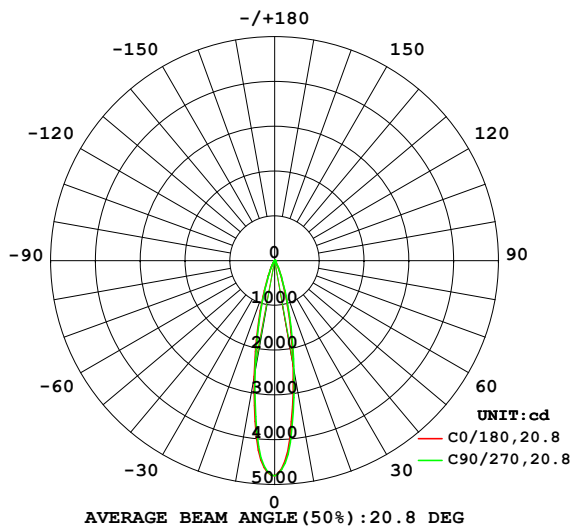


LUMINAIRE PHOTOMETRIC TEST REPORT

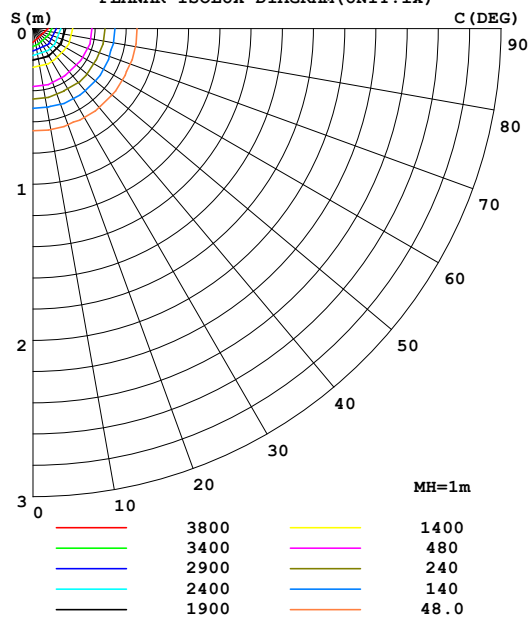
Test:U:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 89.23 lm/W
MODEL		I _{max} (cd)	4801	S/MH (C0/180)	0.37	
NOMINAL POWER(W)	10	LOR (%)	100.0	S/MH (C90/270)	0.36	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	900.24	η UP,DN (C0-180)	0.0,50.3	
NOMINAL FLUX(lm)	900.241	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.7	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	240.44	η down (%)	100.0	CIBSE SHR MAX	0.30	

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:2023-09-14

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	2398	2434	2507	2607	2633	2605	2532	2419	0- 10	336.4	336.4	37.4,37.4
20	552.8	584.6	604.5	626.1	600.1	571.7	560.2	540.6	10- 20	362.9	699.3	77.7,77.7
30	123.9	136.7	137.4	137.2	126.0	121.4	118.9	115.5	20- 30	131.3	830.7	92.3,92.3
40	27.57	32.17	31.79	29.44	26.50	26.80	25.91	25.12	30- 40	39.64	870.3	96.7,96.7
50	11.06	13.27	12.59	11.15	10.53	10.15	9.700	10.25	40- 50	13.14	883.4	98.1,98.1
60	8.033	8.904	8.679	8.021	7.444	7.320	7.321	7.501	50- 60	8.240	891.7	99,99
70	4.693	4.807	4.672	4.731	4.549	4.264	4.270	4.557	60- 70	6.275	898.0	99.7,99.7
80	0.3219	0.3054	0.3135	0.2970	0.3011	0.2701	0.2194	0.2548	70- 80	2.182	900.1	100,100
90	0.0157	0.0006	0.0164	0	0.0029	0	0.0071	0	80- 90	0.1038	900.2	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): 878.13 lm

%lum = 97.5%

%lamp = 97.5%

Conical surface Flux(130deg): 895.19 lm

%lum = 99.4%

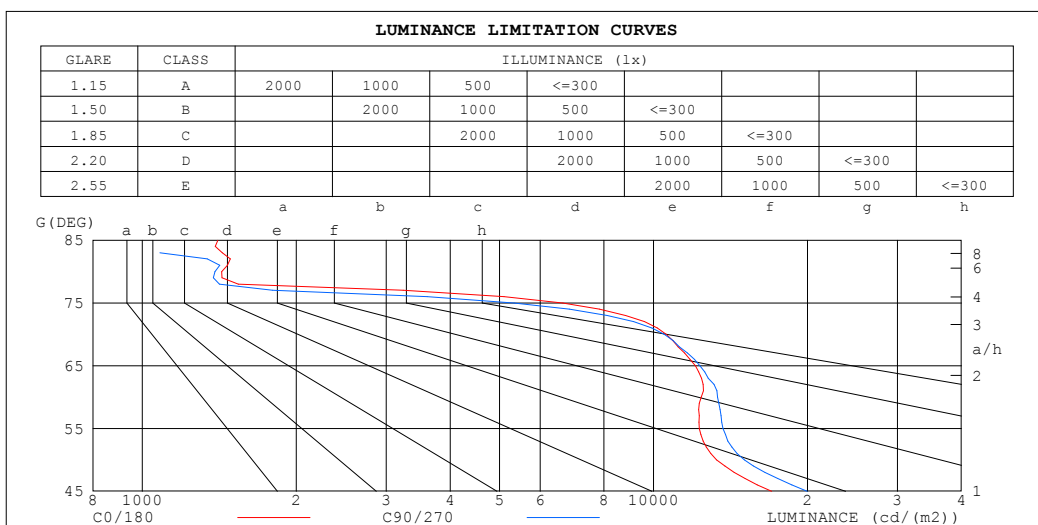
%lamp = 99.4%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1405	160
80	1430	1387
75	6651	5339
70	10587	10494
65	12072	12321
60	12395	13335
55	12284	13680
50	13280	15049
45	17030	19964

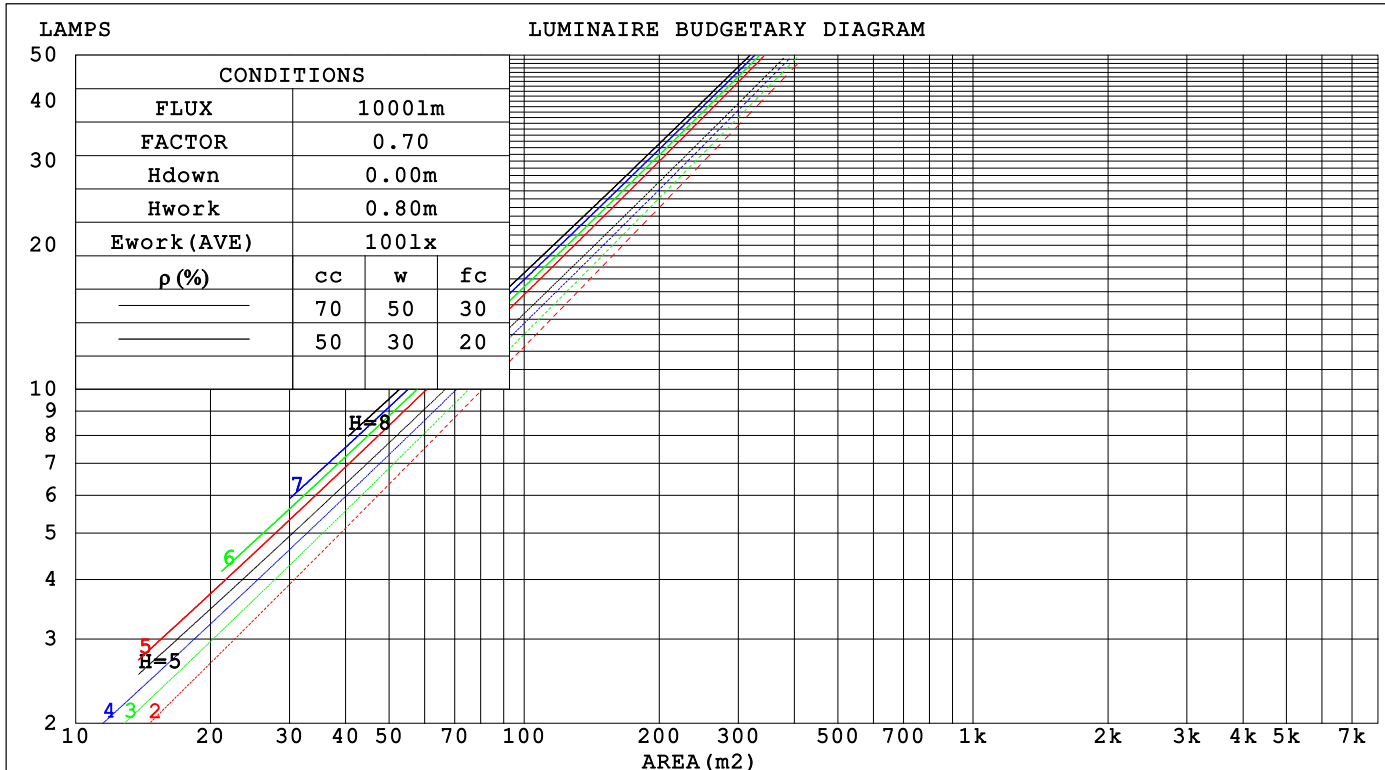
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510		Lamp Flux:900.24lx1 lm
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0														
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
p _{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	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00														
1.0	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96														
2.0	1.07	1.04	1.02	1.06	1.03	1.00	1.02	1.00	.98	.00	.98	.96	.97	.95	.94	.93														
3.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.94	.96	.94	.92	.94	.92	.91	.89														
4.0	.98	.94	.91	.97	.94	.91	.95	.92	.90	.93	.91	.89	.92	.90	.88	.86														
5.0	.95	.90	.87	.94	.90	.87	.92	.89	.86	.91	.88	.86	.89	.87	.85	.84														
6.0	.91	.87	.84	.91	.87	.84	.89	.86	.83	.88	.85	.83	.87	.84	.82	.81														
7.0	.88	.84	.81	.88	.84	.81	.87	.83	.81	.86	.83	.80	.85	.82	.80	.79														
8.0	.86	.82	.79	.85	.81	.78	.84	.81	.78	.83	.80	.78	.83	.80	.78	.77														
9.0	.83	.79	.76	.83	.79	.76	.82	.78	.76	.81	.78	.76	.81	.78	.76	.75														
10.0	.81	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.74	.79	.76	.74	.73														



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz			UTHDi:0.20% ITHDi:19.58% KDisp:0.9510			Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D			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	.141	.080	.025	.134	.076	.024	.122	.070	.022	.110	.064	.020	.100	.058	.019		
2.0	.131	.072	.022	.125	.069	.021	.115	.064	.020	.106	.059	.019	.097	.055	.017		
3.0	.122	.065	.019	.117	.063	.019	.109	.059	.018	.101	.055	.017	.093	.052	.016		
4.0	.114	.059	.017	.110	.058	.017	.103	.055	.016	.096	.052	.016	.090	.049	.015		
5.0	.107	.055	.016	.104	.053	.016	.098	.051	.015	.092	.049	.014	.087	.046	.014		
6.0	.101	.051	.015	.098	.050	.014	.093	.048	.014	.088	.046	.013	.083	.044	.013		
7.0	.096	.047	.013	.093	.047	.013	.089	.045	.013	.085	.043	.013	.080	.042	.012		
8.0	.091	.045	.013	.089	.044	.012	.085	.042	.012	.081	.041	.012	.078	.040	.012		
9.0	.087	.042	.012	.085	.041	.012	.082	.040	.011	.078	.039	.011	.075	.038	.011		
10.0	.083	.040	.011	.082	.039	.011	.078	.038	.011	.075	.037	.011	.073	.036	.010		

