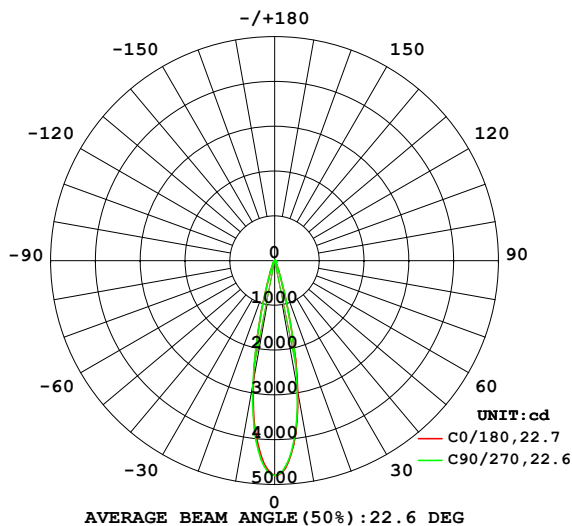


LUMINAIRE PHOTOMETRIC TEST REPORT

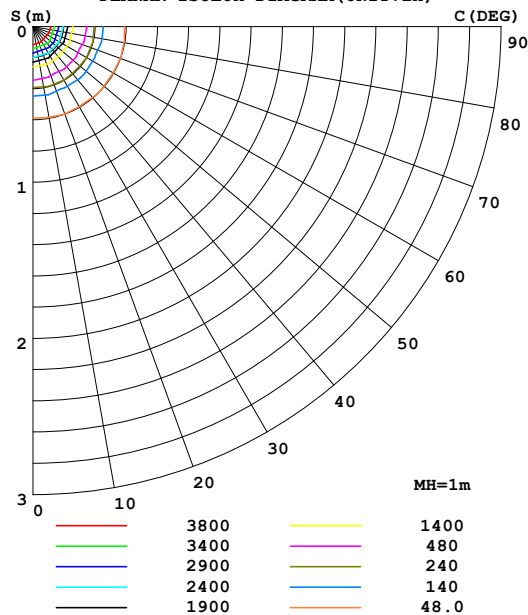
Test:U:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 83.79 lm/W
MODEL		I _{max} (cd)	4794	S/MH (C0/180)	0.36	
NOMINAL POWER(W)	10	LOR (%)	100.0	S/MH (C90/270)	0.36	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	828.97	η UP,DN (C0-180)	0.0,51.2	
NOMINAL FLUX(lm)	828.97	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,48.8	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	240.22	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: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

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	2986	2963	2911	2827	2755	2750	2823	2897	0- 10	362.1	362.1	43.7,43.7
20	348.1	375.0	363.1	352.4	345.0	333.4	318.8	308.2	10- 20	338.4	700.6	84.5,84.5
30	75.58	81.03	76.77	74.77	75.13	75.76	72.34	70.61	20- 30	71.81	772.4	93.2,93.2
40	28.43	30.10	30.59	30.81	30.67	29.79	29.02	28.18	30- 40	29.22	801.6	96.7,96.7
50	12.59	13.22	13.88	14.53	14.09	13.66	13.36	12.76	40- 50	15.93	817.5	98.6,98.6
60	3.847	3.985	4.173	4.332	4.178	4.120	4.125	3.911	50- 60	7.276	824.8	99.5,99.5
70	1.726	1.793	1.866	1.853	1.844	1.828	1.802	1.720	60- 70	2.710	827.5	99.8,99.8
80	0.6736	0.6505	0.6237	0.6622	0.7339	0.6520	0.5475	0.5668	70- 80	1.247	828.8	100,100
90	0.0362	0.0238	0.0379	0.0264	0.0263	0.0247	0.0267	0.0190	80- 90	0.2127	829.0	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): 810.73 lm

%lum = 97.8%

%lamp = 97.8%

Conical surface Flux(120deg): 824.8 lm

%lum = 99.5%

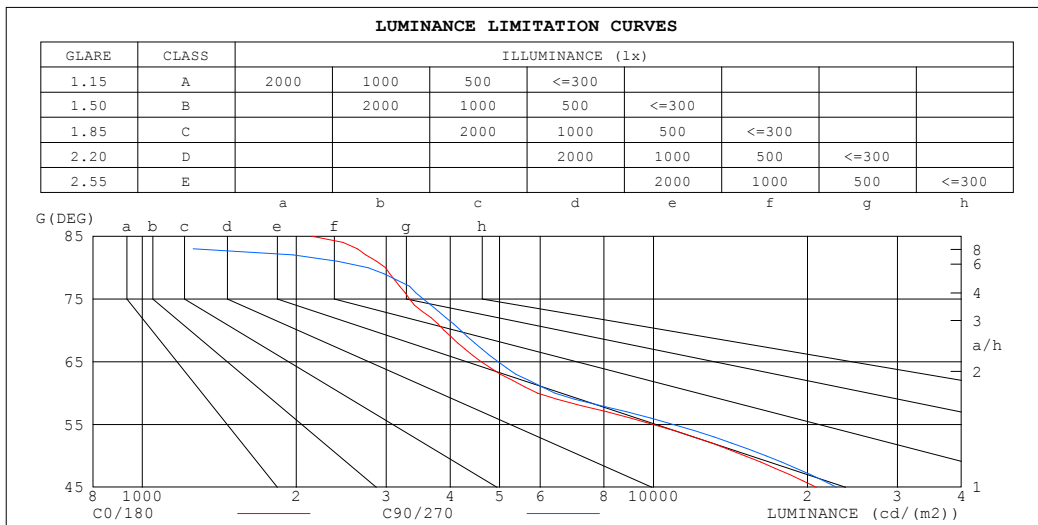
%lamp = 99.5%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



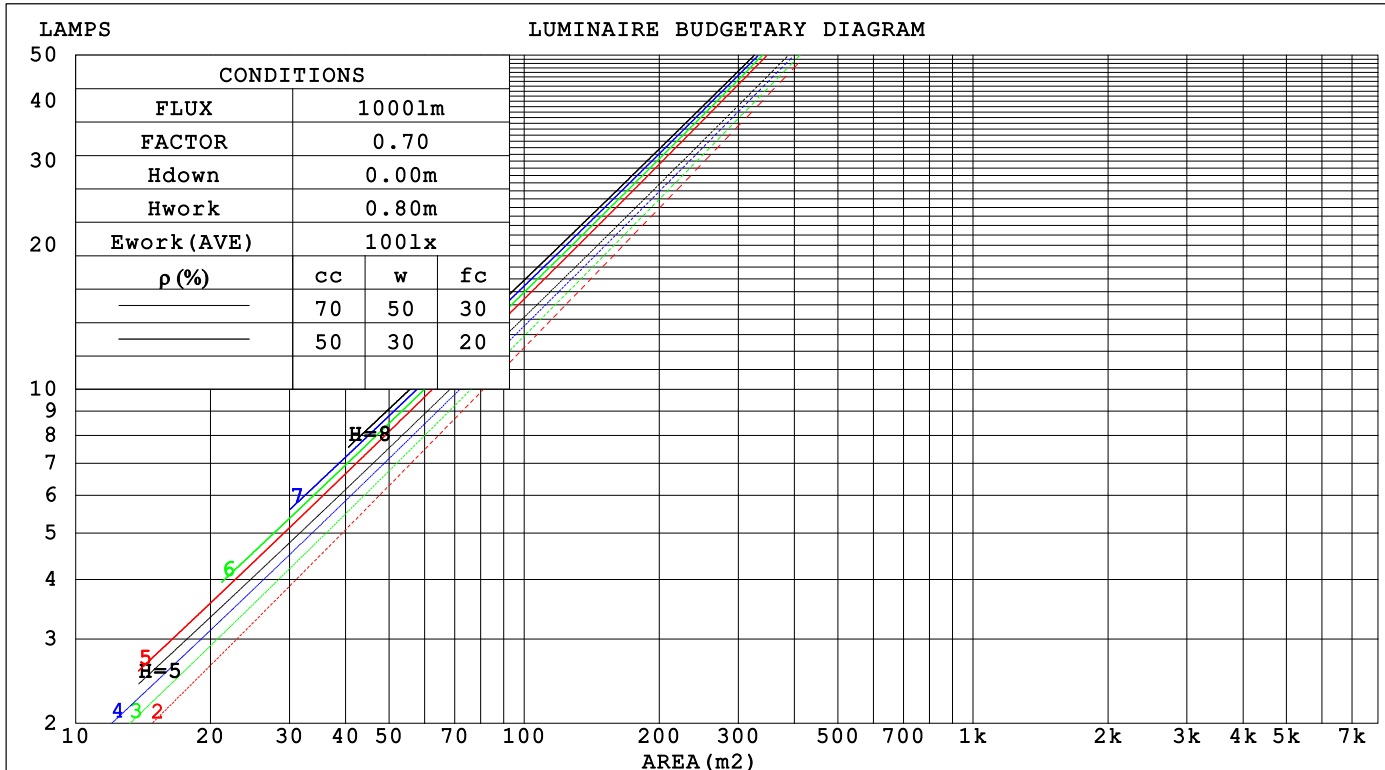
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496		
Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	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: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz			UTHDi:0.18% ITHDi:18.70% KDisp:0.9496			Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D			TYPE:			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.: Norming Lighting			SUR.: 41mm			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	.133	.076	.024	.127	.072	.023	.114	.066	.021	.103	.059	.019	.093	.054	.017		
2.0	.123	.068	.021	.118	.065	.020	.108	.060	.019	.098	.055	.017	.090	.051	.016		
3.0	.114	.061	.018	.110	.059	.018	.101	.055	.017	.094	.051	.016	.086	.048	.015		
4.0	.107	.055	.016	.103	.054	.016	.096	.051	.015	.089	.048	.014	.083	.045	.014		
5.0	.100	.051	.015	.097	.050	.014	.091	.047	.014	.085	.045	.013	.080	.043	.013		
6.0	.094	.047	.014	.092	.046	.013	.086	.044	.013	.081	.042	.012	.077	.041	.012		
7.0	.089	.044	.012	.087	.043	.012	.082	.042	.012	.078	.040	.012	.074	.039	.011		
8.0	.085	.041	.012	.083	.041	.011	.079	.039	.011	.075	.038	.011	.071	.037	.011		
9.0	.081	.039	.011	.079	.038	.011	.075	.037	.011	.072	.036	.010	.069	.035	.010		
10.0	.077	.037	.010	.075	.036	.010	.072	.035	.010	.069	.034	.010	.067	.034	.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	.168	.158	.148	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017		
2.0	.150	.133	.118	.128	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014		
3.0	.135	.113	.096	.115	.098	.083	.079	.068	.059	.046	.040	.035	.015	.013	.011		
4.0	.122	.098	.080	.104	.085	.069	.072	.059	.049	.042	.034	.029	.013	.011	.009		
5.0	.111	.085	.067	.095	.074	.058	.066	.052	.041	.038	.030	.024	.012	.010	.008		
6.0	.102	.075	.056	.088	.065	.049	.060	.046	.035	.035	.027	.021	.011	.009	.007		
7.0	.094	.067	.048	.081	.058	.042	.056	.041	.030	.032	.024	.018	.010	.008	.006		
8.0	.087	.060	.042	.075	.052	.036	.052	.037	.026	.030	.022	.015	.010	.007	.005		
9.0	.081	.054	.036	.070	.047	.032	.049	.033	.022	.028	.020	.013	.009	.006	.004		
10.0	.076	.050	.032	.066	.043	.028	.046	.030	.020	.027	.018	.012	.009	.006	.004		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm										
NAME: MD10-10-XX-04 2700K RA90 24D					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Norming Lighting					SUR.: 41mm			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	13.2	13.8	13.4	13.9	14.1	13.4	14.0	13.6	14.2	14.3
3H	13.2	13.8	13.5	14.0	14.2	13.5	14.1	13.7	14.3	14.4
4H	13.3	13.8	13.5	14.0	14.2	13.5	14.1	13.8	14.3	14.5
6H	13.3	13.8	13.5	14.0	14.3	13.5	14.0	13.8	14.3	14.5
8H	13.3	13.8	13.5	14.0	14.3	13.5	14.0	13.8	14.2	14.5
12H	13.2	13.7	13.5	14.0	14.2	13.4	13.9	13.8	14.2	14.5
4H 2H	13.1	13.7	13.4	13.9	14.1	13.4	13.9	13.6	14.1	14.3
3H	13.3	13.8	13.6	14.0	14.3	13.5	14.0	13.8	14.3	14.5
4H	13.3	13.8	13.7	14.1	14.4	13.6	14.0	13.9	14.3	14.6
6H	13.3	13.7	13.7	14.1	14.4	13.6	14.0	13.9	14.3	14.6
8H	13.3	13.7	13.7	14.1	14.4	13.6	13.9	13.9	14.3	14.6
12H	13.3	13.7	13.7	14.0	14.4	13.5	13.8	13.9	14.2	14.6
8H 4H	13.2	13.6	13.6	14.0	14.3	13.5	13.9	13.9	14.2	14.6
6H	13.3	13.6	13.7	14.0	14.4	13.5	13.8	14.0	14.2	14.6
8H	13.3	13.6	13.8	14.0	14.4	13.5	13.8	14.0	14.2	14.6
12H	13.3	13.5	13.8	14.0	14.4	13.4	13.7	13.9	14.1	14.6
12H 4H	13.2	13.5	13.6	13.9	14.3	13.4	13.8	13.8	14.1	14.5
6H	13.3	13.5	13.7	14.0	14.4	13.5	13.8	13.9	14.2	14.6
8H	13.3	13.5	13.7	14.0	14.4	13.5	13.7	13.9	14.1	14.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.5 / - 2.6					+ 1.5 / - 2.6				
1.5H	+ 1.9 / - 2.0					+ 2.0 / - 2.1				
2.0H	+ 3.1 / - 3.0					+ 3.3 / - 3.2				

CIE Pub.117, 829.0 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -0.7)
Area: 0.0013 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

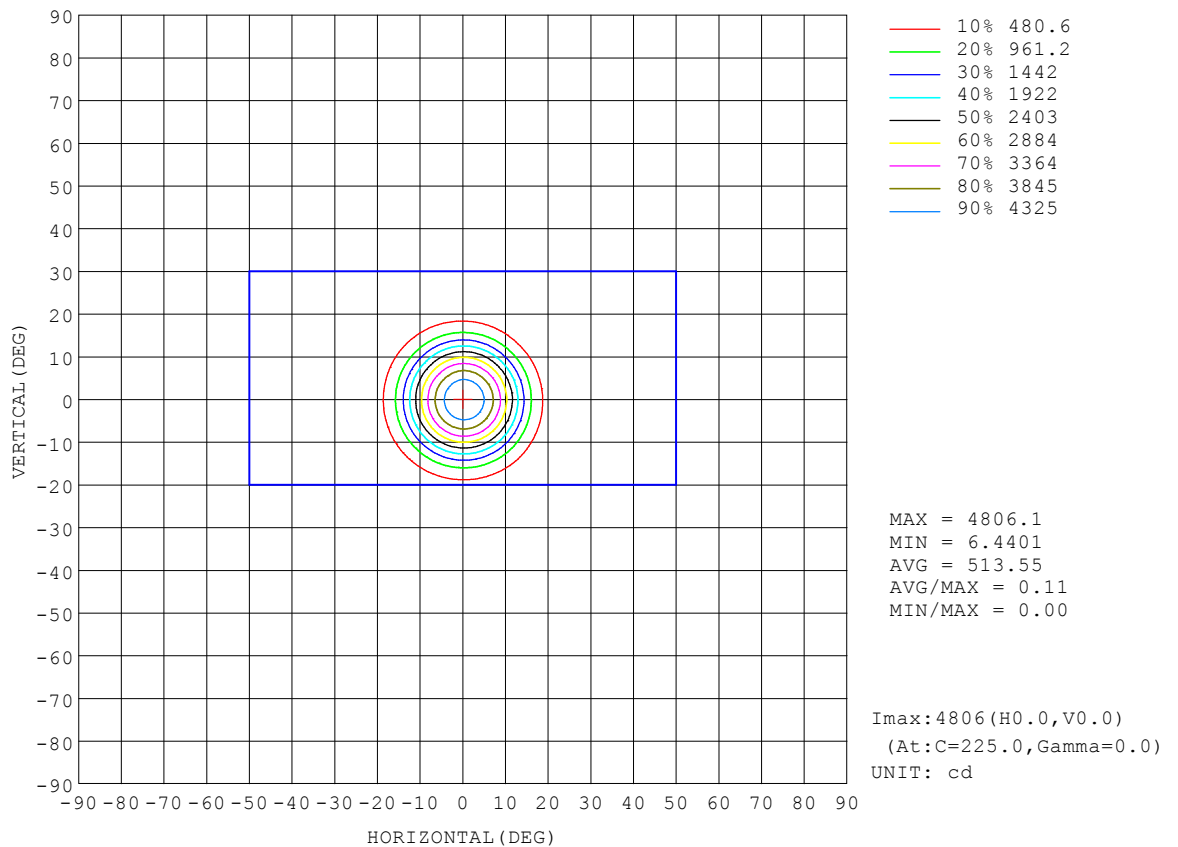
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	88
1.25	104	100	96	103	99	96	101	98	95	91
1.50	107	103	99	106	102	99	104	100	98	94
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	104	106	104	102	96
3.00	112	109	107	111	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: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

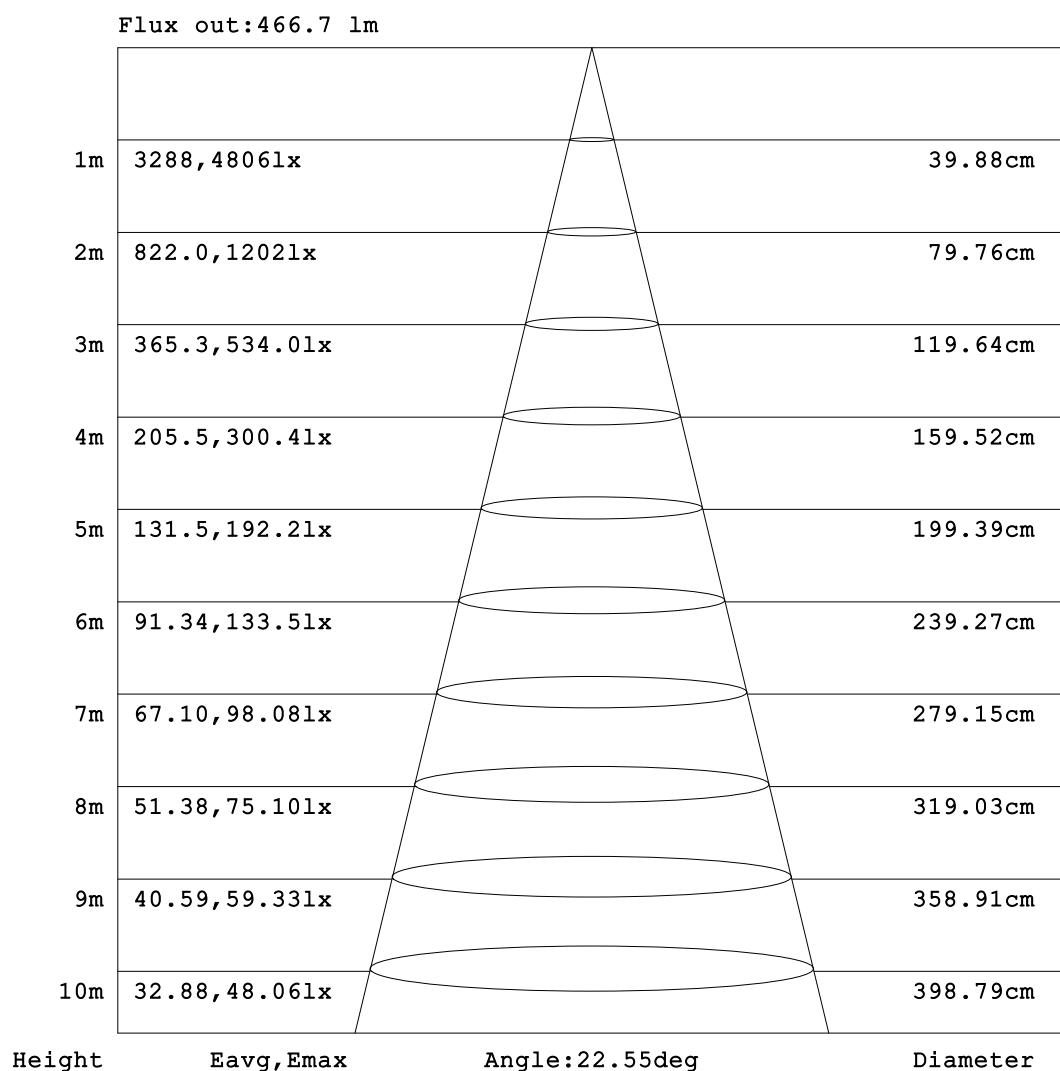


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



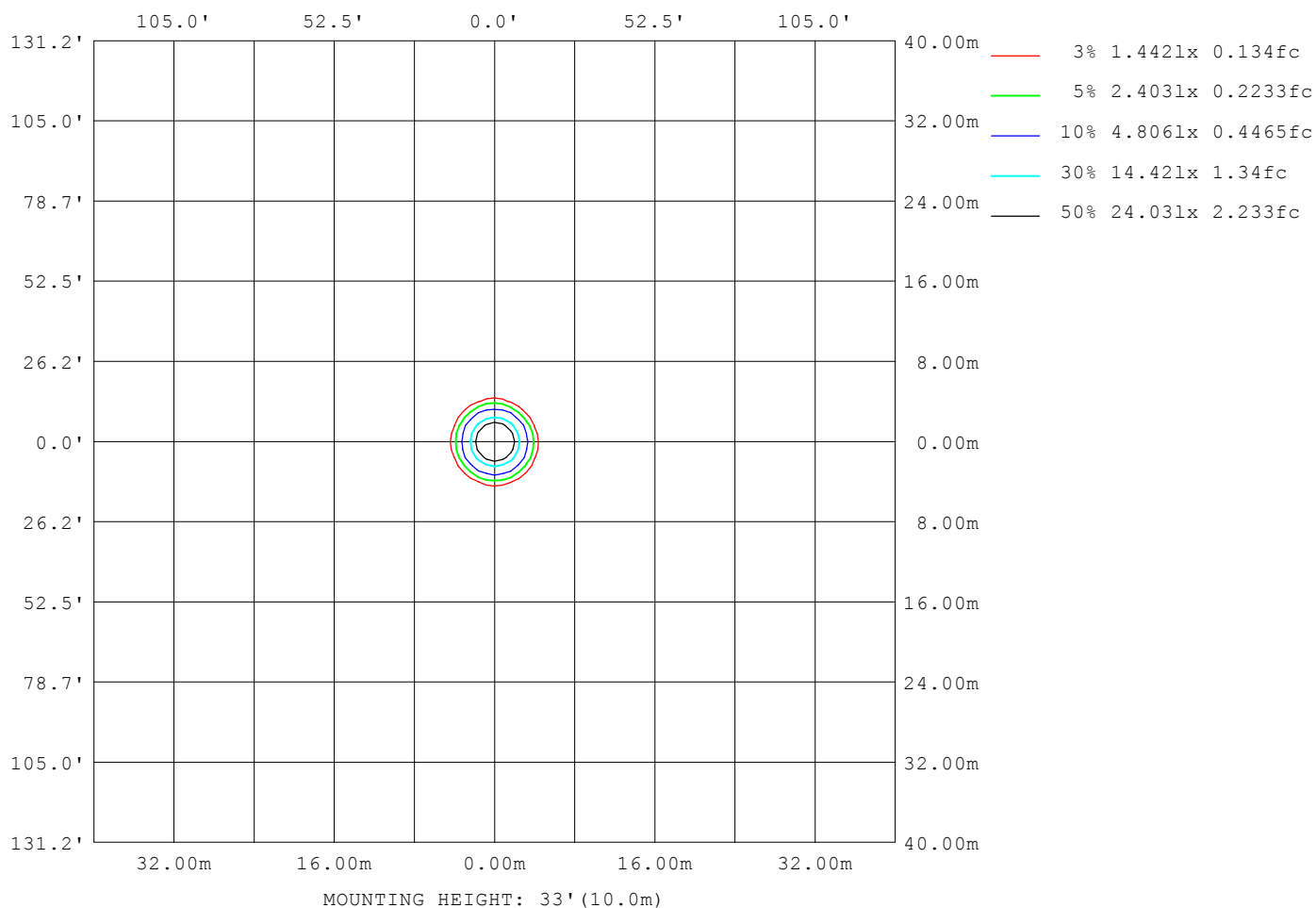
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.2V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz UTHDi:0.18% ITHDi:18.70% KDisp:0.9496 Lamp Flux:828.97x1 lm		
NAME: MD10-10-XX-04 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

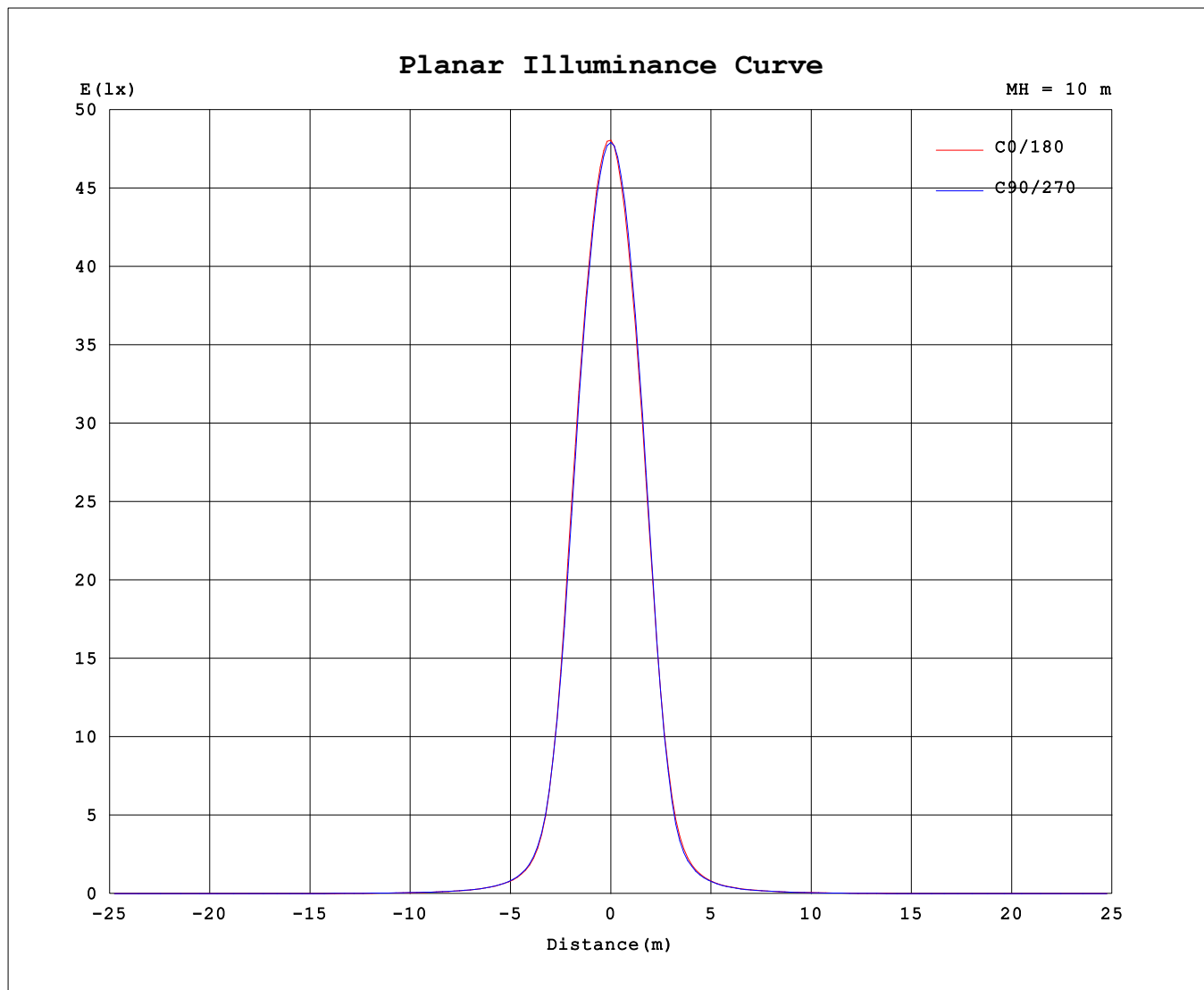
AvgL	cd/m2
L_0~180 (65) av	4754
L_0~180 (75) av	3467
L_0~180 (85) av	2195
L_90~270 (65) av	4908
L_90~270 (75) av	3503
L_90~270 (85) av	363
L_45 (65) av	4817
L_45 (75) av	3410
L_45 (85) av	237

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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: MEDIUM
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2023-12-21

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:

```

Photometric Data Table [cd]

G/C	0.0	45.0	90.0	135.0	180.0	225.0	270.0	315.0
0.0	4794	4794	4794	4794	4794	4794	4794	4794
3.0	4642	4632	4612	4582	4538	4550	4599	4620
6.0	4117	4111	4078	4017	3950	3950	4034	4077
9.0	3314	3298	3257	3173	3094	3091	3172	3239
12.0	2270	2256	2193	2115	2056	2036	2092	2155
15.0	1240	1264	1228	1171	1136	1100	1121	1143
18.0	577.0	608.5	590.3	565.1	550.8	530.8	516.4	509.4
21.0	279.5	302.0	292.7	285.7	279.8	271.9	259.8	249.8
24.0	163.4	177.1	170.0	167.4	165.2	163.0	156.9	149.4
27.0	107.6	116.1	110.4	108.6	107.7	107.8	103.9	100.1
30.0	75.58	81.03	76.77	74.77	75.13	75.76	72.34	70.61
33.0	54.18	58.17	55.51	54.12	55.07	55.03	52.31	51.07
36.0	40.25	42.80	42.05	41.36	42.01	41.37	39.63	38.69
39.0	30.90	32.69	33.01	33.03	33.11	32.20	31.29	30.43
42.0	24.21	25.55	26.31	26.87	26.45	25.64	25.06	24.24
45.0	19.09	20.08	20.97	21.83	21.26	20.54	20.06	19.31
48.0	15.01	15.77	16.55	17.34	16.81	16.26	15.88	15.22
51.0	11.44	12.03	12.62	13.19	12.81	12.45	12.18	11.59
54.0	8.372	8.754	9.190	9.575	9.275	9.085	8.933	8.462
57.0	5.720	5.951	6.278	6.527	6.232	6.133	6.133	5.783
60.0	3.847	3.985	4.173	4.332	4.178	4.120	4.125	3.911
63.0	2.954	3.067	3.177	3.232	3.138	3.106	3.098	2.942
66.0	2.336	2.436	2.528	2.551	2.503	2.480	2.463	2.331
69.0	1.865	1.938	2.015	2.008	1.994	1.979	1.953	1.857
72.0	1.471	1.521	1.576	1.563	1.567	1.543	1.525	1.455
75.0	1.119	1.140	1.194	1.192	1.214	1.173	1.163	1.085
78.0	0.8403	0.8448	0.8524	0.8820	0.9299	0.8727	0.7762	0.7721
81.0	0.5829	0.5528	0.4900	0.5404	0.6369	0.5358	0.4191	0.4583
84.0	0.3346	0.1767	0.0475	0.1804	0.3544	0.1485	0.0386	0.1007
87.0	0.0481	0.0218	0.0402	0.0242	0.0439	0.0231	0.0357	0.0180
90.0	0.0362	0.0238	0.0379	0.0264	0.0263	0.0247	0.0267	0.0190

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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: