%

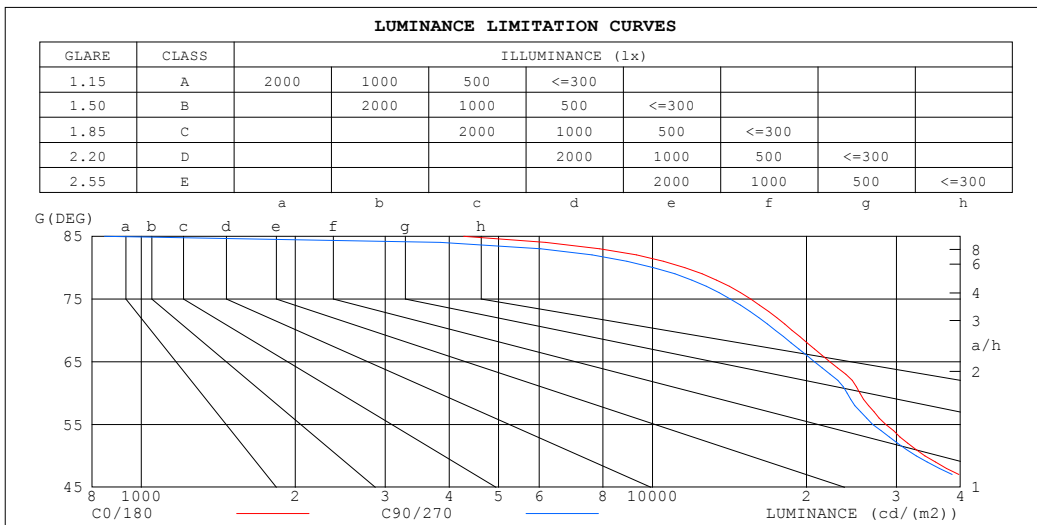
%lamp = 99.2%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2023-09-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



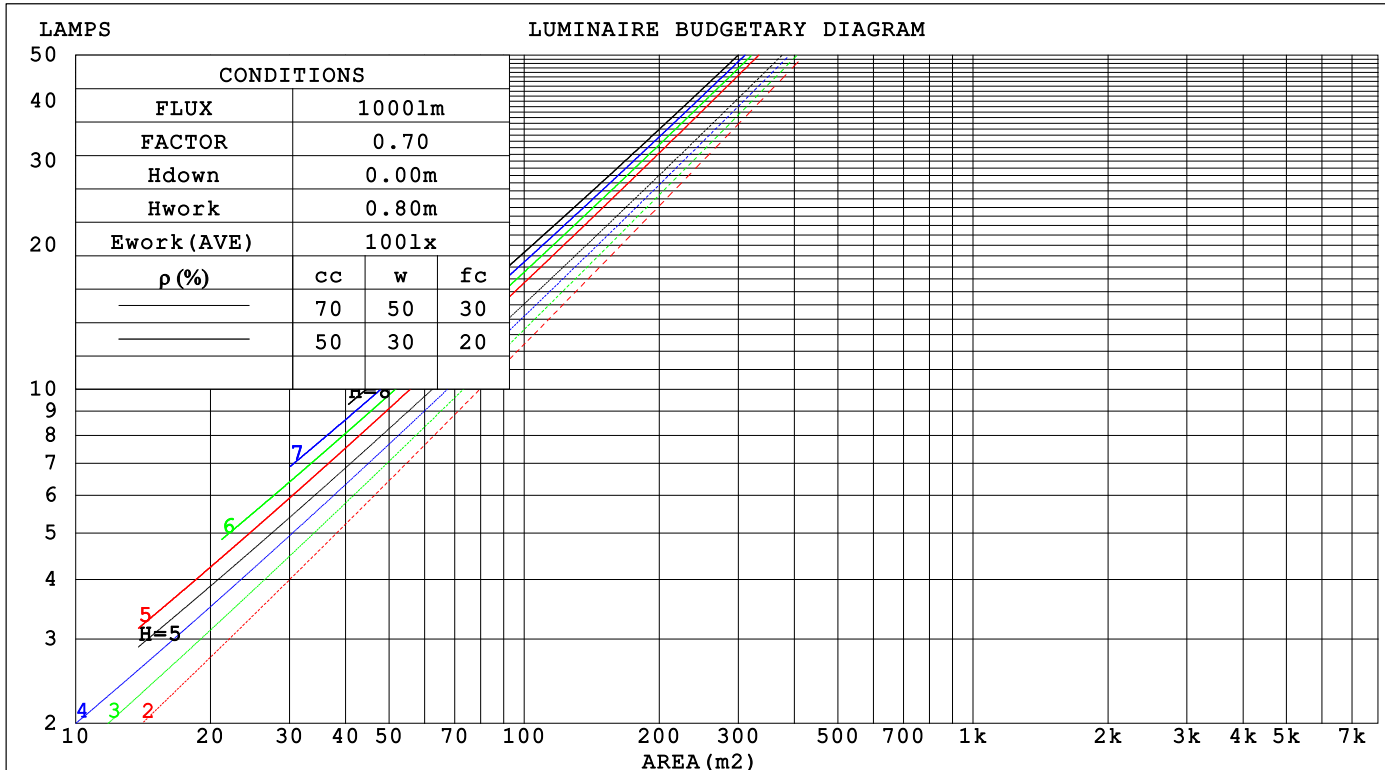
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-09-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527		
Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding 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															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz			UTHDi:0.21% ITHDi:19.96% KDisp:0.9527			Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D			TYPE:			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.: Norming Lighting			SUR.:			Shielding 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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.159	.090	.029	.152	.087	.028	.140	.080	.026	.128	.074	.024	.118	.068	.022		
2.0	.150	.082	.025	.144	.079	.024	.134	.074	.023	.124	.070	.022	.115	.065	.021		
3.0	.141	.075	.022	.136	.073	.022	.127	.069	.021	.119	.065	.020	.112	.062	.019		
4.0	.133	.069	.020	.129	.067	.020	.121	.064	.019	.114	.061	.019	.108	.059	.018		
5.0	.126	.064	.019	.122	.063	.018	.116	.060	.018	.110	.058	.017	.104	.056	.017		
6.0	.119	.060	.017	.116	.059	.017	.111	.057	.017	.105	.055	.016	.101	.053	.016		
7.0	.114	.056	.016	.111	.055	.016	.106	.054	.015	.101	.052	.015	.097	.050	.015		
8.0	.108	.053	.015	.106	.052	.015	.102	.051	.015	.098	.049	.014	.094	.048	.014		
9.0	.104	.050	.014	.102	.050	.014	.098	.048	.014	.094	.047	.014	.091	.046	.013		
10.0	.100	.048	.013	.098	.047	.013	.094	.046	.013	.091	.045	.013	.088	.044	.013		

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016		
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.069	.052	.046	.041	.017	.015	.013		
3.0	.140	.113	.093	.120	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011		
4.0	.128	.098	.076	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009		
5.0	.119	.086	.063	.102	.075	.055	.070	.052	.039	.041	.031	.023	.013	.010	.008		
6.0	.110	.077	.053	.095	.066	.046	.065	.047	.032	.038	.027	.019	.012	.009	.006		
7.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.016	.012	.008	.005		
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005		
9.0	.092	.057	.033	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004		
10.0	.087	.052	.029	.075	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm										
NAME: MD10-10-XX-05 2700K RA90 38D					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Norming Lighting					SUR.:			Shielding 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	20.1	20.9	20.3	21.1	21.2	19.8	20.6	20.1	20.8	20.9
3H	20.3	21.1	20.6	21.3	21.5	20.0	20.8	20.3	21.0	21.2
4H	20.4	21.1	20.7	21.3	21.5	20.1	20.8	20.4	21.0	21.2
6H	20.4	21.1	20.7	21.3	21.6	20.1	20.8	20.4	21.0	21.3
8H	20.4	21.0	20.7	21.3	21.6	20.1	20.7	20.4	21.0	21.2
12H	20.4	21.0	20.7	21.3	21.5	20.0	20.7	20.4	20.9	21.2
4H 2H	20.1	20.8	20.4	21.0	21.2	19.8	20.5	20.1	20.7	21.0
3H	20.4	21.0	20.7	21.3	21.6	20.1	20.7	20.4	21.0	21.3
4H	20.5	21.1	20.9	21.4	21.7	20.2	20.8	20.6	21.1	21.4
6H	20.6	21.1	21.0	21.4	21.8	20.3	20.8	20.7	21.1	21.5
8H	20.6	21.0	21.0	21.4	21.8	20.3	20.7	20.7	21.1	21.4
12H	20.5	21.0	20.9	21.3	21.7	20.2	20.6	20.6	21.0	21.4
8H 4H	20.5	20.9	20.9	21.3	21.7	20.2	20.7	20.6	21.0	21.4
6H	20.6	21.0	21.0	21.3	21.8	20.3	20.7	20.7	21.1	21.5
8H	20.6	20.9	21.0	21.3	21.8	20.3	20.6	20.7	21.0	21.5
12H	20.5	20.8	21.0	21.3	21.7	20.2	20.5	20.7	20.9	21.4
12H 4H	20.4	20.9	20.9	21.2	21.6	20.2	20.6	20.6	21.0	21.3
6H	20.5	20.9	21.0	21.3	21.7	20.2	20.6	20.7	21.0	21.4
8H	20.5	20.8	21.0	21.3	21.7	20.2	20.5	20.7	21.0	21.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.9 / - 2.3					+ 1.7 / - 2.3				
1.5H	+ 3.6 / - 1.9					+ 3.3 / - 1.9				
2.0H	+ 1.4 / - 0.8					+ 1.4 / - 0.8				

CIE Pub.117, 764.5 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -0.9$)
Area: 0.0007 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

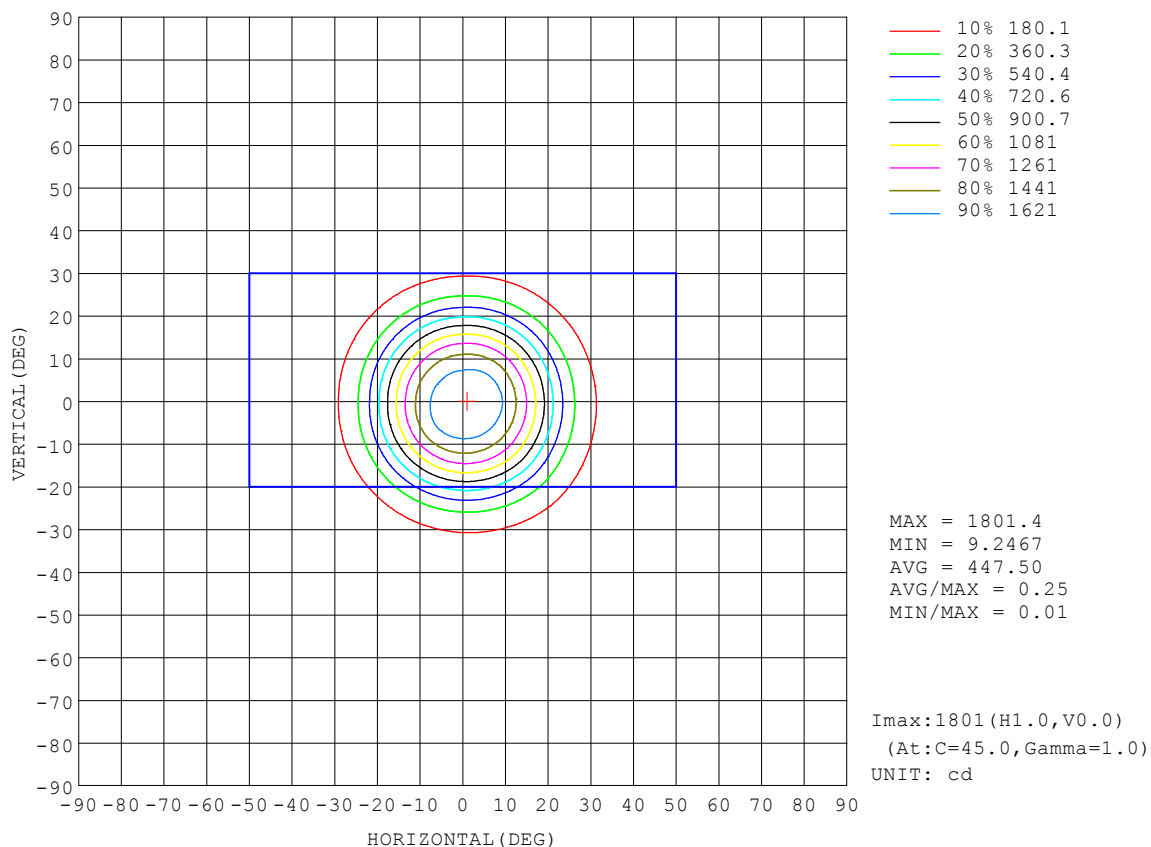
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	79	88	82	79	87	82	78	75
0.80	96	90	86	95	90	86	94	89	86	82
1.00	100	94	91	99	94	91	97	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	98	105	101	98	103	99	97	93
2.00	109	105	102	107	104	101	105	102	99	94
2.50	110	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
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:2023-09-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

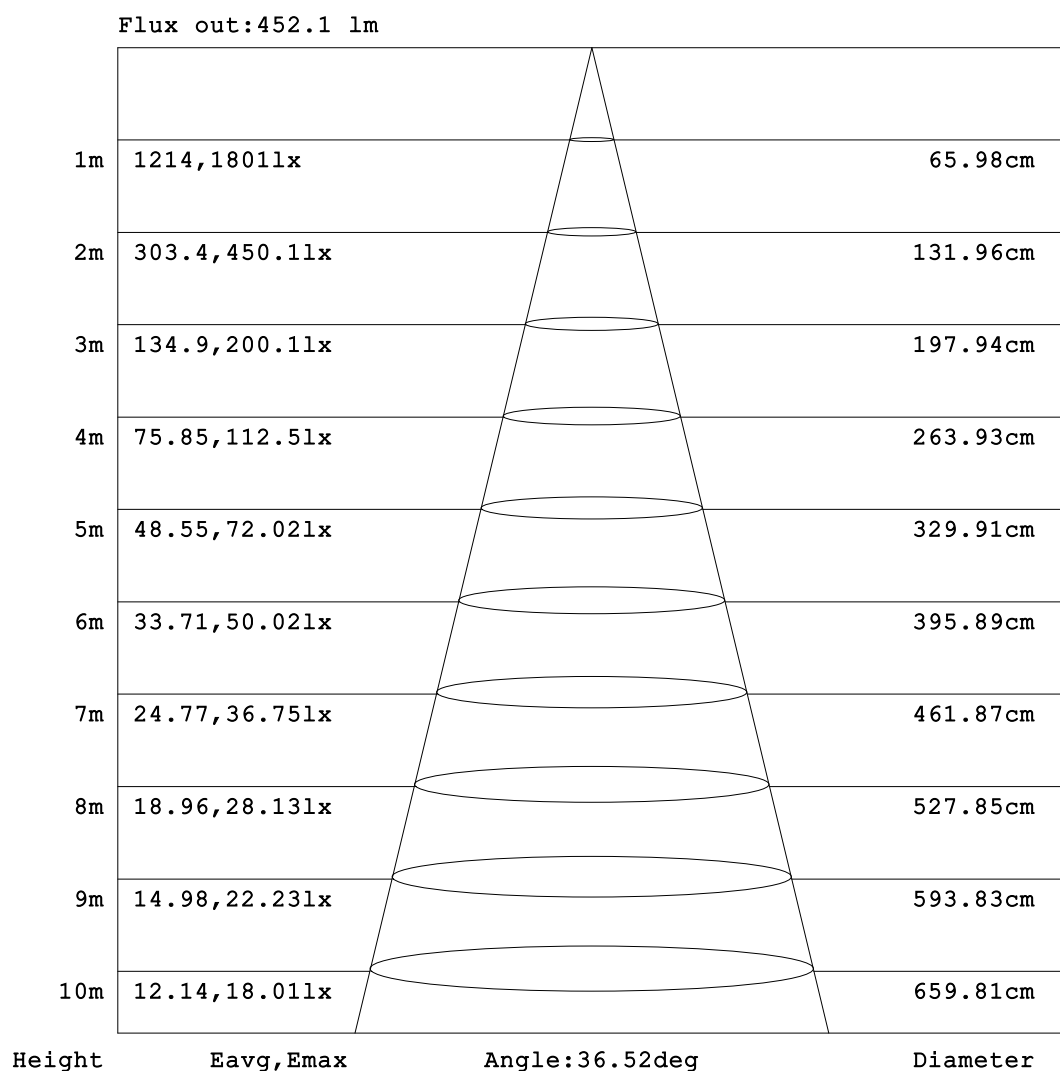


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



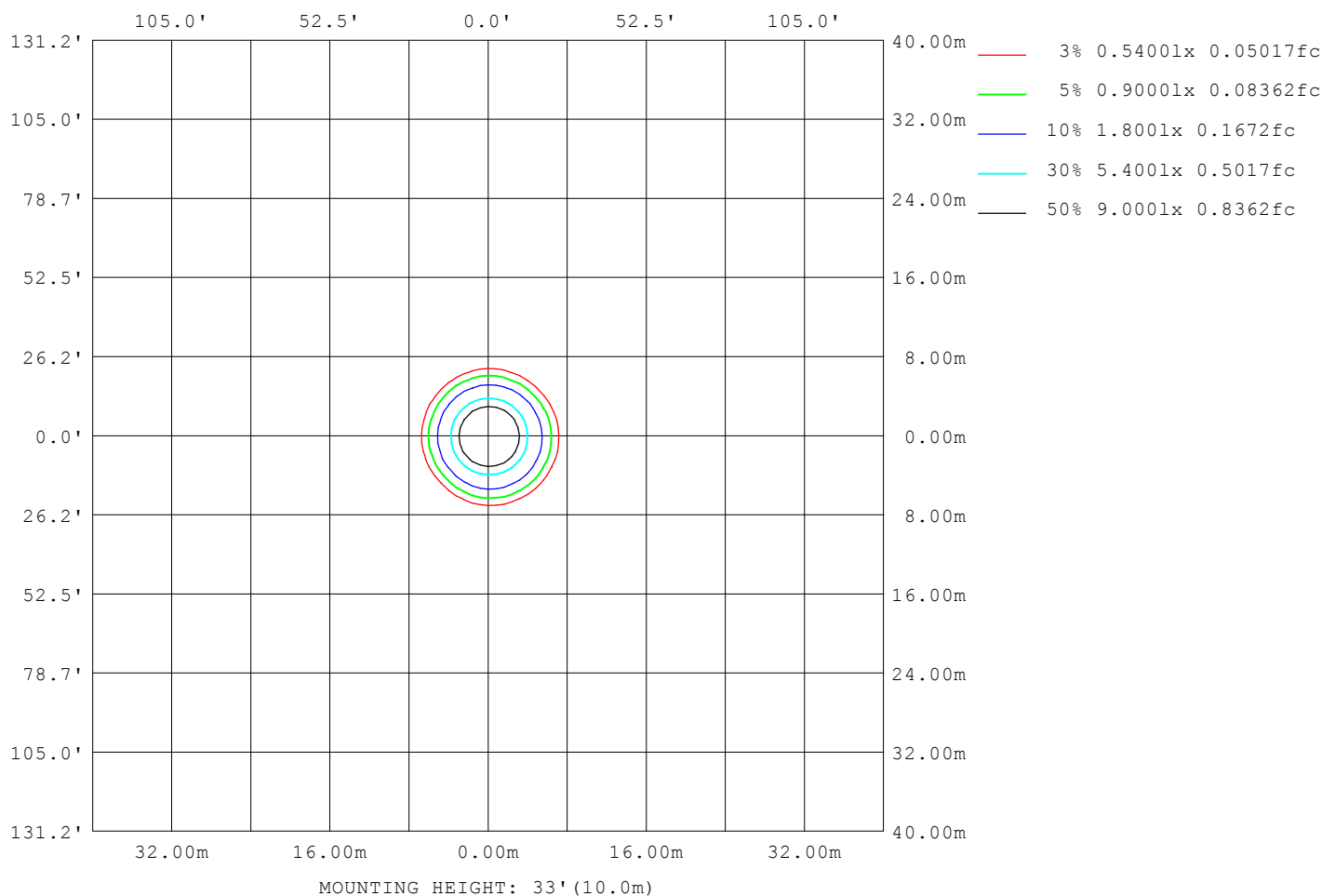
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz		
UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:240.3V I:0.0448A P:10.0W PF:0.9315 Freq:49.99Hz UTHDi:0.21% ITHDi:19.96% KDisp:0.9527 Lamp Flux:764.468x1 lm		
NAME: MD10-10-XX-05 2700K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

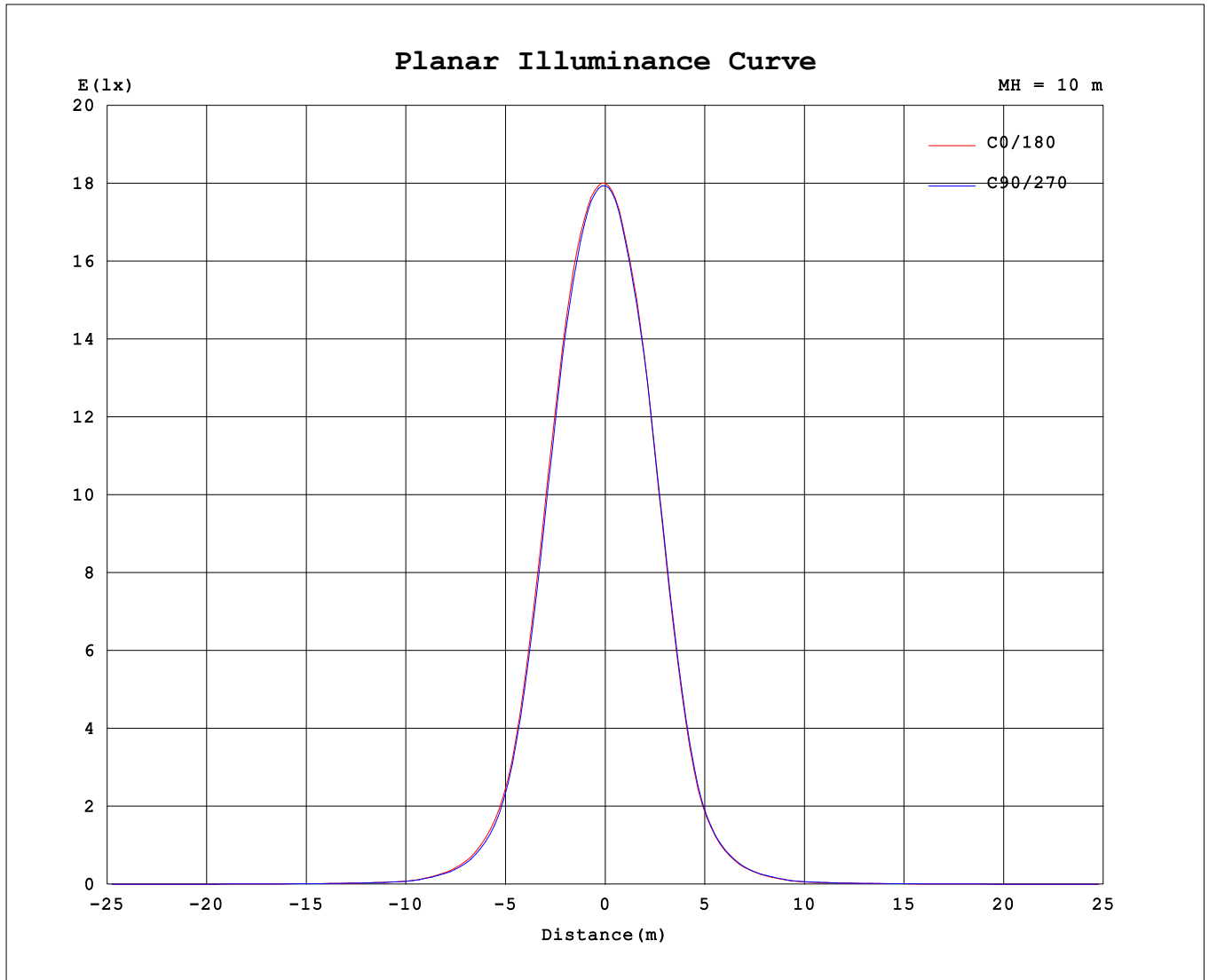
AvgL	cd/m2
L_0~180 (65) av	21181
L_0~180 (75) av	15586
L_0~180 (85) av	4709
L_90~270 (65) av	21072
L_90~270 (75) av	15422
L_90~270 (85) av	521
L_45 (65) av	21215
L_45 (75) av	15413
L_45 (85) av	1248

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-18

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [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: 2023-09-18

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

```