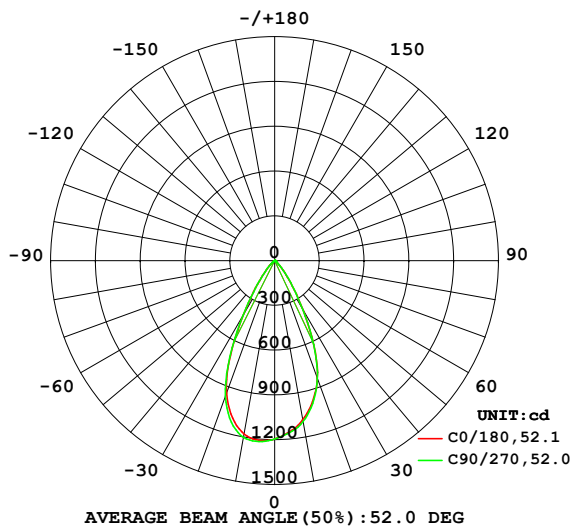


LUMINAIRE PHOTOMETRIC TEST REPORT

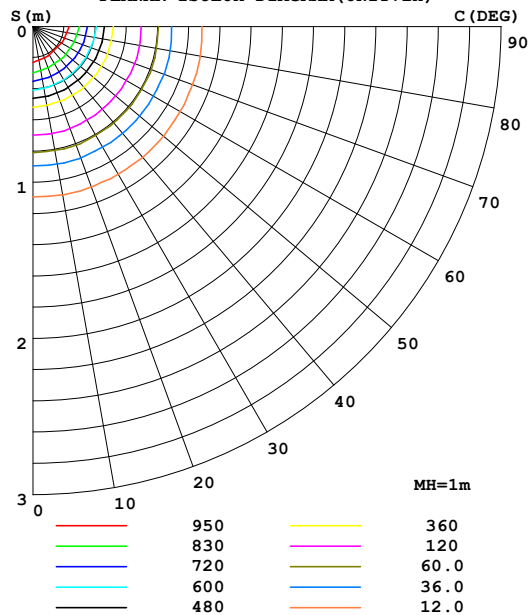
Test:U:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 91.50 lm/W
MODEL		I _{max} (cd)	1217	S/MH(C0/180)	0.80	
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.80	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	906.81	η UP,DN(C0-180)	0.0,48.0	
NOMINAL FLUX(lm)	906.806	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.0	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	240.21	η down (%)	100.0	CIBSE SHR MAX	0.80	

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:2023-12-21

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	1083	1052	1096	1158	1181	1194	1202	1150	0- 10	111.6	111.6	12.3,12.3
20	838.5	800.4	839.2	909.5	945.0	956.5	965.1	902.9	10- 20	289.7	401.3	44.3,44.3
30	381.6	369.6	379.1	404.2	420.8	427.3	426.0	405.6	20- 30	297.2	698.5	77,77
40	108.7	108.2	106.7	112.1	112.8	113.3	112.3	110.9	30- 40	140.8	839.2	92.5,92.5
50	26.77	27.07	25.55	26.24	26.61	27.02	26.14	25.88	40- 50	44.90	884.2	97.5,97.5
60	9.338	9.428	9.489	9.586	9.541	9.580	9.339	9.163	50- 60	14.27	898.4	99.1,99.1
70	3.514	3.583	3.694	3.721	3.670	3.615	3.565	3.443	60- 70	6.009	904.4	99.7,99.7
80	0.7958	0.8210	0.7856	0.8657	0.8337	0.7265	0.6368	0.7150	70- 80	2.168	906.6	100,100
90	0.0301	0.0244	0.0322	0.0258	0.0262	0.0253	0.0286	0.0229	80- 90	0.2067	906.8	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): 868.55 lm

%lum = 95.8%

%lamp = 95.8%

Conical surface Flux(120deg): 898.42 lm

%lum = 99.1%

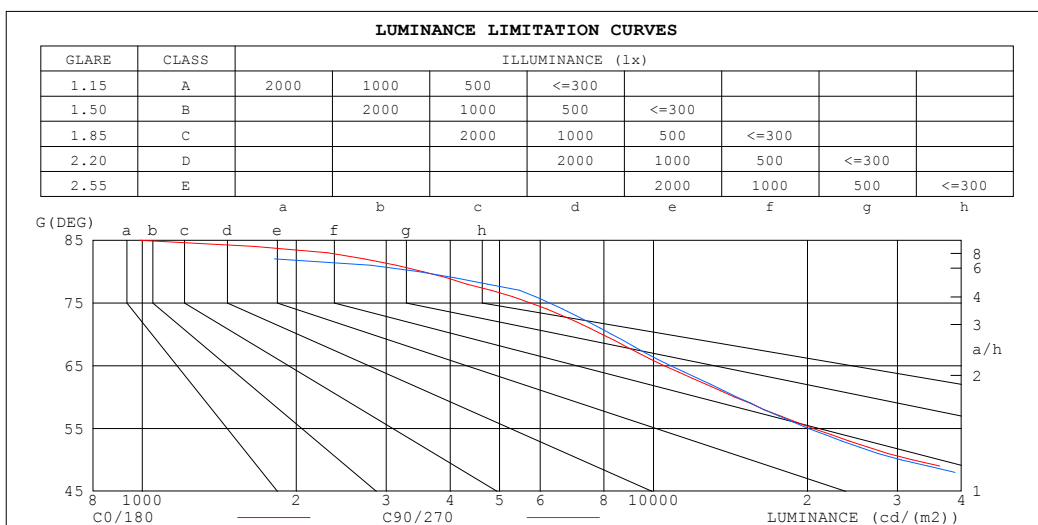
%lamp = 99.1%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



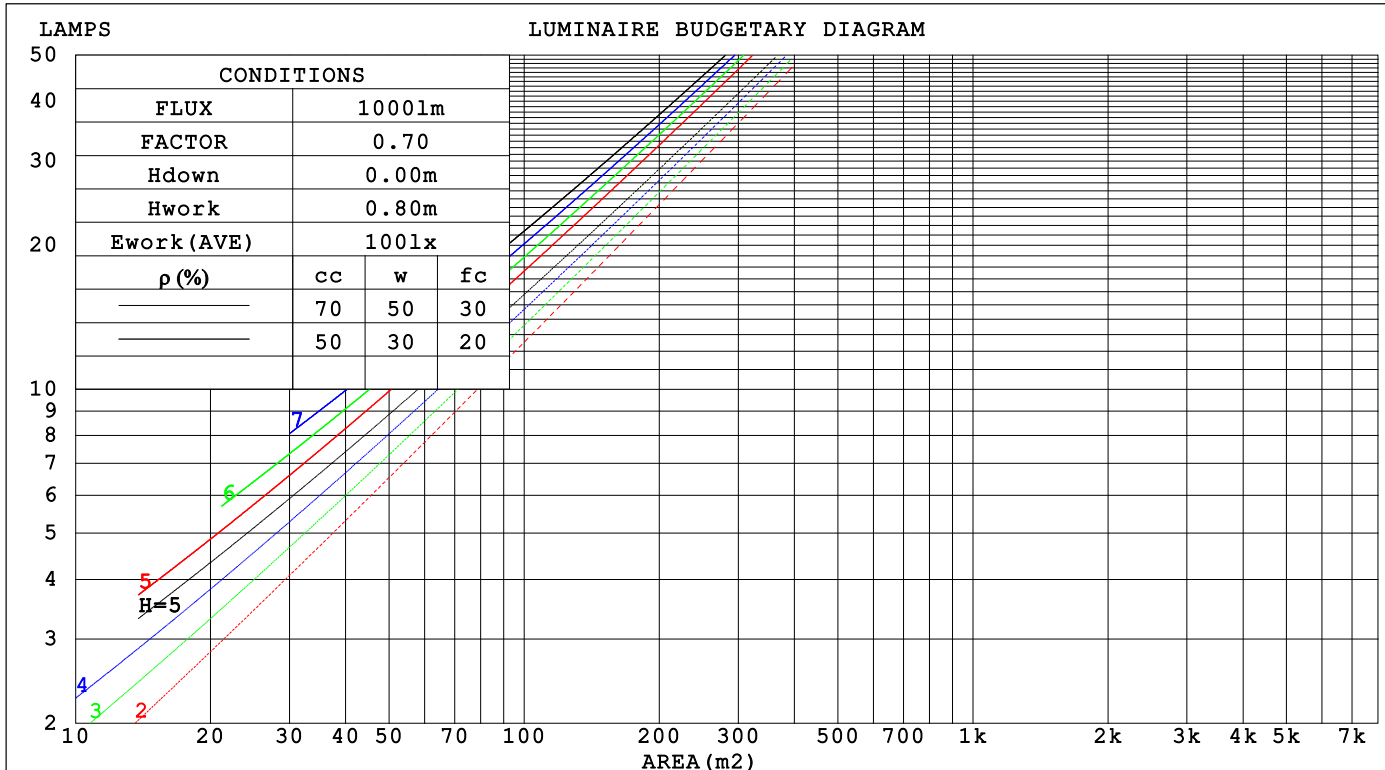
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496		
Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	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: HIGH
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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz			UTHDi:0.17% ITHDi:18.61% KDisp:0.9496			Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D			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	.174	.099	.031	.167	.095	.030	.155	.089	.028	.143	.083	.027	.133	.077	.025		
2.0	.166	.091	.028	.161	.088	.027	.150	.083	.026	.140	.079	.025	.131	.074	.023		
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.074	.023	.128	.071	.022		
4.0	.150	.078	.023	.146	.076	.023	.138	.073	.022	.131	.070	.021	.124	.068	.021		
5.0	.143	.073	.021	.139	.072	.021	.133	.069	.020	.126	.067	.020	.121	.064	.019		
6.0	.136	.068	.020	.133	.067	.019	.127	.065	.019	.122	.063	.019	.117	.061	.018		
7.0	.130	.064	.018	.127	.064	.018	.122	.062	.018	.117	.060	.018	.113	.059	.017		
8.0	.125	.061	.017	.122	.060	.017	.117	.059	.017	.113	.057	.017	.109	.056	.016		
9.0	.119	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016	.105	.054	.015		
10.0	.115	.055	.015	.113	.054	.015	.109	.053	.015	.105	.052	.015	.102	.051	.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	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011		
4.0	.132	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009		
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007		
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006		
7.0	.110	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005		
8.0	.104	.064	.036	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004		
9.0	.099	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004		
10.0	.094	.054	.028	.081	.047	.024	.056	.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:2023-12-21

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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz UTHDi:0.17% ITHDi:18.61% KDisp:0.9496Lamp Flux:906.806x1 lm											
NAME: MD10-10-XX-04 4000K RA90 50D						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	2H	21.5	22.4	21.7	22.5	22.7	21.4	22.3	21.6	22.5	22.6
	3H	21.4	22.2	21.6	22.4	22.6	21.3	22.1	21.5	22.3	22.5
	4H	21.3	22.1	21.6	22.3	22.5	21.2	22.0	21.5	22.3	22.5
	6H	21.2	22.0	21.5	22.2	22.5	21.2	21.9	21.5	22.2	22.4
	8H	21.2	21.9	21.5	22.2	22.4	21.1	21.8	21.4	22.1	22.4
	12H	21.1	21.8	21.5	22.1	22.4	21.1	21.8	21.4	22.0	22.3
4H	2H	21.3	22.1	21.5	22.3	22.5	21.2	22.0	21.5	22.2	22.4
	3H	21.2	21.9	21.5	22.2	22.4	21.1	21.8	21.5	22.1	22.4
	4H	21.2	21.8	21.5	22.1	22.4	21.1	21.7	21.4	22.0	22.3
	6H	21.1	21.6	21.5	22.0	22.3	21.0	21.6	21.4	21.9	22.2
	8H	21.0	21.5	21.4	21.9	22.3	21.0	21.5	21.4	21.8	22.2
	12H	21.0	21.5	21.4	21.8	22.2	20.9	21.4	21.3	21.8	22.1
8H	4H	21.0	21.5	21.4	21.9	22.3	21.0	21.5	21.4	21.8	22.2
	6H	21.0	21.4	21.4	21.8	22.2	20.9	21.3	21.3	21.7	22.1
	8H	20.9	21.3	21.4	21.7	22.1	20.8	21.2	21.3	21.6	22.1
	12H	20.9	21.2	21.3	21.6	22.1	20.8	21.1	21.3	21.5	22.0
12H	4H	21.0	21.4	21.4	21.8	22.2	20.9	21.4	21.3	21.8	22.1
	6H	20.9	21.3	21.4	21.7	22.1	20.8	21.2	21.3	21.6	22.1
	8H	20.9	21.2	21.3	21.6	22.1	20.8	21.1	21.3	21.5	22.0
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 2.8 / - 5.8					+ 2.7 / - 5.7					
1.5H	+ 4.5 / - 4.7					+ 4.5 / - 4.6					
2.0H	+ 4.6 / - 3.5					+ 4.4 / - 3.3					

CIE Pub.117, 906.8 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -0.3$)
Area: 0.0013 m²

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

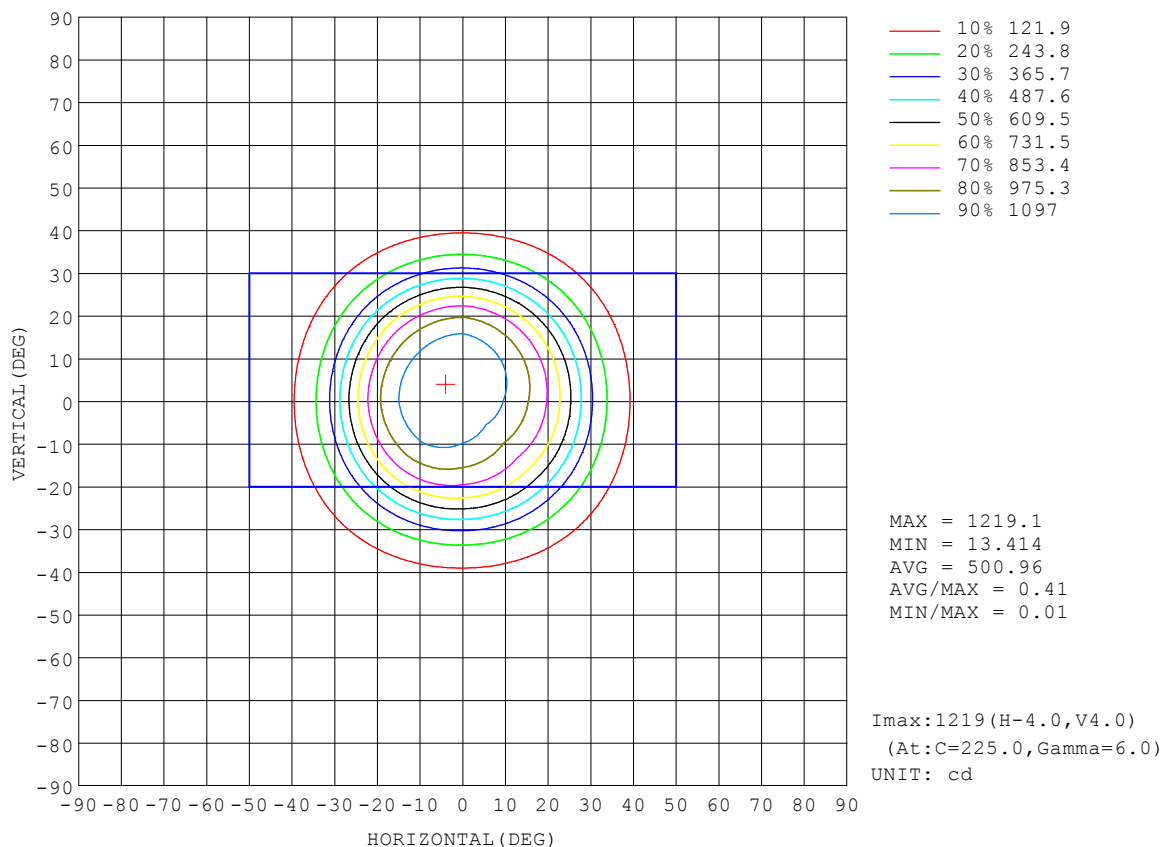
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	77	86	80	76	86	80	76	73
0.80	94	88	85	94	88	85	93	88	84	80
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	108	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	102	105	103	101	95
3.00	112	108	106	110	107	104	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	107	106	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:2023-12-21

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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

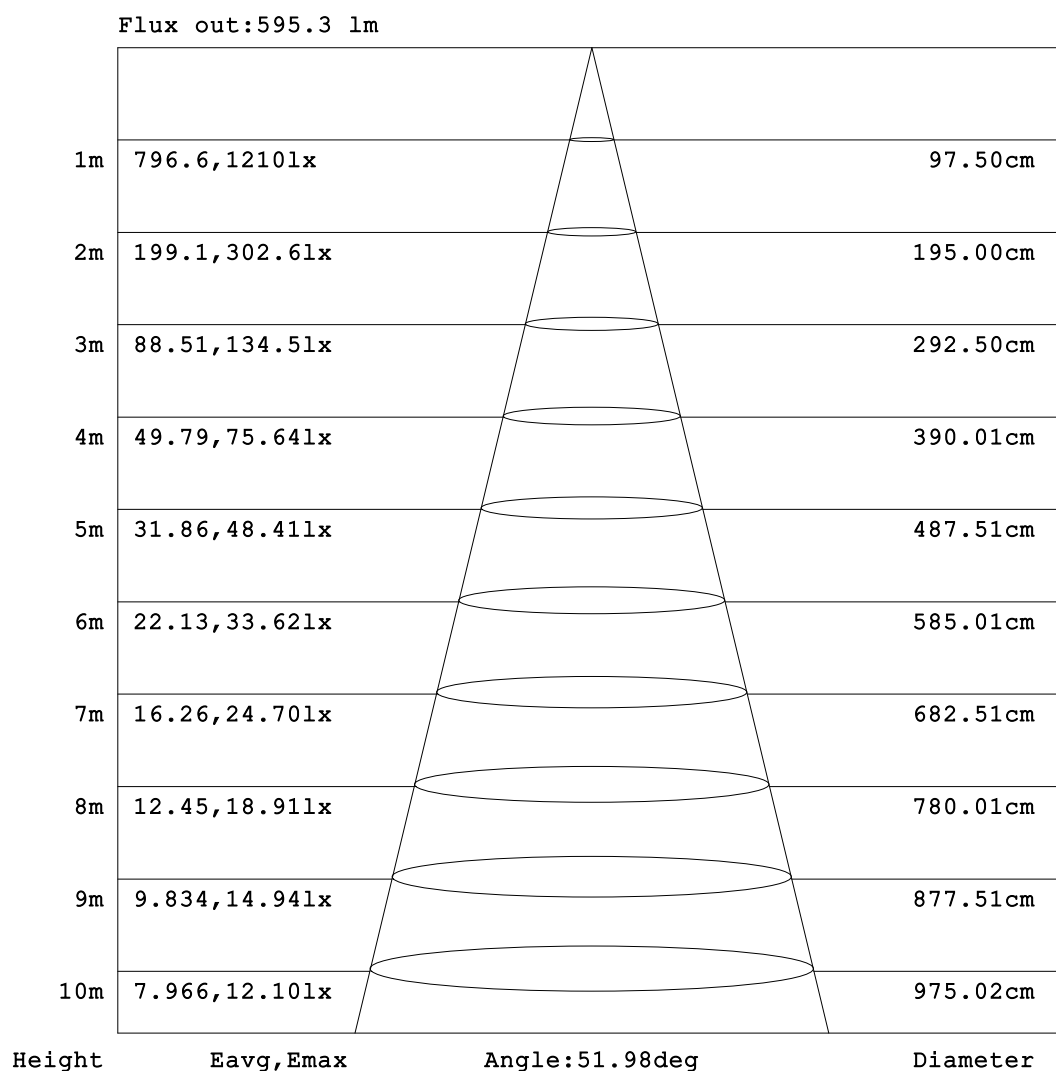


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



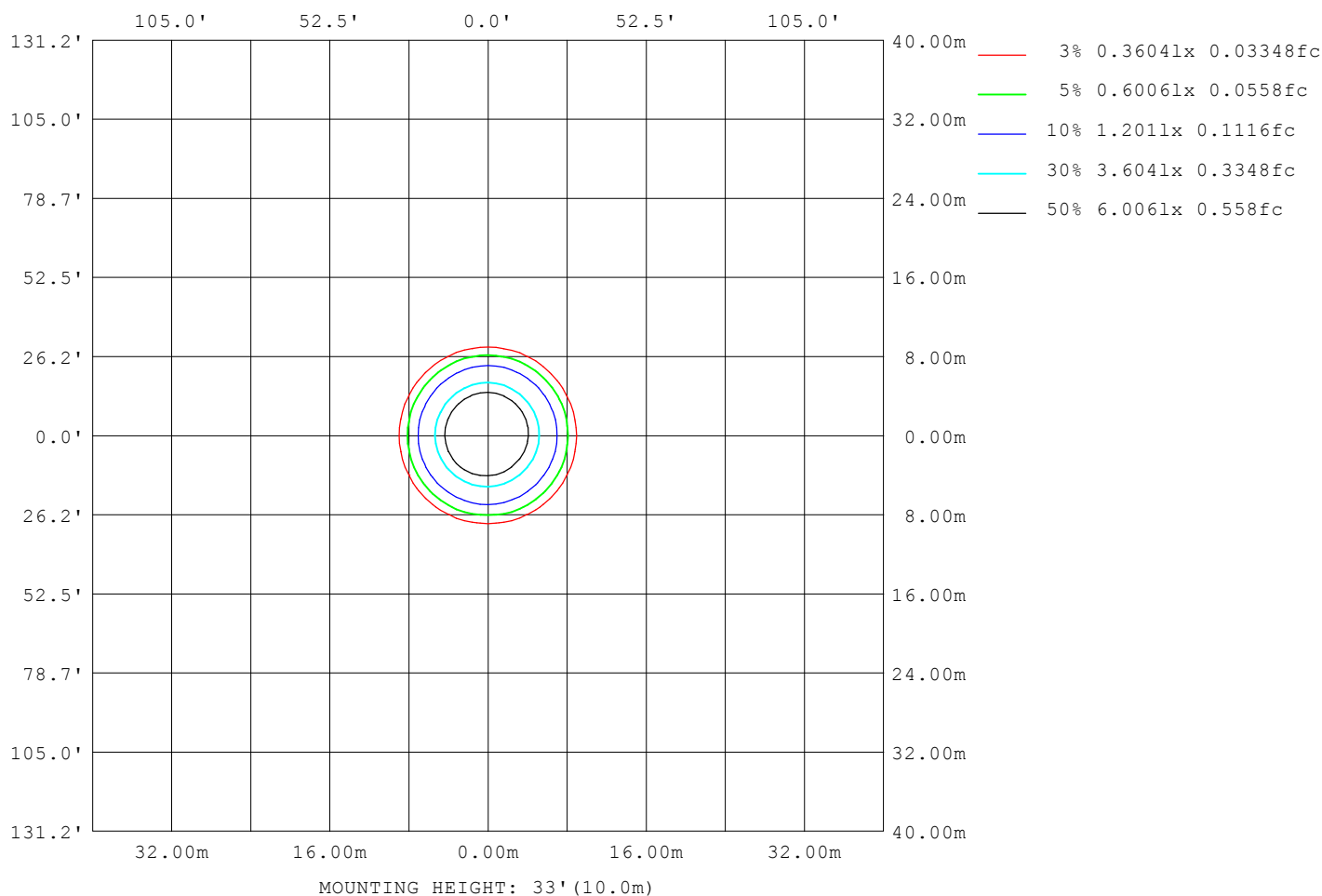
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 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:240.3V I:0.0442A P:9.9W PF:0.9331 Freq:49.99Hz		
UTHDi:0.17% ITHDi:18.61% KDisp:0.9496 Lamp Flux:906.806x1 lm		
NAME: MD10-10-XX-04 4000K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

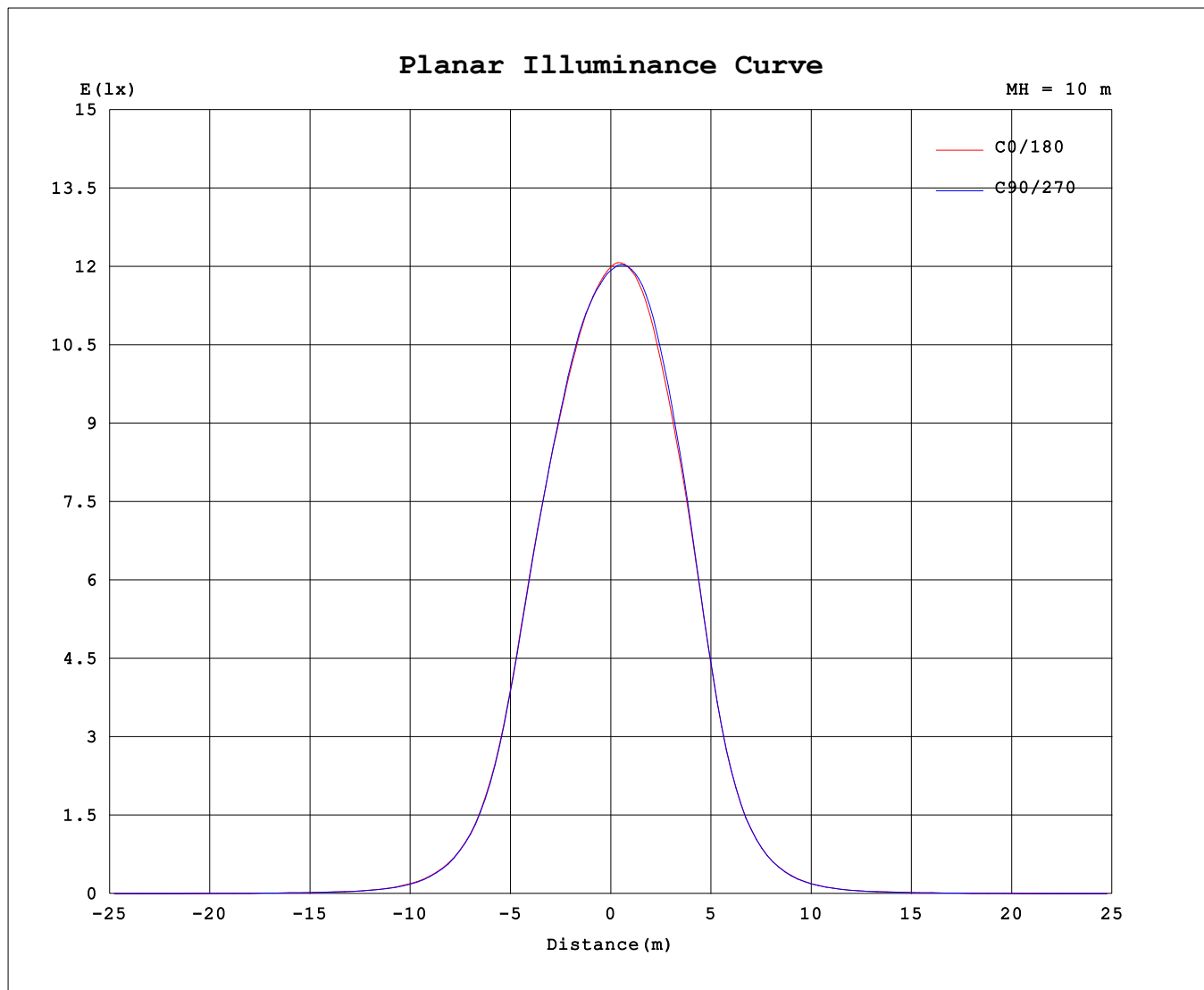
AvgL	cd/m2
L_0~180 (65) av	10679
L_0~180 (75) av	5908
L_0~180 (85) av	1076
L_90~270 (65) av	10729
L_90~270 (75) av	6083
L_90~270 (85) av	287
L_45 (65) av	10657
L_45 (75) av	5945
L_45 (85) av	227

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
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: HIGH
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	1195	1195	1195	1195	1195	1195	1195	1195
3.0	1171	1162	1173	1195	1207	1214	1211	1192
6.0	1141	1123	1148	1187	1206	1217	1216	1183
9.0	1101	1071	1112	1169	1191	1204	1209	1161
12.0	1046	1011	1059	1130	1152	1164	1179	1119
15.0	979.8	941.0	990.1	1067	1092	1104	1121	1057
18.0	901.9	862.0	906.0	980.2	1012	1024	1037	972.4
21.0	802.3	765.5	801.6	868.7	905.4	916.7	922.0	862.9
24.0	670.9	643.3	668.3	724.0	759.1	769.9	767.6	719.6
27.0	522.4	504.1	520.4	559.8	586.8	596.1	593.1	558.3
30.0	381.6	369.6	379.1	404.2	420.8	427.3	426.0	405.6
33.0	267.8	260.8	265.2	280.7	288.9	292.4	292.6	282.9
36.0	184.0	180.6	182.4	192.1	195.1	196.1	196.9	192.2
39.0	124.4	123.2	122.6	128.8	129.7	130.2	129.9	127.7
42.0	82.91	82.86	80.75	83.90	85.17	86.64	84.08	83.36
45.0	54.42	55.03	52.26	53.86	55.10	56.34	54.26	53.45
48.0	35.52	35.97	33.90	34.85	35.61	36.35	35.05	34.53
51.0	23.41	23.66	22.51	23.01	23.27	23.52	22.75	22.59
54.0	16.94	17.08	16.57	16.97	17.04	17.16	16.68	16.57
57.0	12.46	12.57	12.45	12.68	12.65	12.72	12.39	12.22
60.0	9.338	9.428	9.489	9.586	9.541	9.580	9.339	9.163
63.0	7.001	7.089	7.210	7.257	7.231	7.223	7.065	6.868
66.0	5.205	5.275	5.400	5.458	5.427	5.387	5.293	5.112
69.0	3.895	3.962	4.077	4.113	4.064	4.011	3.957	3.818
72.0	2.821	2.889	2.994	3.016	2.952	2.894	2.858	2.768
75.0	1.926	2.004	2.113	2.124	2.049	1.980	1.980	1.894
78.0	1.162	1.223	1.283	1.354	1.271	1.179	1.060	1.130
81.0	0.6362	0.6315	0.5715	0.6655	0.6704	0.5502	0.4367	0.5320
84.0	0.2238	0.0835	0.0374	0.1076	0.2747	0.0701	0.0332	0.0630
87.0	0.0369	0.0209	0.0328	0.0210	0.0291	0.0218	0.0299	0.0197
90.0	0.0301	0.0244	0.0322	0.0258	0.0262	0.0253	0.0286	0.0229

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
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: