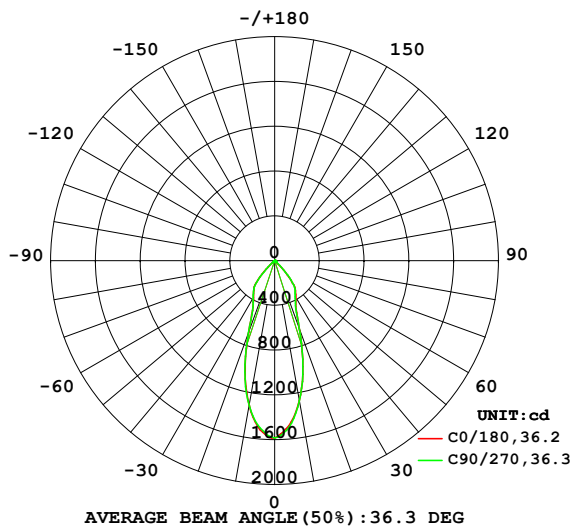


LUMINAIRE PHOTOMETRIC TEST REPORT

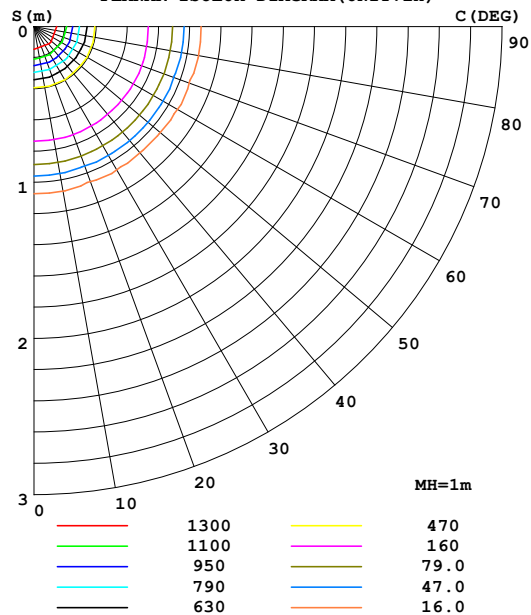
Test:U:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 94.15 lm/W
MODEL		I _{max} (cd)	1586	S/MH(C0/180)	0.61	
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.61	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	935.02	η UP,DN(C0-180)	0.0,49.2	
NOMINAL FLUX(lm)	935.02	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.8	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	240.33	η down(%)	100.0	CIBSE SHR MAX	0.55	

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	1270	1269	1273	1301	1315	1320	1316	1291	0- 10	136.4	136.4	14.6,14.6
20	649.8	646.2	649.7	674.0	683.9	683.5	687.1	664.1	10- 20	272.8	409.2	43.8,43.8
30	378.3	374.5	370.9	377.8	380.9	382.6	383.6	379.6	20- 30	217.8	627.0	67.1,67.1
40	228.0	227.2	233.5	247.7	254.9	255.2	250.7	234.8	30- 40	200.5	827.5	88.5,88.5
50	20.65	20.83	19.62	21.22	21.86	20.54	21.76	21.20	40- 50	81.87	909.3	97.3,97.3
60	9.358	9.474	9.436	9.581	9.576	9.577	9.610	9.457	50- 60	12.75	922.1	98.6,98.6
70	4.678	4.843	4.781	4.677	4.535	4.547	4.755	4.785	60- 70	6.334	928.4	99.3,99.3
80	3.780	4.125	4.214	4.225	4.228	3.840	3.116	3.240	70- 80	5.325	933.7	99.9,99.9
90	0.0205	0.0122	0.0174	0.0103	0.0167	0.0154	0.0158	0.0132	80- 90	1.271	935.0	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): 890.13 lm

%lum = 95.2%

%lamp = 95.2%

Conical surface Flux(130deg): 925.8 lm

%lum = 99.0%

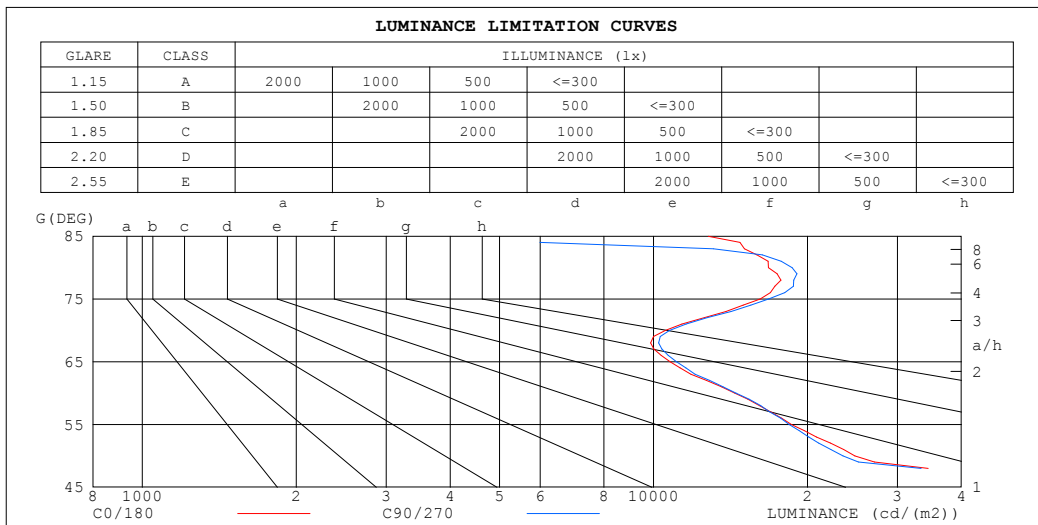
%lamp = 99.0%

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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	12802	512
80	16783	18659
75	16171	16778
70	10545	10747
65	10776	11096
60	14430	14510
55	18626	18415
50	24773	23464
45	94576	98004

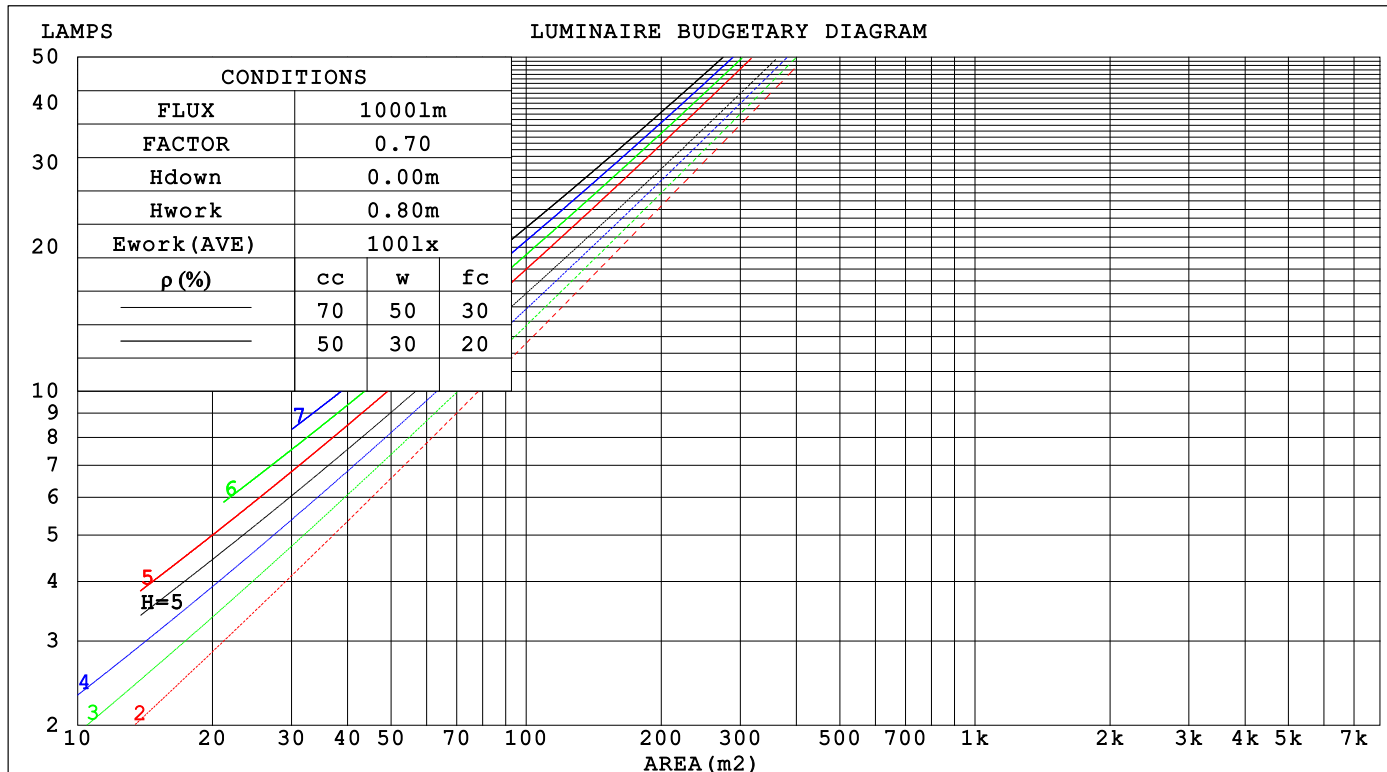
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-09-14

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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K 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															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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93														
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87														
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.85	.89	.86	.83	.87	.84	.82	.81														
4.0	.90	.84	.80	.88	.83	.79	.86	.82	.78	.84	.81	.78	.82	.79	.77	.75														
5.0	.84	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.72	.78	.75	.72	.70														
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66														
7.0	.74	.68	.64	.74	.68	.64	.73	.67	.64	.71	.67	.63	.70	.66	.63	.62														
8.0	.70	.64	.60	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.59	.58														
9.0	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.63	.59	.56	.55														
10.0	.63	.58	.54	.63	.57	.54	.62	.57	.54	.61	.57	.53	.61	.56	.53	.52														



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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K 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	.181	.103	.033	.174	.099	.032	.162	.093	.030	.150	.087	.028	.139	.081	.026		
2.0	.173	.095	.029	.167	.092	.028	.157	.087	.027	.147	.082	.026	.138	.078	.025		
3.0	.164	.087	.026	.159	.085	.026	.150	.081	.025	.142	.078	.024	.134	.074	.023		
4.0	.156	.081	.024	.152	.079	.023	.144	.076	.023	.137	.073	.022	.130	.071	.021		
5.0	.148	.076	.022	.145	.074	.022	.138	.072	.021	.131	.069	.021	.125	.067	.020		
6.0	.141	.071	.020	.138	.070	.020	.132	.068	.020	.126	.066	.019	.121	.064	.019		
7.0	.134	.066	.019	.132	.066	.019	.126	.064	.018	.121	.062	.018	.117	.061	.018		
8.0	.128	.063	.018	.126	.062	.018	.121	.061	.017	.117	.059	.017	.113	.058	.017		
9.0	.123	.059	.017	.121	.059	.016	.116	.057	.016	.112	.056	.016	.109	.055	.016		
10.0	.118	.056	.016	.116	.056	.016	.112	.055	.015	.108	.054	.015	.105	.053	.015		

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	.171	.157	.145	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010		
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009		
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.036	.043	.031	.022	.014	.010	.007		
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006		
7.0	.111	.070	.042	.096	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005		
8.0	.105	.064	.036	.091	.056	.031	.063	.039	.022	.036	.023	.013	.012	.008	.004		
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004		
10.0	.095	.055	.027	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003		

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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz UTHDi:0.26% ITHDi:19.76% KDisp:0.9487Lamp Flux:935.02x1 lm										
NAME: MD10-10-XX-02 4000K 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	24.2	25.1	24.4	25.3	25.5	24.2	25.2	24.4	25.3	25.5
3H	24.1	25.0	24.3	25.2	25.4	24.1	25.0	24.3	25.2	25.4
4H	24.1	24.9	24.3	25.1	25.3	24.1	24.9	24.4	25.1	25.4
6H	24.1	24.9	24.4	25.1	25.3	24.1	24.9	24.4	25.1	25.4
8H	24.1	24.8	24.4	25.1	25.3	24.1	24.9	24.4	25.1	25.4
12H	24.0	24.8	24.4	25.0	25.3	24.1	24.8	24.4	25.1	25.3
4H 2H	24.0	24.8	24.2	25.0	25.2	24.0	24.8	24.3	25.0	25.3
3H	23.9	24.6	24.2	24.9	25.1	23.9	24.6	24.2	24.9	25.1
4H	23.9	24.6	24.3	24.9	25.2	23.9	24.6	24.3	24.9	25.2
6H	24.0	24.6	24.4	24.9	25.2	24.0	24.6	24.4	24.9	25.3
8H	24.0	24.5	24.4	24.9	25.3	24.1	24.6	24.5	24.9	25.3
12H	24.0	24.5	24.4	24.9	25.3	24.0	24.5	24.4	24.9	25.3
8H 4H	23.8	24.4	24.2	24.7	25.1	23.9	24.4	24.3	24.8	25.1
6H	24.0	24.4	24.4	24.8	25.2	24.0	24.5	24.5	24.9	25.3
8H	24.0	24.4	24.5	24.8	25.3	24.1	24.5	24.5	24.9	25.3
12H	24.1	24.4	24.5	24.8	25.3	24.1	24.4	24.5	24.8	25.3
12H 4H	23.8	24.3	24.2	24.7	25.1	23.8	24.3	24.2	24.7	25.1
6H	24.0	24.4	24.4	24.8	25.2	24.0	24.4	24.5	24.8	25.3
8H	24.0	24.4	24.5	24.8	25.3	24.1	24.4	24.6	24.9	25.3
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.4 / - 6.0					+ 2.3 / - 5.9				
1.5H	+ 4.7 / - 5.8					+ 4.6 / - 5.8				
2.0H	+ 5.3 / - 1.6					+ 5.4 / - 1.6				

CIE Pub.117, 935.0 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -0.2$)
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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

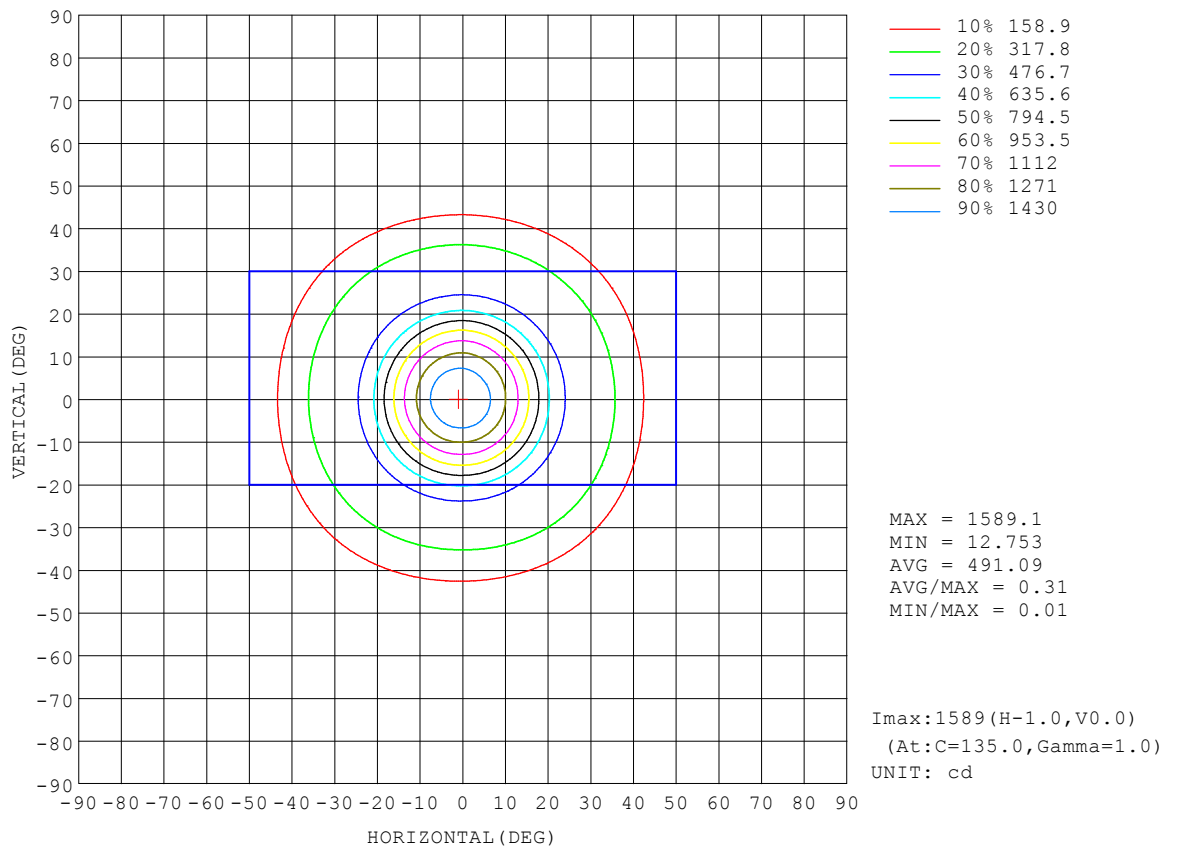
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	82	92	86	82	90	85	81	77
1.00	97	91	87	96	91	87	95	91	87	82
1.25	102	96	92	101	96	92	99	94	91	87
1.50	105	99	96	103	99	95	101	97	94	90
2.00	108	103	100	106	102	99	103	100	98	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	107	105	104	97
5.00	115	112	110	112	110	108	108	107	105	98
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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

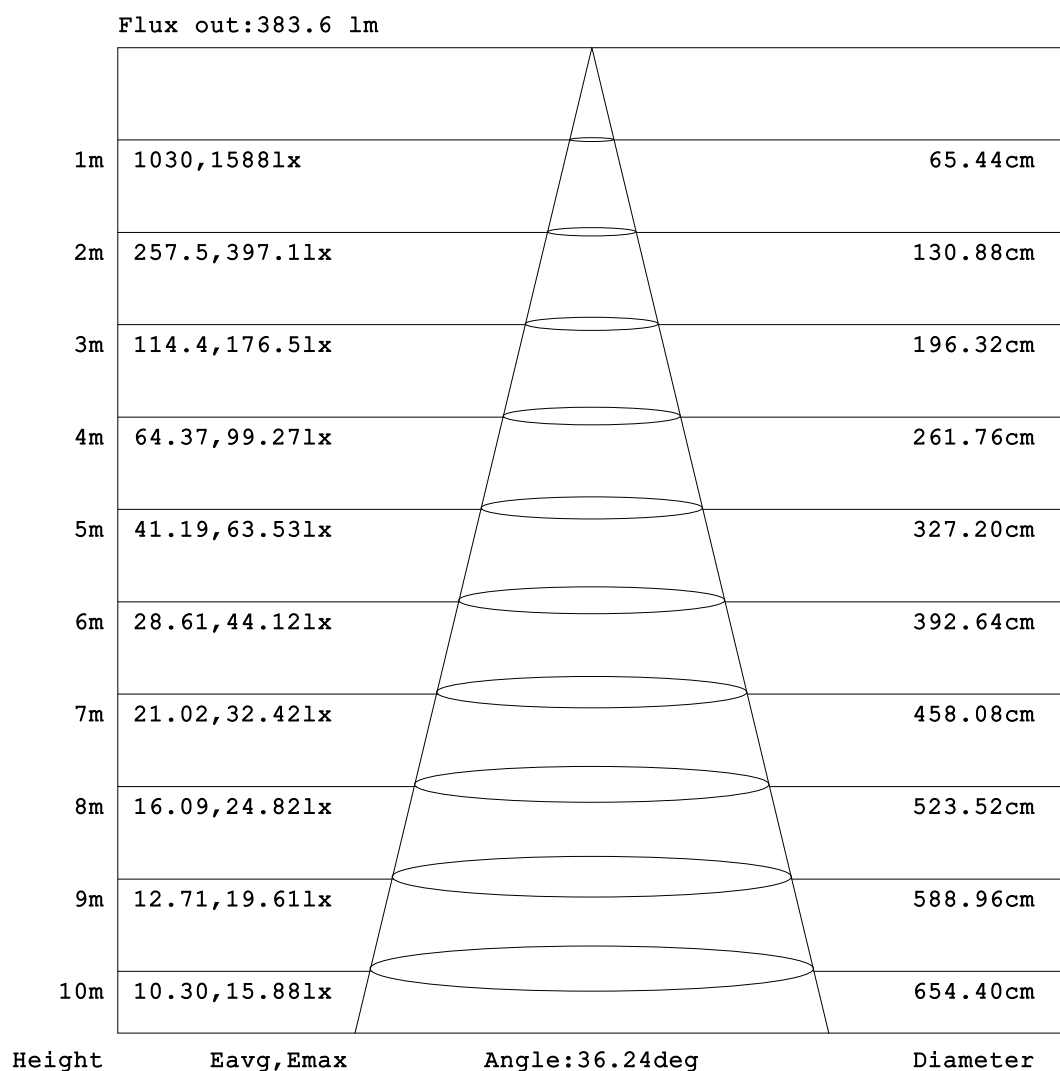


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-09-14

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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:



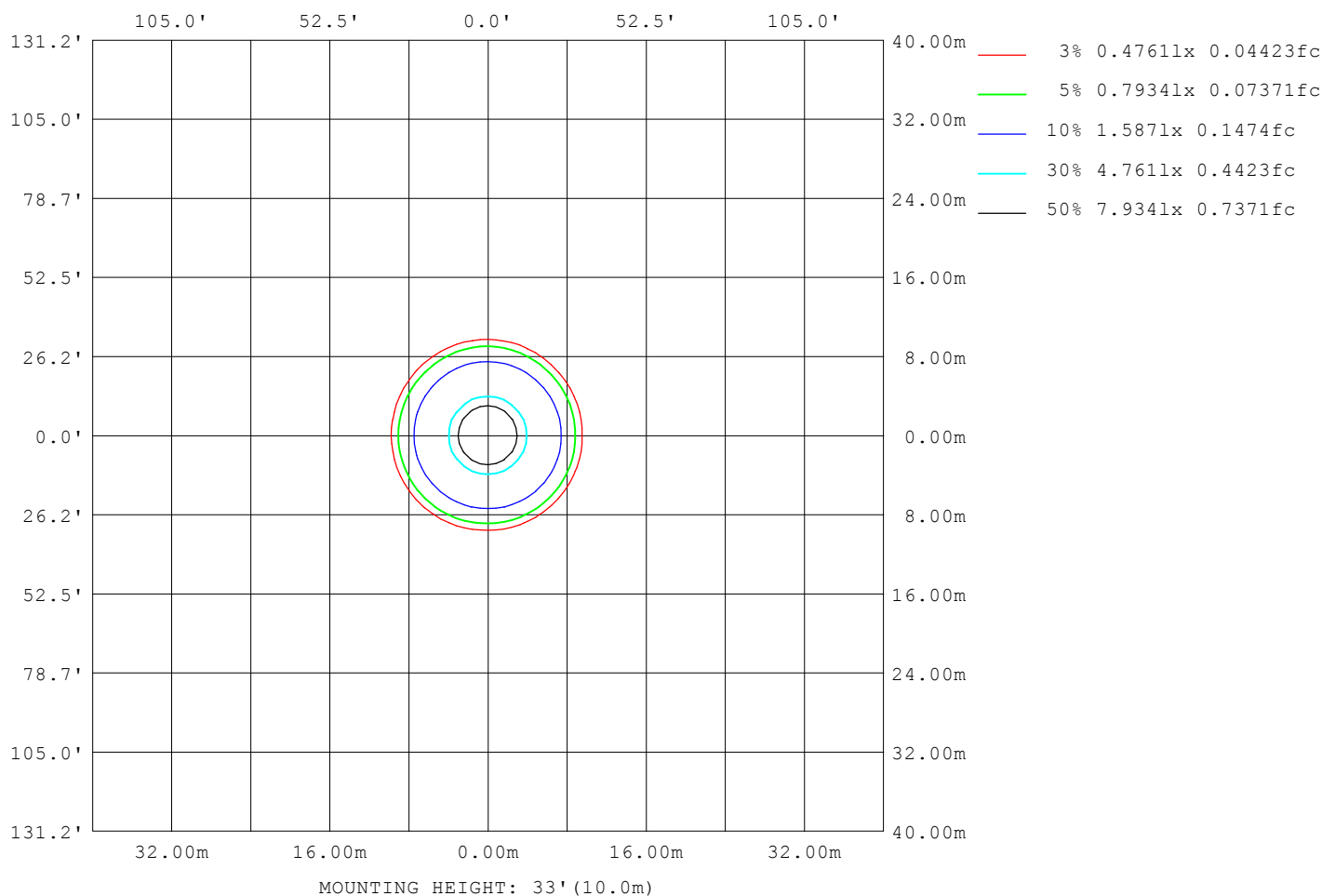
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K 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:2023-09-14

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:240.4V I:0.0444A P:9.9W PF:0.9305 Freq:49.99Hz		
UTHDi:0.26% ITHDi:19.76% KDisp:0.9487 Lamp Flux:935.02x1 lm		
NAME: MD10-10-XX-02 4000K RA90 38D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.:	Shielding Angle:

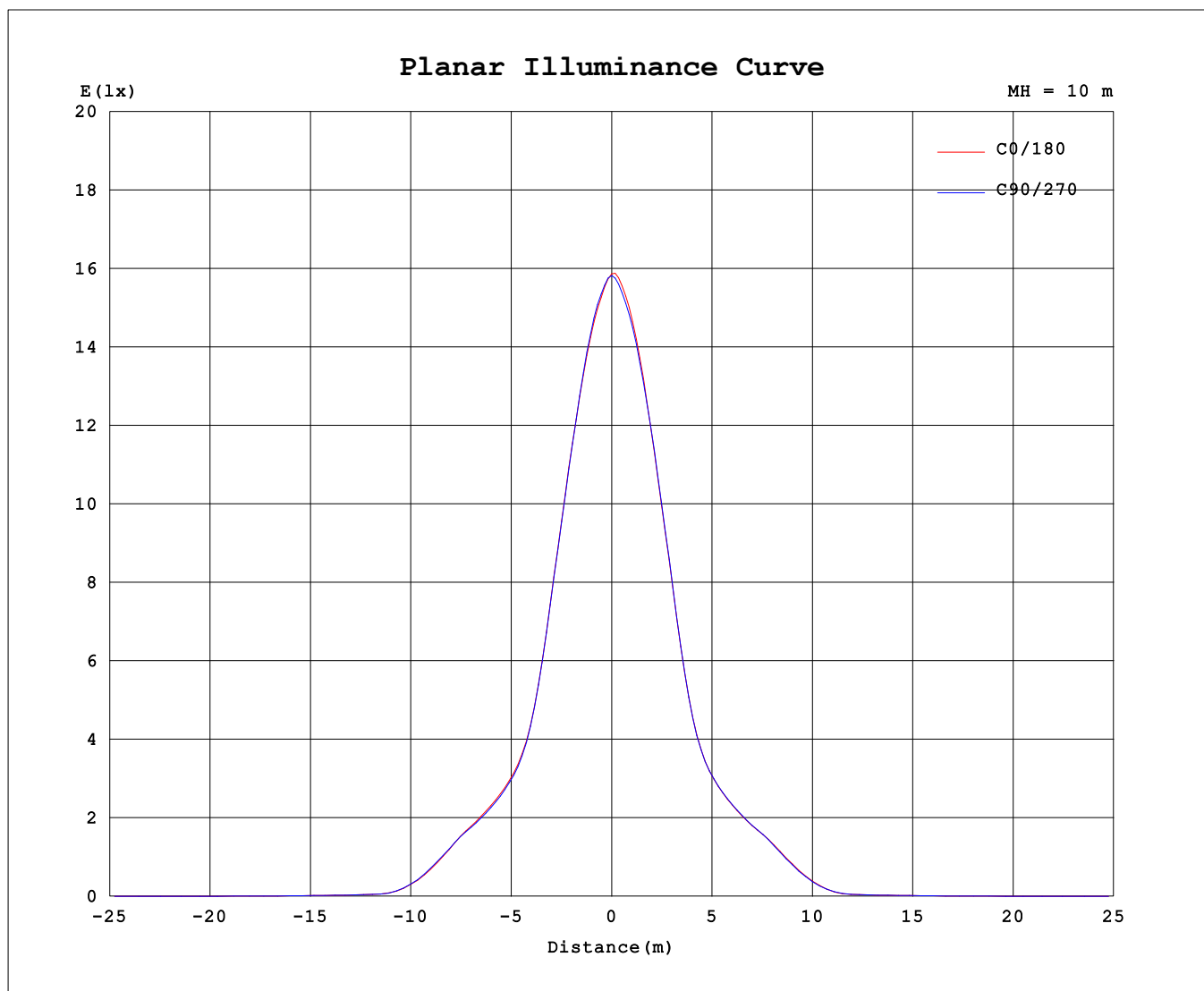
AvgL	cd/m2
L_0~180 (65) av	10940
L_0~180 (75) av	16250
L_0~180 (85) av	14100
L_90~270 (65) av	11231
L_90~270 (75) av	16218
L_90~270 (85) av	361
L_45 (65) av	11085
L_45 (75) av	16602
L_45 (85) av	2239

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:

```