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	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017		
2.0	.151	.133	.117	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014		
3.0	.136	.113	.095	.117	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011		
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009		
5.0	.113	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008		
6.0	.104	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007		
7.0	.097	.068	.047	.083	.059	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006		
8.0	.090	.061	.041	.077	.053	.036	.054	.037	.025	.031	.022	.015	.010	.007	.005		
9.0	.084	.055	.035	.073	.048	.031	.050	.034	.022	.029	.020	.013	.009	.007	.004		
10.0	.079	.050	.031	.068	.044	.027	.047	.031	.019	.028	.018	.012	.009	.006	.004		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm										
NAME: MD10-10-XX-01 2700K RA90 24D					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	14.6	15.3	14.8	15.4	15.6	15.1	15.7	15.3	15.9	16.0
3H	15.4	16.0	15.6	16.2	16.4	15.7	16.3	15.9	16.5	16.7
4H	15.5	16.1	15.8	16.3	16.5	15.8	16.4	16.1	16.6	16.8
6H	15.5	16.0	15.7	16.3	16.5	15.7	16.3	16.0	16.5	16.8
8H	15.4	16.0	15.7	16.2	16.5	15.7	16.2	16.0	16.5	16.7
12H	15.4	15.9	15.7	16.2	16.4	15.6	16.2	15.9	16.4	16.7
4H 2H	14.9	15.5	15.2	15.7	15.9	15.3	15.9	15.6	16.1	16.3
3H	15.8	16.3	16.1	16.6	16.9	16.1	16.6	16.4	16.9	17.1
4H	16.0	16.5	16.3	16.8	17.1	16.2	16.7	16.5	17.0	17.3
6H	15.9	16.3	16.3	16.7	17.0	16.1	16.5	16.5	16.9	17.2
8H	15.9	16.3	16.3	16.6	17.0	16.1	16.5	16.5	16.8	17.2
12H	15.8	16.2	16.2	16.6	16.9	16.0	16.4	16.4	16.7	17.1
8H 4H	16.0	16.4	16.3	16.7	17.1	16.2	16.6	16.5	16.9	17.3
6H	15.9	16.2	16.3	16.6	17.0	16.1	16.4	16.5	16.8	17.2
8H	15.8	16.1	16.3	16.5	17.0	16.0	16.3	16.5	16.7	17.2
12H	15.8	16.0	16.2	16.5	16.9	15.9	16.2	16.4	16.6	17.1
12H 4H	15.9	16.3	16.3	16.6	17.0	16.1	16.5	16.5	16.8	17.2
6H	15.8	16.1	16.3	16.5	17.0	16.0	16.3	16.4	16.7	17.1
8H	15.8	16.0	16.2	16.5	16.9	16.0	16.2	16.4	16.6	17.1
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.9 / - 1.2					+ 1.2 / - 1.3				
1.5H	+ 1.9 / - 1.2					+ 2.3 / - 1.1				
2.0H	+ 0.7 / - 0.6					+ 1.0 / - 0.6				

CIE Pub.117, 900.2 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -0.4)
Area: 0.0013 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

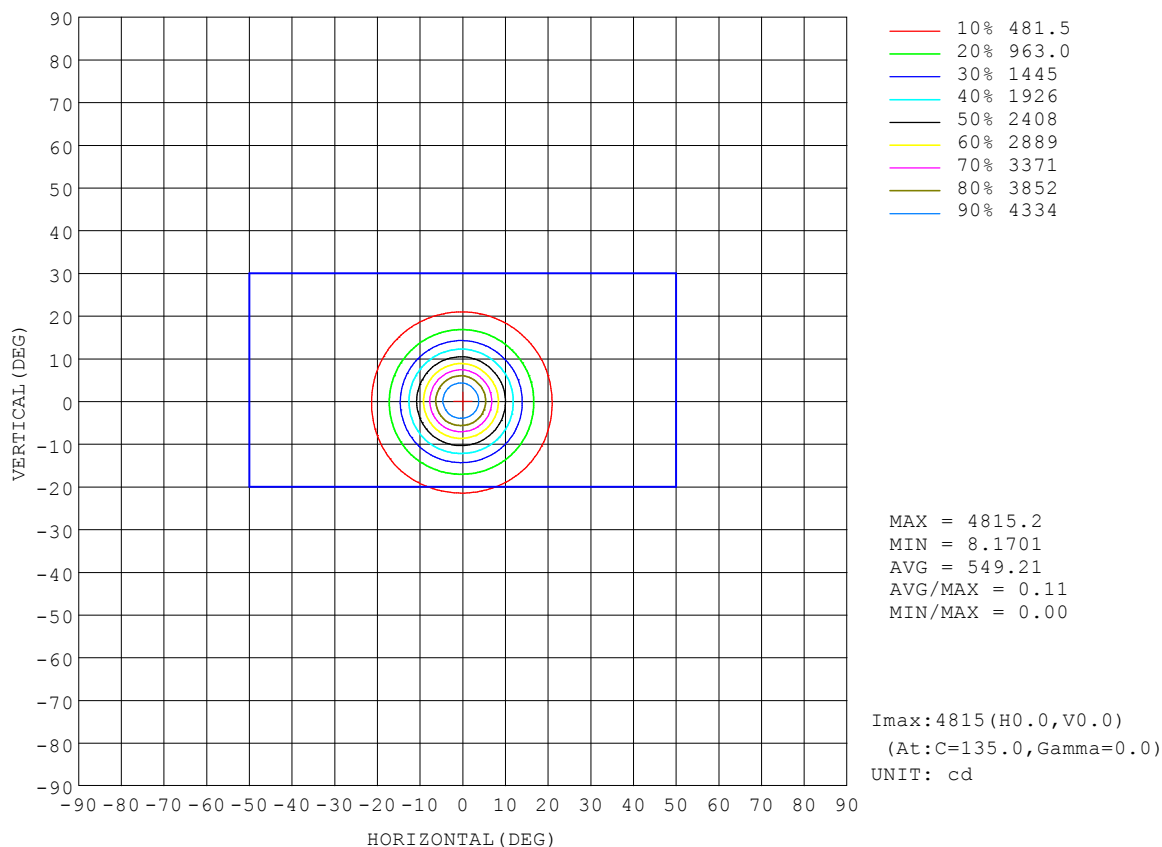
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	104	102	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	105	98
5.00	115	113	112	113	112	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: 2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

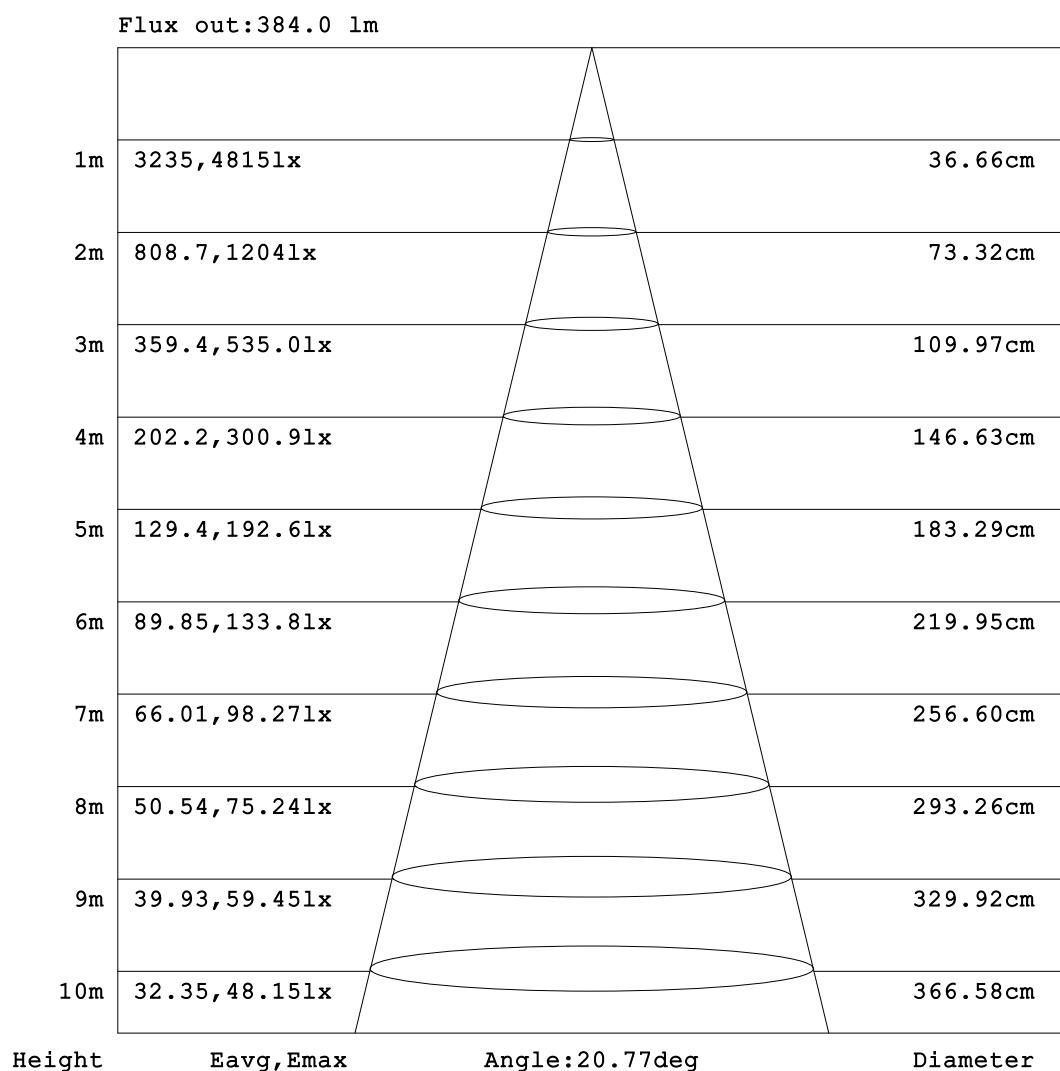


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



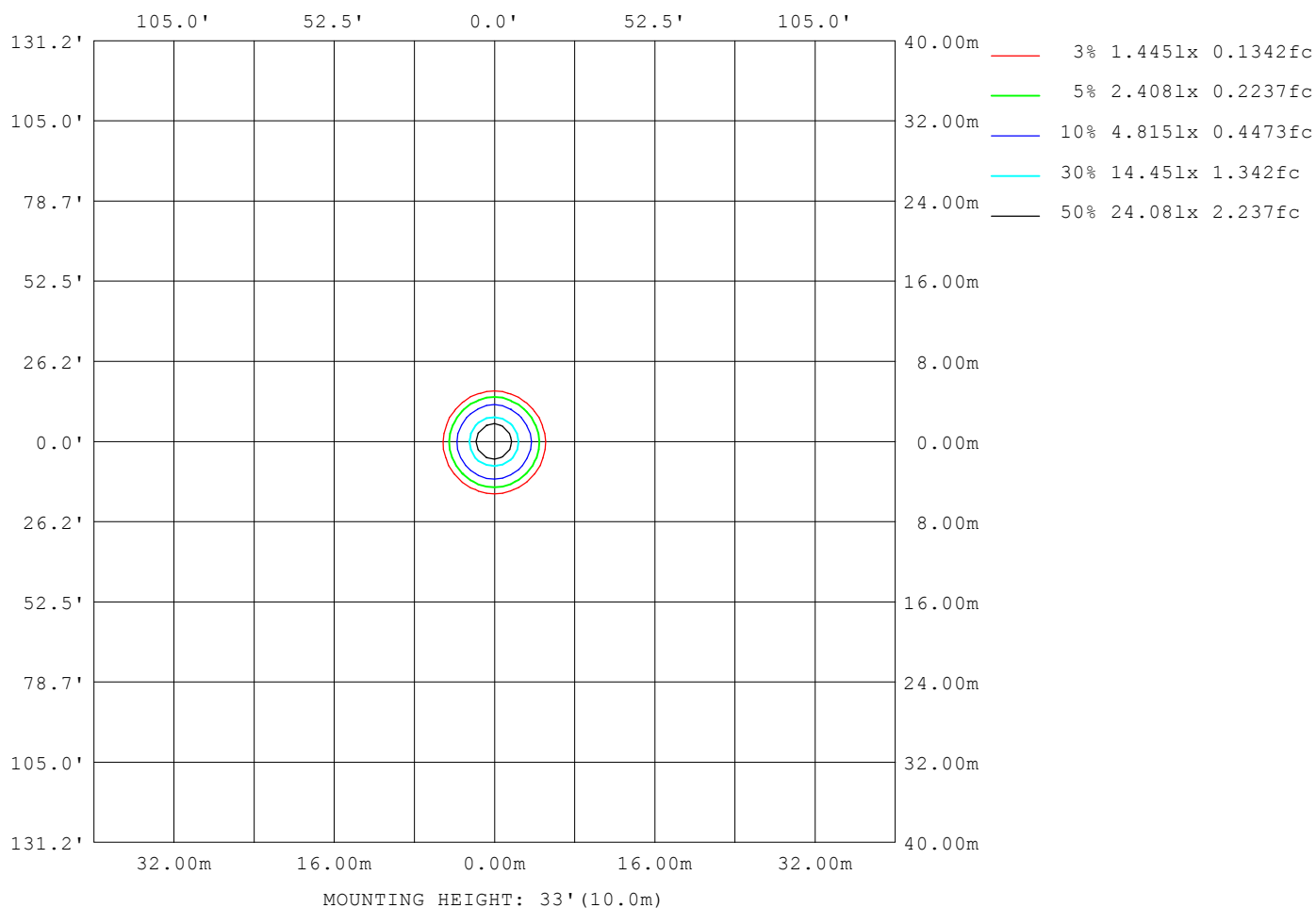
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	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:2023-09-14

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:240.5V I:0.0450A P:10.1W PF:0.9326 Freq:49.99Hz		
UTHDi:0.20% ITHDi:19.58% KDisp:0.9510 Lamp Flux:900.24lx1 lm		
NAME: MD10-10-XX-01 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

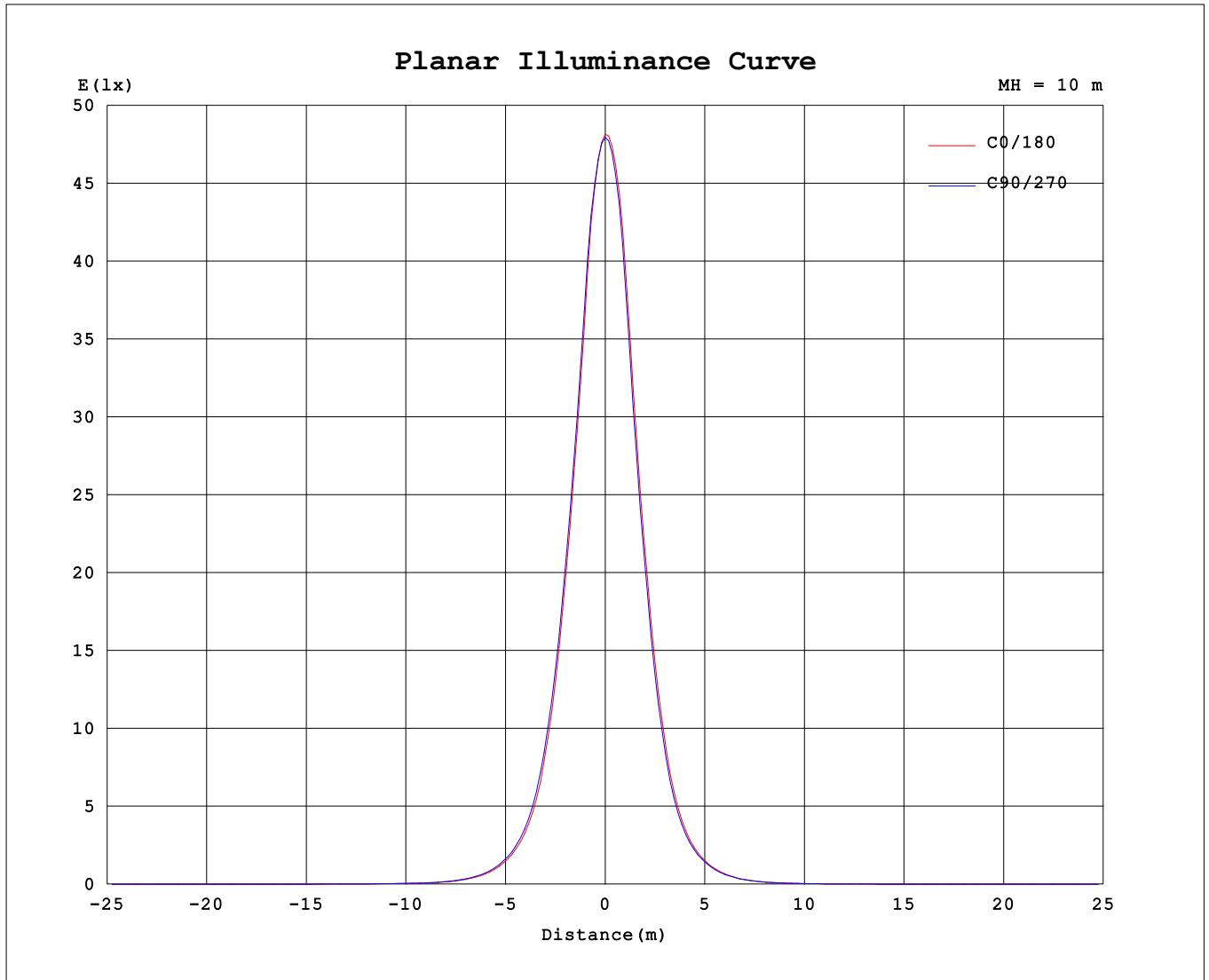
AvgL	cd/m2
L_0~180 (65) av	11683
L_0~180 (75) av	6443
L_0~180 (85) av	1305
L_90~270 (65) av	11488
L_90~270 (75) av	4817
L_90~270 (85) av	127
L_45 (65) av	11678
L_45 (75) av	6099
L_45 (85) av	178

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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: 2023-09-14

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:

```