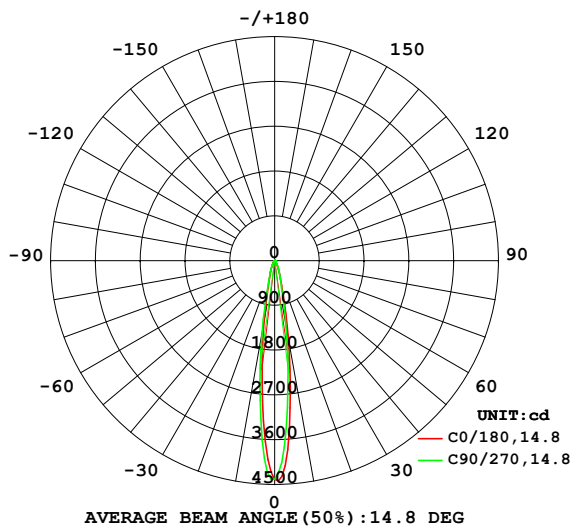


LUMINAIRE PHOTOMETRIC TEST REPORT

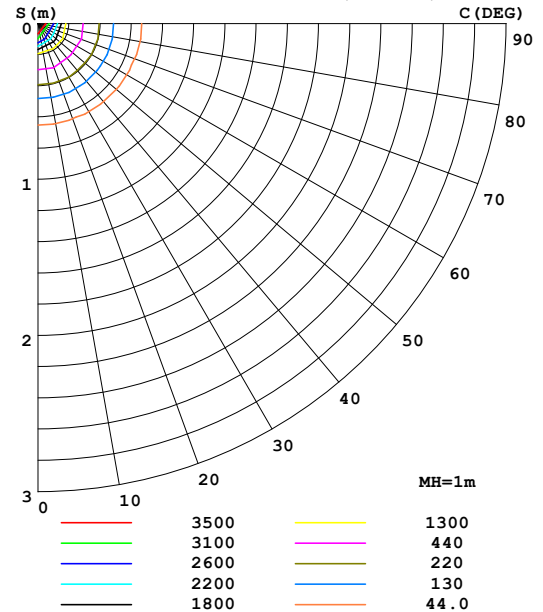
Test:U:240.5V I:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 94.62 lm/W
MODEL		I _{max} (cd)	4433	S/MH(C0/180)	0.23	
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	0.27	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	545.91	η UP,DN(C0-180)	0.0,51.3	
NOMINAL FLUX(lm)	545.909	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.7	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	240.41	η down(%)	100.0	CIBSE SHR MAX	0.25	

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:2024-08-01

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	1604	1473	1319	1230	1239	1308	1479	1621	0- 10	240.2	240.2	44,44
20	309.4	312.5	309.1	289.2	263.1	252.3	273.6	300.4	10- 20	168.3	408.5	74.8,74.8
30	103.0	109.8	111.0	102.4	86.21	81.46	90.64	97.12	20- 30	80.71	489.2	89.6,89.6
40	28.94	30.91	33.53	29.17	23.91	22.88	25.62	27.08	30- 40	34.47	523.7	95.9,95.9
50	8.438	8.896	9.823	8.292	7.434	7.290	8.052	7.989	40- 50	11.89	535.6	98.1,98.1
60	4.390	4.750	4.819	4.436	4.398	4.397	4.444	4.313	50- 60	5.261	540.8	99.1,99.1
70	2.562	2.627	2.445	2.392	2.414	2.382	2.407	2.473	60- 70	3.457	544.3	99.7,99.7
80	0.3904	0.3745	0.3522	0.3478	0.3432	0.3565	0.3715	0.3888	70- 80	1.412	545.7	100,100
90	0.0128	0.0055	0.0141	0.0036	0.0083	0.0042	0.0129	0.0048	80- 90	0.2000	545.9	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): 531.17 lm

%lum = 97.3%

%lamp = 97.3%

Conical surface Flux(120deg): 540.84 lm

%lum = 99.1%

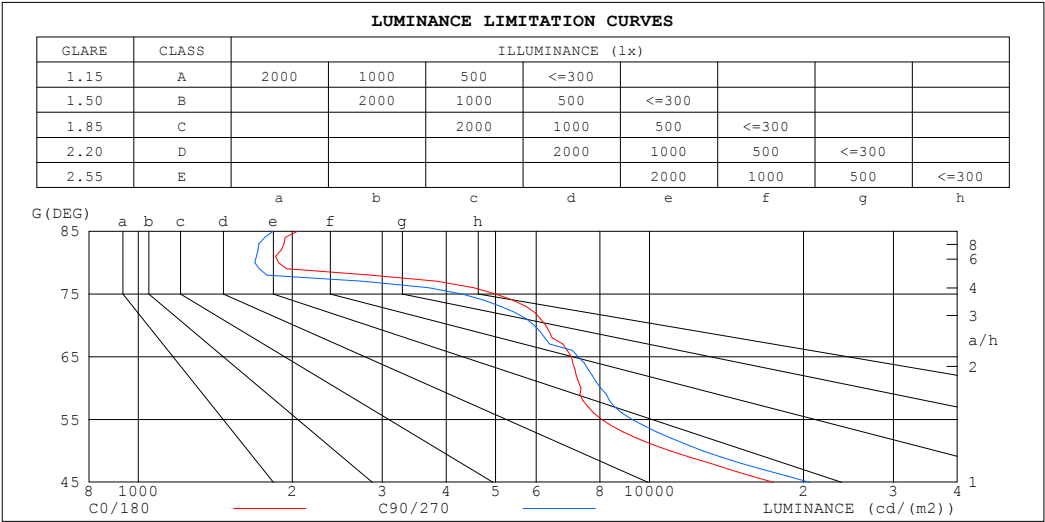
%lamp = 99.1%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2047	1834
80	1880	1689
75	5007	4300
70	6265	5953
65	7037	7253
60	7341	8027
55	8068	9254
50	10977	12728
45	17476	20576

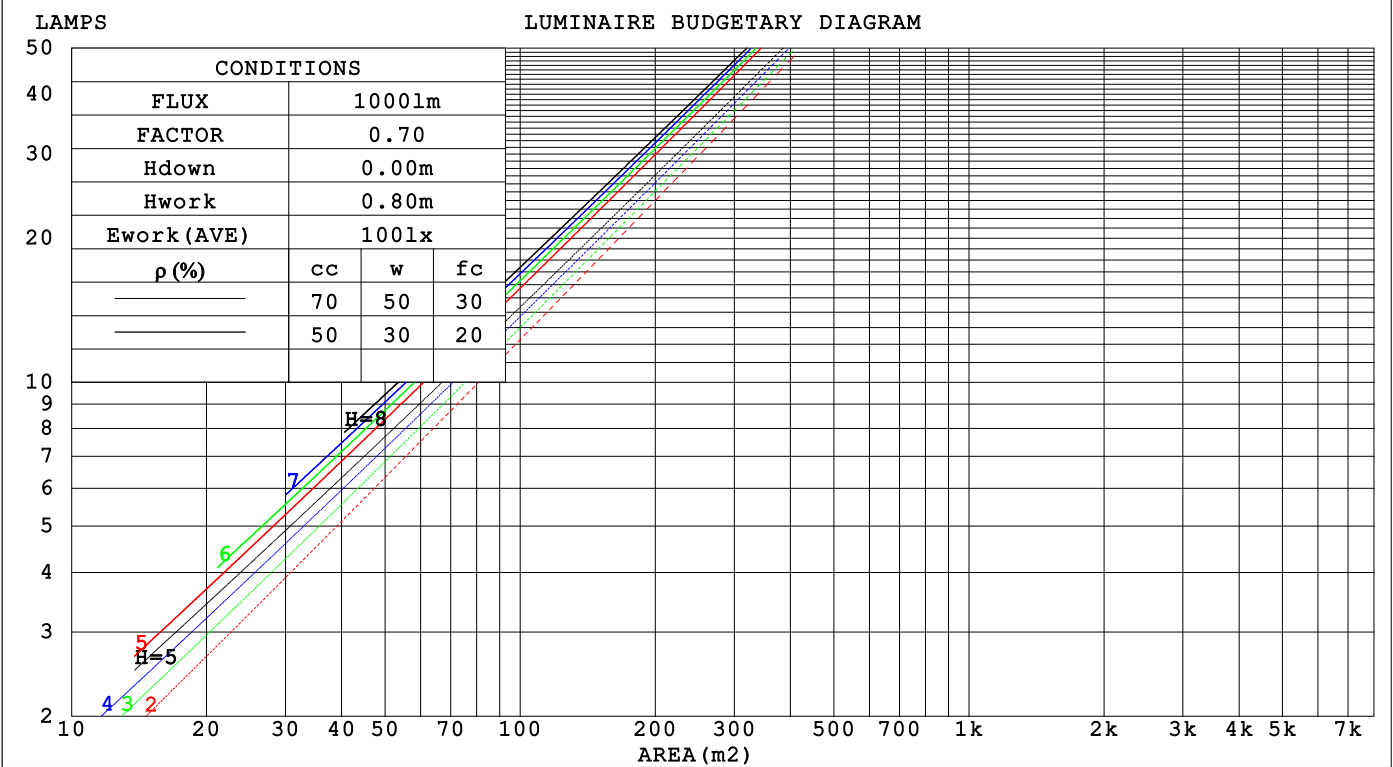
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007		
Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	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:2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	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	.140	.079	.025	.133	.076	.024	.121	.069	.022	.109	.063	.020	.099	.057	.018		
2.0	.130	.071	.022	.124	.069	.021	.114	.064	.020	.105	.059	.018	.096	.054	.017		
3.0	.121	.064	.019	.116	.062	.019	.108	.058	.018	.100	.055	.017	.093	.051	.016		
4.0	.113	.059	.017	.109	.057	.017	.102	.054	.016	.095	.051	.015	.089	.048	.015		
5.0	.106	.054	.016	.103	.053	.015	.097	.050	.015	.091	.048	.014	.086	.046	.014		
6.0	.100	.050	.014	.097	.049	.014	.092	.047	.014	.087	.045	.013	.082	.043	.013		
7.0	.095	.047	.013	.092	.046	.013	.088	.044	.013	.083	.043	.012	.079	.041	.012		
8.0	.090	.044	.012	.088	.043	.012	.084	.042	.012	.080	.041	.012	.076	.039	.011		
9.0	.086	.041	.012	.084	.041	.011	.080	.040	.011	.077	.039	.011	.074	.037	.011		
10.0	.082	.039	.011	.080	.039	.011	.077	.038	.011	.074	.037	.010	.071	.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	.118	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.095	.116	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.123	.098	.079	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.066	.097	.074	.057	.067	.052	.040	.039	.030	.024	.012	.010	.008	
6.0	.104	.076	.055	.089	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.096	.067	.047	.083	.058	.041	.057	.041	.029	.033	.024	.017	.011	.008	.006	
8.0	.089	.061	.041	.077	.053	.036	.053	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.084	.055	.036	.072	.048	.031	.050	.034	.022	.029	.020	.013	.009	.007	.004	
10.0	.079	.050	.031	.068	.044	.027	.047	.031	.019	.027	.018	.012	.009	.006	.004	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz										
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007					Lamp Flux:545.909x1 lm					
NAME: MD16-06-XX-01 4000K RA90 15D THU					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Norming lighting					SUR.: 40mm			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	15.1	15.7	15.3	15.9	16.0	15.5	16.2	15.7	16.3	16.5
3H	15.3	16.0	15.6	16.1	16.3	15.7	16.4	16.0	16.5	16.7
4H	15.4	16.0	15.7	16.2	16.4	15.8	16.4	16.1	16.6	16.8
6H	15.4	16.0	15.7	16.2	16.4	15.7	16.3	16.0	16.5	16.8
8H	15.4	15.9	15.7	16.2	16.4	15.7	16.2	16.0	16.5	16.7
12H	15.3	15.9	15.6	16.1	16.4	15.7	16.2	16.0	16.4	16.7
4H 2H	15.1	15.7	15.3	15.9	16.1	15.5	16.1	15.8	16.3	16.5
3H	15.5	16.0	15.8	16.3	16.5	15.8	16.4	16.1	16.6	16.9
4H	15.6	16.1	16.0	16.4	16.7	15.9	16.4	16.3	16.7	17.0
6H	15.6	16.0	16.0	16.4	16.7	15.9	16.3	16.2	16.6	17.0
8H	15.6	16.0	16.0	16.3	16.7	15.8	16.2	16.2	16.6	16.9
12H	15.5	15.9	15.9	16.3	16.6	15.8	16.1	16.2	16.5	16.9
8H 4H	15.6	16.0	16.0	16.3	16.7	15.9	16.3	16.3	16.6	17.0
6H	15.6	15.9	16.0	16.3	16.7	15.8	16.1	16.2	16.5	16.9
8H	15.5	15.8	16.0	16.2	16.7	15.8	16.1	16.2	16.5	16.9
12H	15.5	15.7	16.0	16.2	16.6	15.7	16.0	16.2	16.4	16.9
12H 4H	15.5	15.9	15.9	16.3	16.7	15.8	16.2	16.2	16.6	16.9
6H	15.5	15.8	15.9	16.2	16.6	15.8	16.0	16.2	16.5	16.9
8H	15.5	15.7	15.9	16.2	16.6	15.7	16.0	16.2	16.4	16.9
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 1.8 / - 2.5					+ 2.1 / - 2.8				
1.5H	+ 3.4 / - 2.2					+ 3.8 / - 2.5				
2.0H	+ 2.3 / - 1.1					+ 2.9 / - 1.2				

CIE Pub.117, 545.9 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = -2.1$)
Area: 0.0012 m²

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:

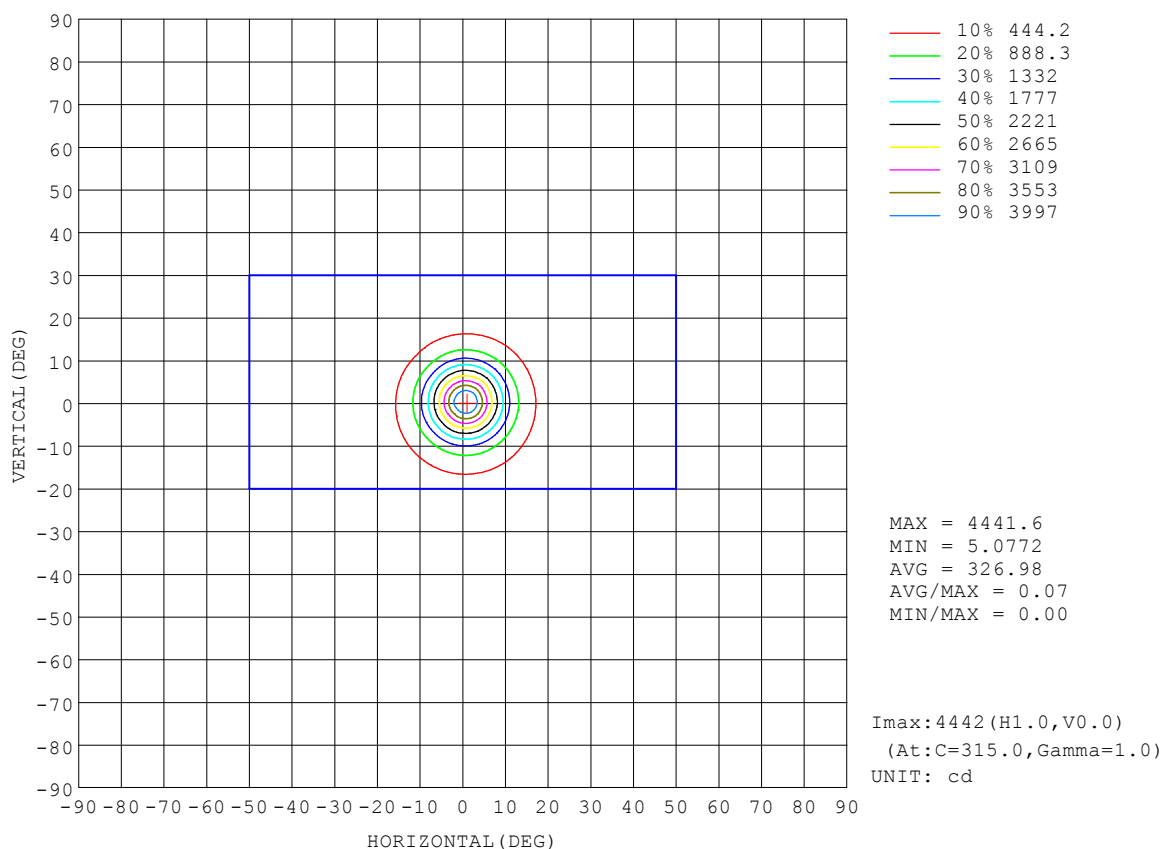
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	79	89	83	79	88	82	79	76
0.80	96	91	87	96	90	87	94	90	87	83
1.00	100	95	92	99	95	91	98	94	91	87
1.25	104	99	96	103	99	95	101	97	95	91
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	96
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	109	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: MEDIUM
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:

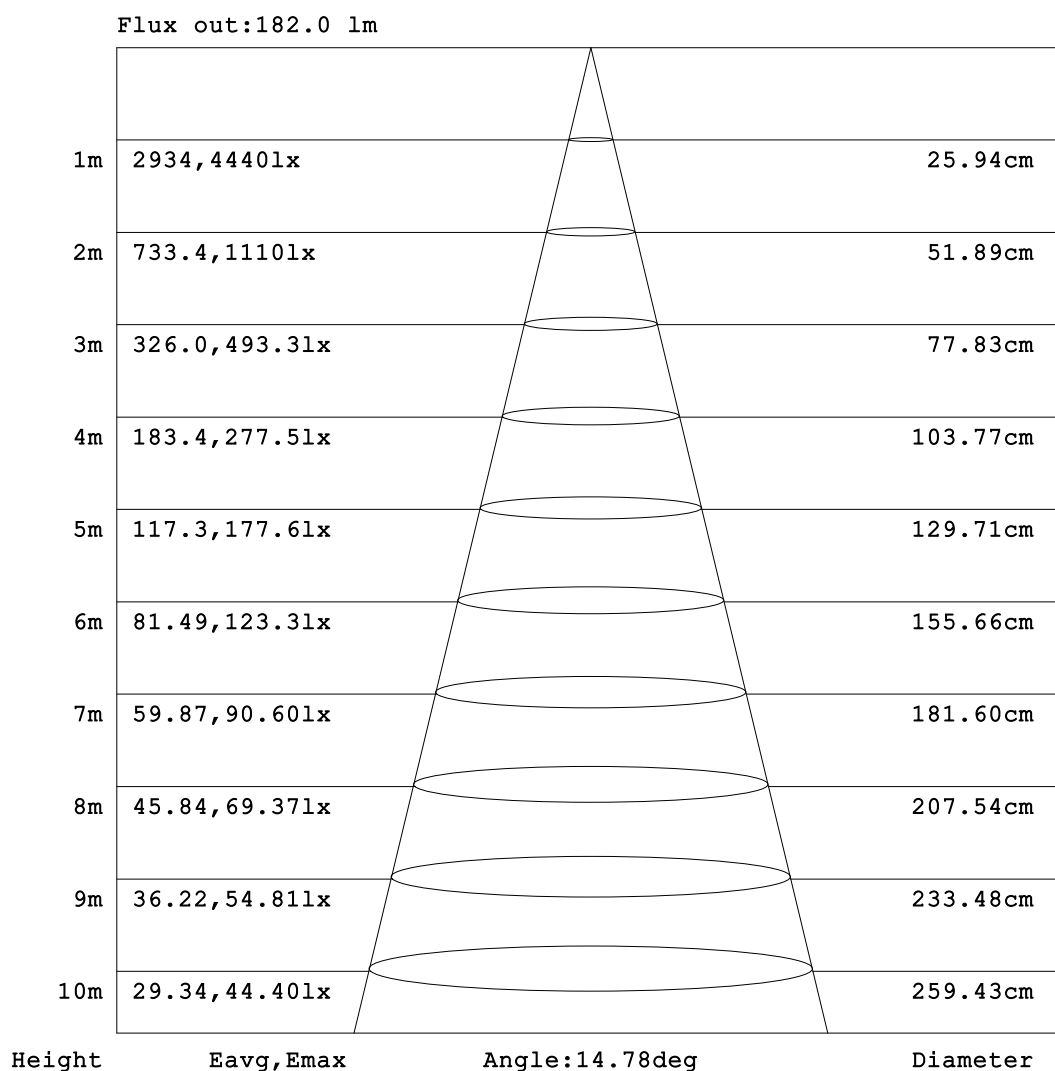


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:



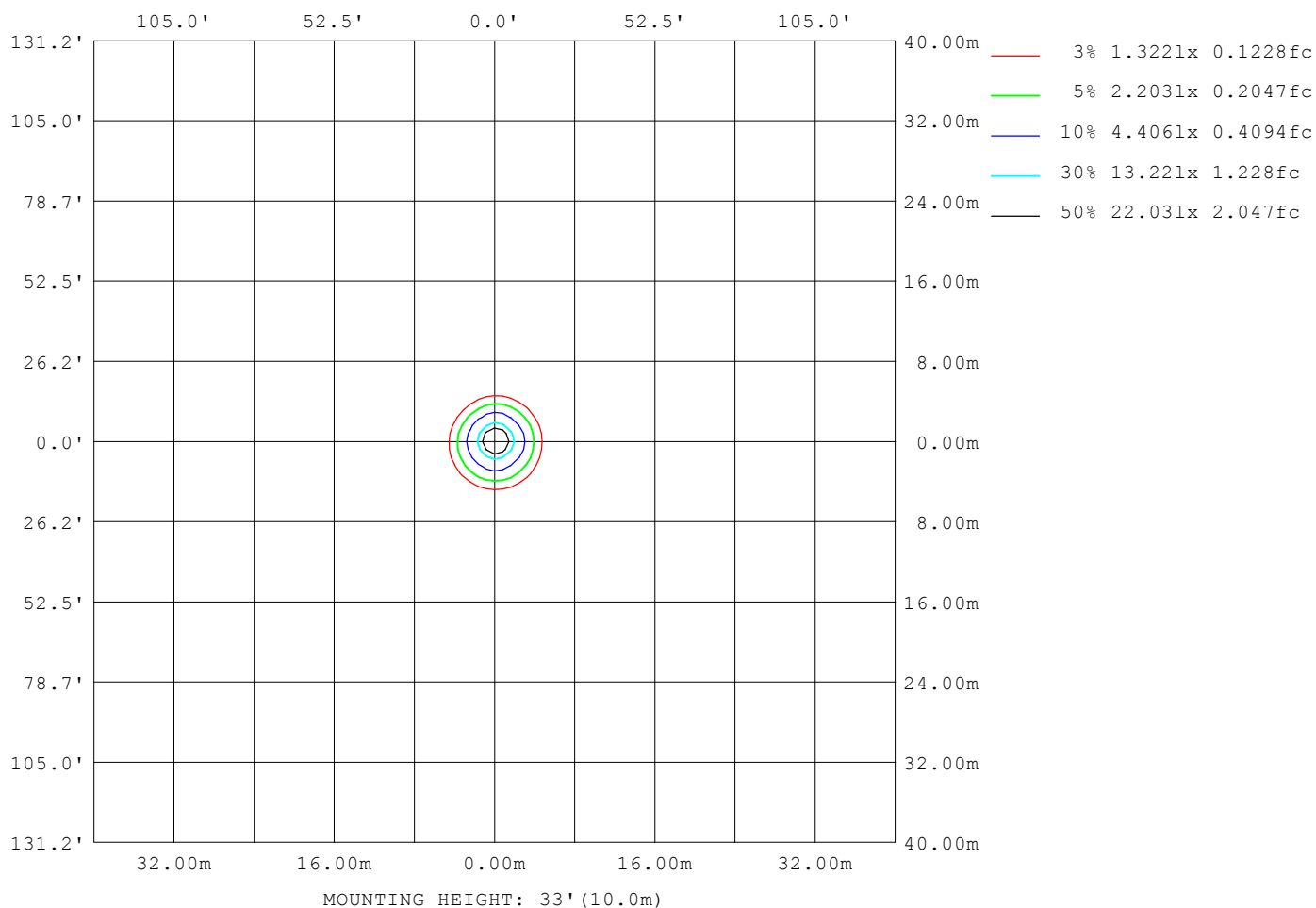
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz		
UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-08-01

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:0.0274A P:5.8W PF:0.8754 Freq:49.99Hz UTHDi:0.16% ITHDi:23.67% KDisp:0.9007 Lamp Flux:545.909x1 lm		
NAME: MD16-06-XX-01 4000K RA90 15D THU	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming lighting	SUR.: 40mm	Shielding Angle:

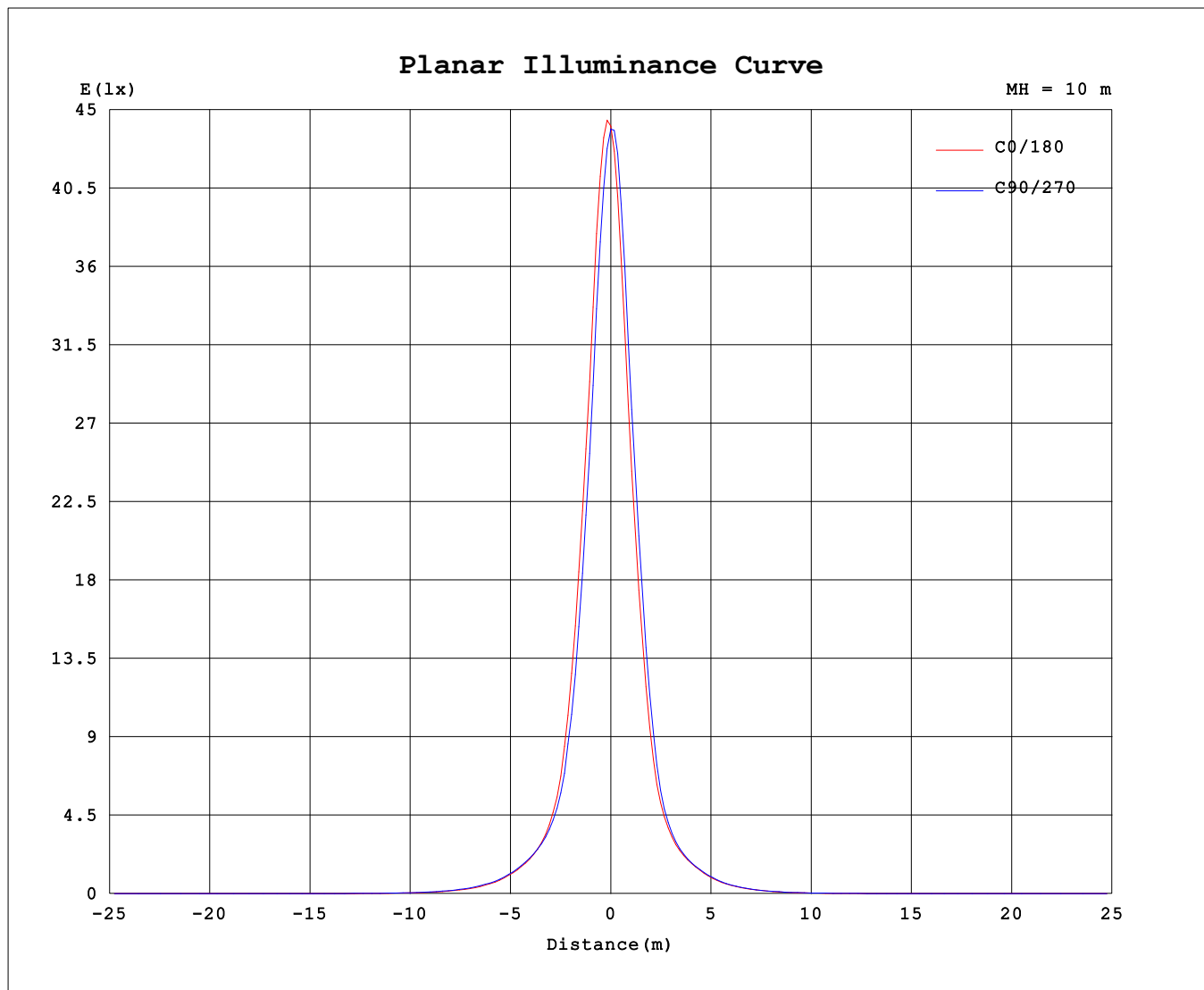
AvgL	cd/m2
L_0~180 (65) av	6933
L_0~180 (75) av	4486
L_0~180 (85) av	1936
L_90~270 (65) av	7059
L_90~270 (75) av	4389
L_90~270 (85) av	1857
L_45 (65) av	7011
L_45 (75) av	4444
L_45 (85) av	1825

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-08-01

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: 2024-08-01

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	4391	4391	4391	4391	4391	4391	4391	4391
3.0	4120	3960	3758	3634	3650	3765	3980	4169
6.0	2979	2793	2570	2443	2457	2615	2827	3027
9.0	1911	1758	1592	1496	1502	1592	1790	1942
12.0	1089	1005	919.3	829.3	819.0	856.0	986.9	1085
15.0	613.9	586.7	545.5	512.1	489.0	483.0	540.2	598.6
18.0	394.4	391.0	378.8	356.2	327.7	318.0	347.6	383.3
21.0	277.3	282.0	281.5	263.1	237.3	227.2	245.6	268.1
24.0	204.3	211.9	212.9	198.6	176.3	167.2	182.4	197.5
27.0	148.5	156.0	156.2	143.9	124.3	117.9	130.6	140.4
30.0	103.0	109.8	111.0	102.4	86.21	81.46	90.64	97.12
33.0	71.60	76.45	79.37	71.71	59.87	55.16	62.26	67.44
36.0	48.70	52.40	55.49	49.60	40.73	37.84	42.90	46.03
39.0	33.02	35.35	37.99	33.42	27.40	25.96	29.17	31.07
42.0	22.02	23.41	25.84	22.09	18.19	17.63	19.91	20.71
45.0	14.78	15.63	17.47	14.80	12.36	12.22	13.79	14.30
48.0	10.53	10.86	12.15	10.26	8.950	8.823	9.805	9.949
51.0	7.620	8.114	8.927	7.548	6.857	6.736	7.382	7.280
54.0	5.924	6.406	6.889	5.972	5.623	5.658	5.963	5.811
57.0	4.939	5.363	5.576	5.033	4.870	4.889	5.049	4.877
60.0	4.390	4.750	4.819	4.436	4.398	4.397	4.444	4.313
63.0	3.878	4.172	4.133	3.888	3.873	3.874	3.888	3.809
66.0	3.357	3.552	3.450	3.159	3.172	3.243	3.285	3.283
69.0	2.730	2.804	2.629	2.593	2.602	2.572	2.580	2.659
72.0	2.204	2.227	2.028	1.921	1.996	1.988	2.043	2.126
75.0	1.550	1.532	1.336	1.233	1.237	1.276	1.390	1.480
78.0	0.7096	0.6055	0.4456	0.4295	0.4264	0.4440	0.4981	0.6740
81.0	0.3472	0.3355	0.3195	0.3084	0.3112	0.3208	0.3358	0.3404
84.0	0.2422	0.2302	0.2216	0.2059	0.2208	0.2072	0.2301	0.2385
87.0	0.1445	0.1295	0.1119	0.0761	0.0766	0.0852	0.1269	0.1380
90.0	0.0128	0.0055	0.0141	0.0036	0.0083	0.0042	0.0129	0.0048

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2024-08-01

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: