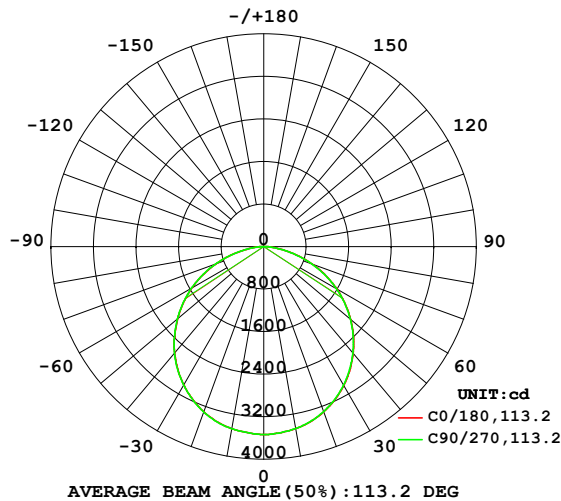


LUMINAIRE PHOTOMETRIC TEST REPORT

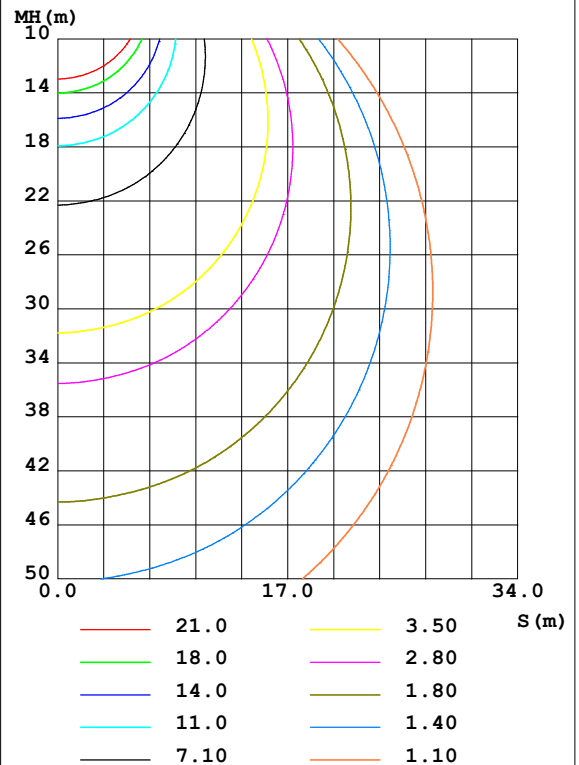
Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 90.46 lm/W			
CLE SHALIMONDE32 802mm 3800lm 930 EXC		Imax(cd)	3535	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	10140	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	10140.5	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [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
5	3515	3515	3515	3514	3513	3515	3513	3514	0- 5	84.24	84.24	0.83,0.83
10	3475	3473	3474	3474	3476	3478	3476	3479	5- 10	250.0	334.2	3.3,3.3
15	3408	3404	3403	3402	3409	3409	3412	3414	10- 15	408.4	742.6	7.32,7.32
20	3306	3303	3301	3300	3305	3304	3308	3310	15- 20	553.2	1296	12.8,12.8
25	3173	3170	3166	3167	3169	3170	3173	3176	20- 25	679.1	1975	19.5,19.5
30	3013	3010	3006	3006	3007	3008	3010	3014	25- 30	782.1	2757	27.2,27.2
35	2828	2825	2820	2819	2820	2821	2824	2828	30- 35	858.8	3616	35.7,35.7
40	2618	2616	2610	2610	2609	2611	2614	2619	35- 40	907.0	4523	44.6,44.6
45	2389	2386	2380	2378	2365	2367	2371	2375	40- 45	924.7	5447	53.7,53.7
50	2138	2136	2129	2127	2116	2118	2122	2127	45- 50	909.7	6357	62.7,62.7
55	1869	1867	1860	1858	1847	1850	1854	1858	50- 55	866.1	7223	71.2,71.2
60	1585	1582	1575	1573	1563	1566	1571	1575	55- 60	793.1	8016	79.1,79.1
65	1286	1283	1276	1274	1265	1269	1274	1278	60- 65	692.5	8709	85.9,85.9
70	974.0	970.1	963.4	960.4	957.5	961.2	967.3	970.3	65- 70	567.3	9276	91.5,91.5
75	666.1	661.8	655.8	652.7	649.8	653.4	659.5	662.9	70- 75	423.5	9700	95.7,95.7
80	376.2	373.3	367.9	364.2	360.7	364.4	370.5	373.2	75- 80	272.8	9973	98.3,98.3
85	142.6	142.0	138.6	134.8	130.9	133.8	138.6	140.0	80- 85	133.7	10106	99.7,99.7
90	4.776	3.687	2.902	2.901	2.617	2.613	2.605	2.927	85- 90	34.24	10140	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 5447.5 lm

%lum = 53.7%

%lamp = 53.7%

Conical surface Flux(120deg): 8016.4 lm

%lum = 79.1%

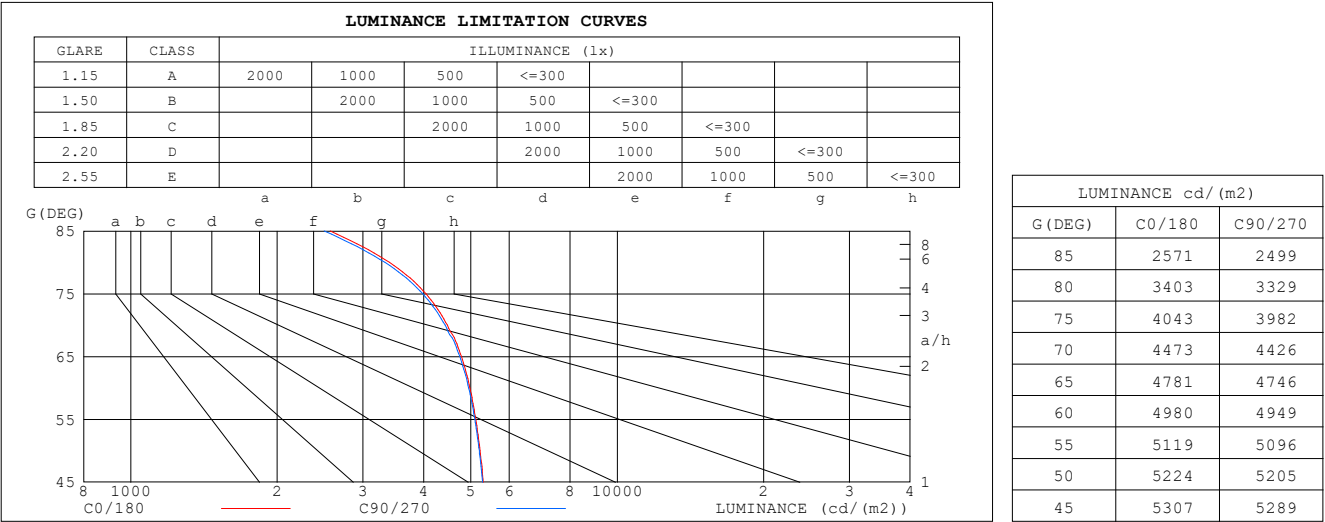
%lamp = 79.1%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



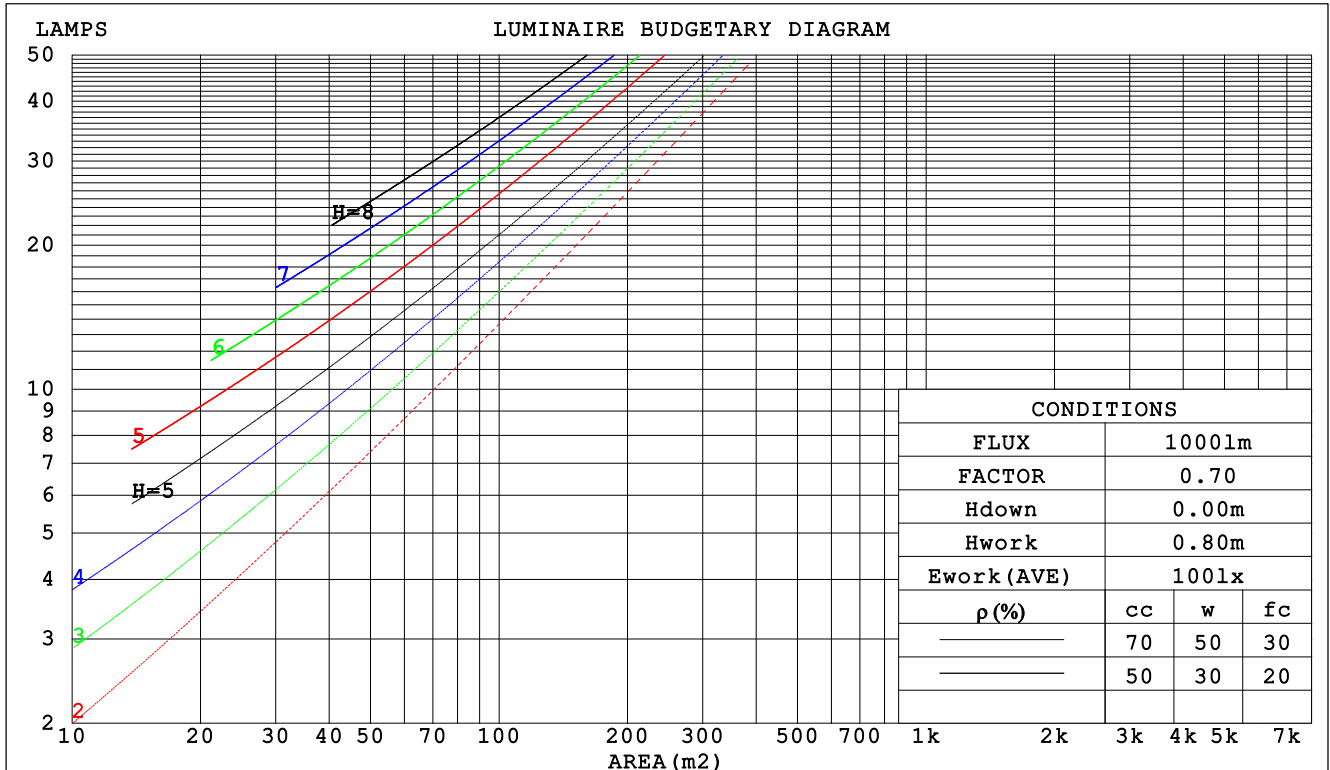
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	.00
1.0	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.74	.79	.75	.72	.70
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.61	.55	.69	.61	.54	.66	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.56	.47	.41	.56	.47	.41	.54	.46	.40	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.39	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	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	.307	.175	.055	.300	.171	.054	.287	.165	.053	.275	.158	.051	.263	.153	.049		
2.0	.290	.159	.049	.284	.157	.048	.273	.152	.047	.262	.147	.046	.252	.142	.045		
3.0	.269	.143	.043	.264	.141	.043	.254	.137	.042	.244	.134	.041	.235	.130	.040		
4.0	.249	.129	.038	.244	.128	.038	.235	.125	.037	.226	.122	.037	.218	.119	.036		
5.0	.230	.117	.034	.226	.116	.034	.218	.113	.033	.210	.111	.033	.203	.109	.033		
6.0	.214	.107	.031	.210	.106	.030	.202	.104	.030	.196	.102	.030	.189	.100	.030		
7.0	.199	.098	.028	.195	.097	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027		
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025		
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023		
10.0	.164	.078	.022	.161	.078	.022	.157	.077	.022	.152	.076	.021	.148	.074	.021		

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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.074	.141	.099	.064	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm										
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:1		
MFR.: DARKON					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	18.6	20.1	18.8	20.3	20.5	18.6	20.1	18.8	20.3	20.5
3H	20.1	21.5	20.4	21.7	22.0	20.1	21.5	20.4	21.7	21.9
4H	20.7	22.0	21.0	22.2	22.5	20.6	22.0	20.9	22.2	22.5
6H	21.0	22.3	21.4	22.6	22.8	21.0	22.2	21.3	22.5	22.8
8H	21.1	22.3	21.5	22.6	22.9	21.1	22.3	21.4	22.6	22.9
12H	21.2	22.3	21.5	22.6	22.9	21.1	22.3	21.5	22.6	22.9
4H 2H	19.2	20.5	19.5	20.8	21.0	19.2	20.5	19.5	20.8	21.0
3H	20.9	22.0	21.2	22.3	22.6	20.8	22.0	21.2	22.3	22.6
4H	21.6	22.6	21.9	22.9	23.3	21.5	22.6	21.9	22.9	23.3
6H	22.0	23.0	22.4	23.3	23.7	22.0	23.0	22.4	23.3	23.7
8H	22.2	23.1	22.6	23.4	23.8	22.1	23.0	22.6	23.4	23.8
12H	22.3	23.1	22.7	23.5	23.9	22.2	23.0	22.6	23.4	23.8
8H 4H	21.8	22.7	22.2	23.1	23.4	21.8	22.7	22.2	23.0	23.4
6H	22.4	23.1	22.9	23.6	24.0	22.4	23.1	22.8	23.5	23.9
8H	22.6	23.3	23.1	23.7	24.2	22.6	23.2	23.0	23.7	24.1
12H	22.8	23.3	23.2	23.8	24.2	22.7	23.3	23.2	23.7	24.2
12H 4H	21.8	22.6	22.2	23.0	23.4	21.8	22.6	22.2	23.0	23.4
6H	22.5	23.1	22.9	23.5	24.0	22.4	23.1	22.9	23.5	23.9
8H	22.7	23.3	23.2	23.7	24.2	22.7	23.2	23.1	23.7	24.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 10140 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.0)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

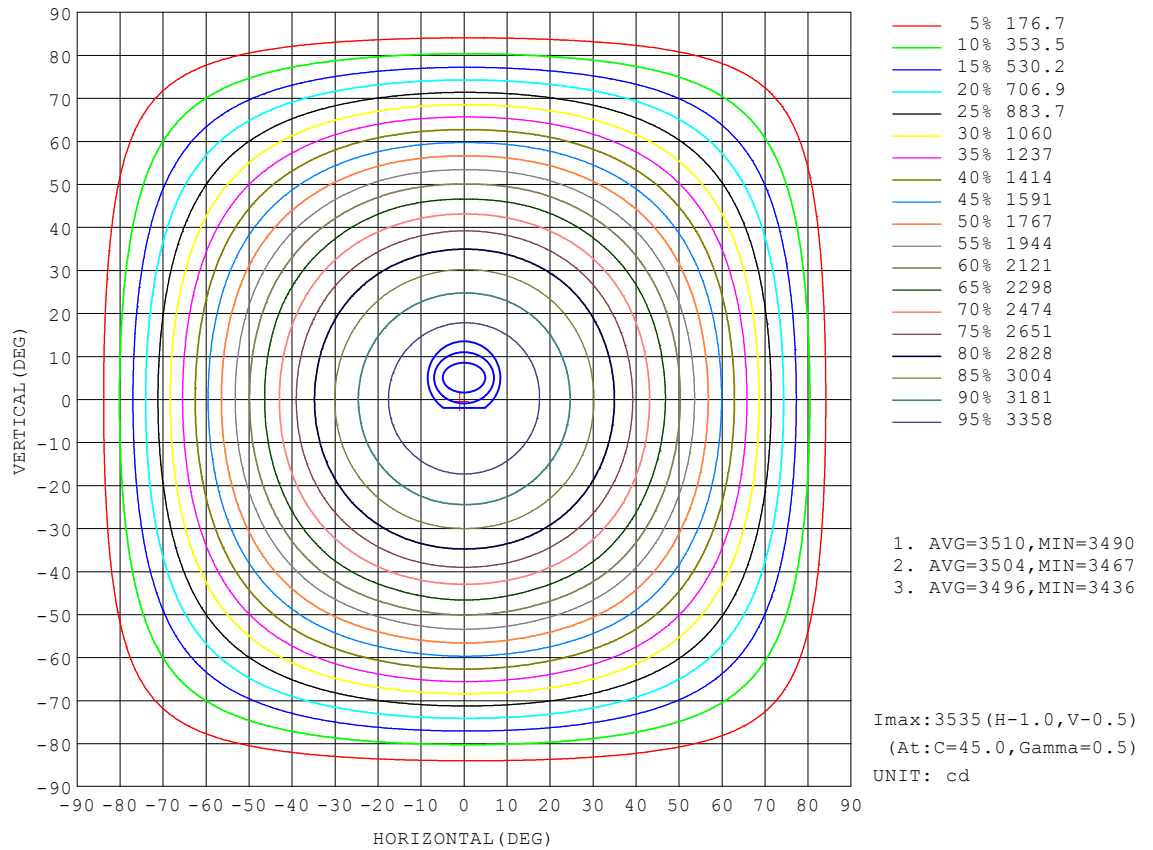
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	55	48	65	55	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	83	73	66	82	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	76	70	62
2.00	95	87	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	98	102	98	95	86
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

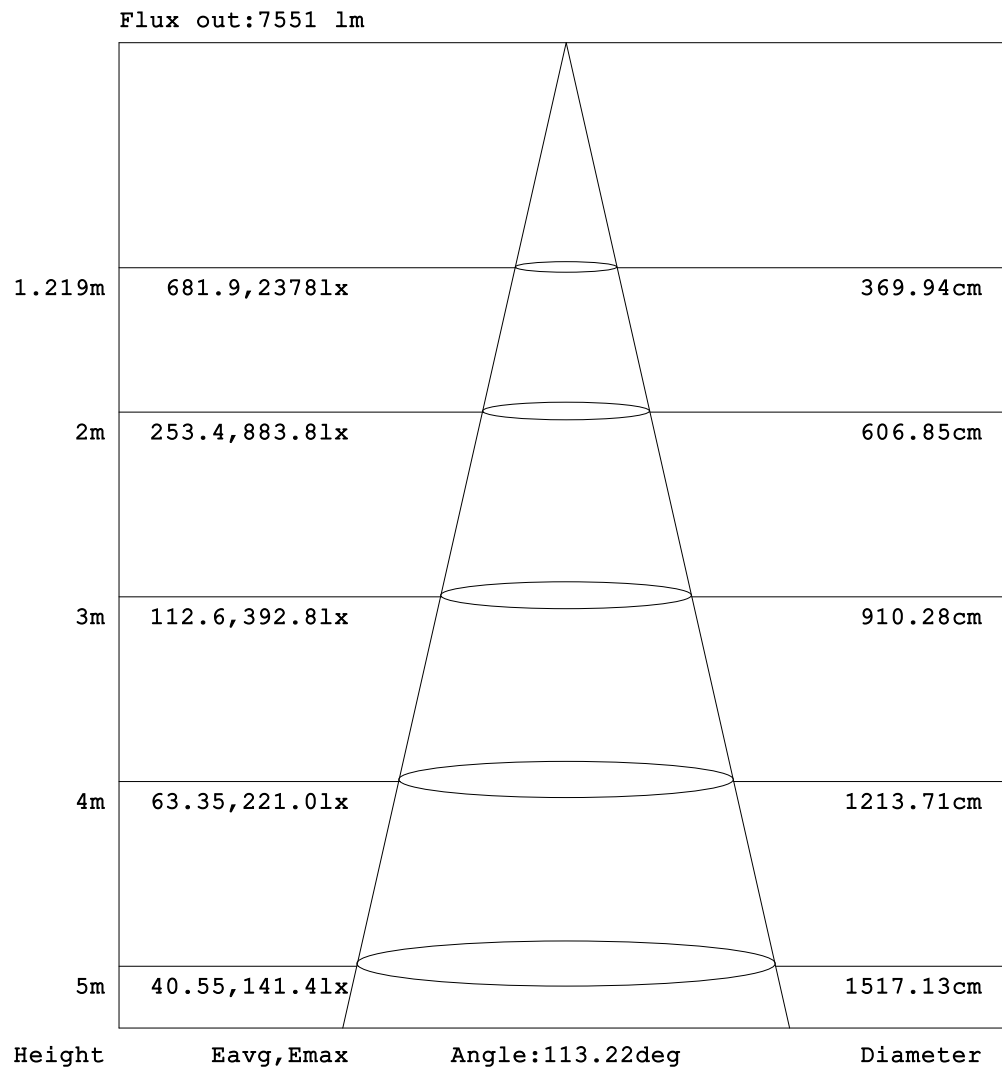


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

AAI Figure

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



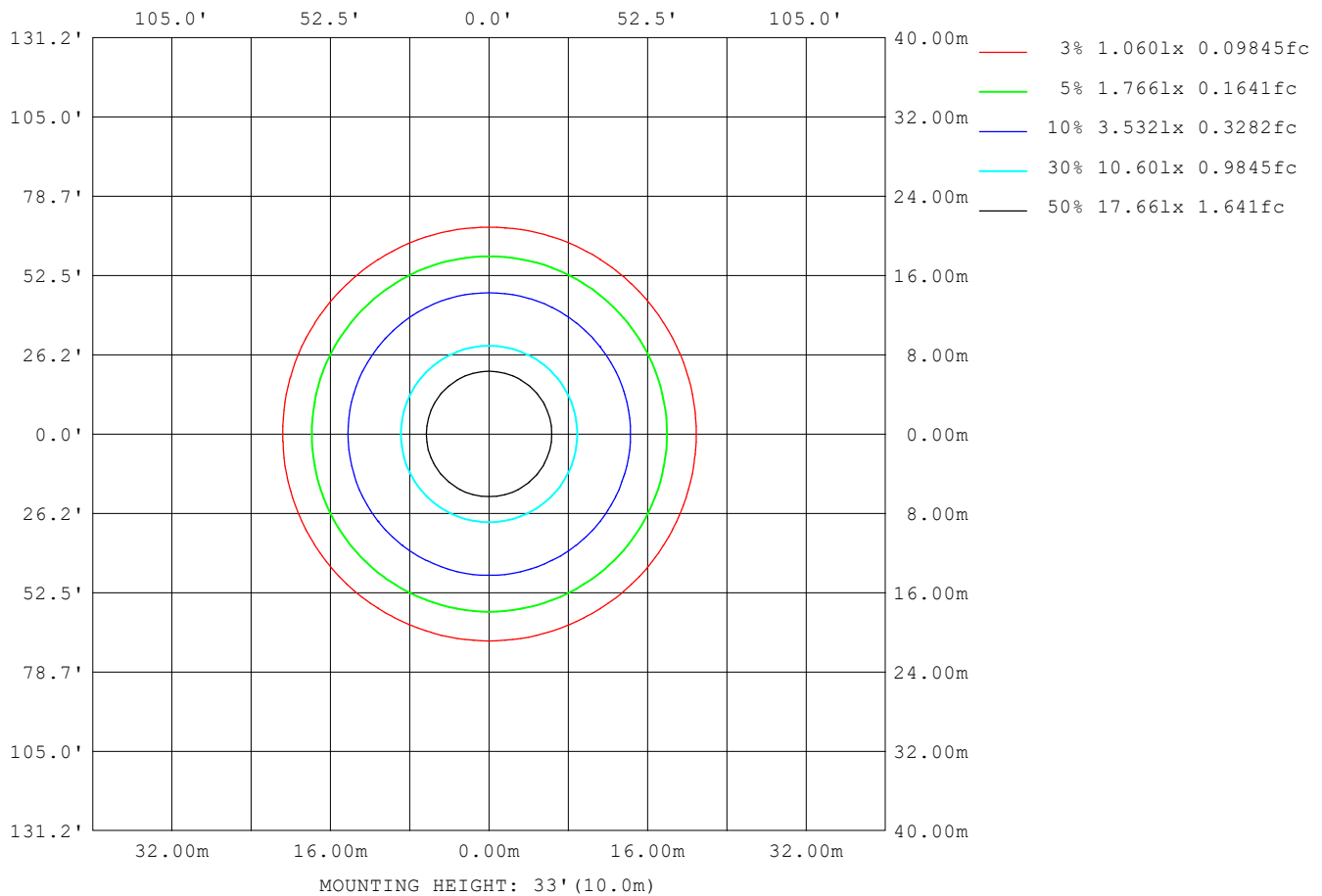
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:JEFF
 Test Date:27 May 2025

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:7.888m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:239.8V I:0.4913A P:112.1W PF:0.9516 Lamp Flux:10140.5x1 lm		
NAME: MRS SPIN 900_NA_WHT_775mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

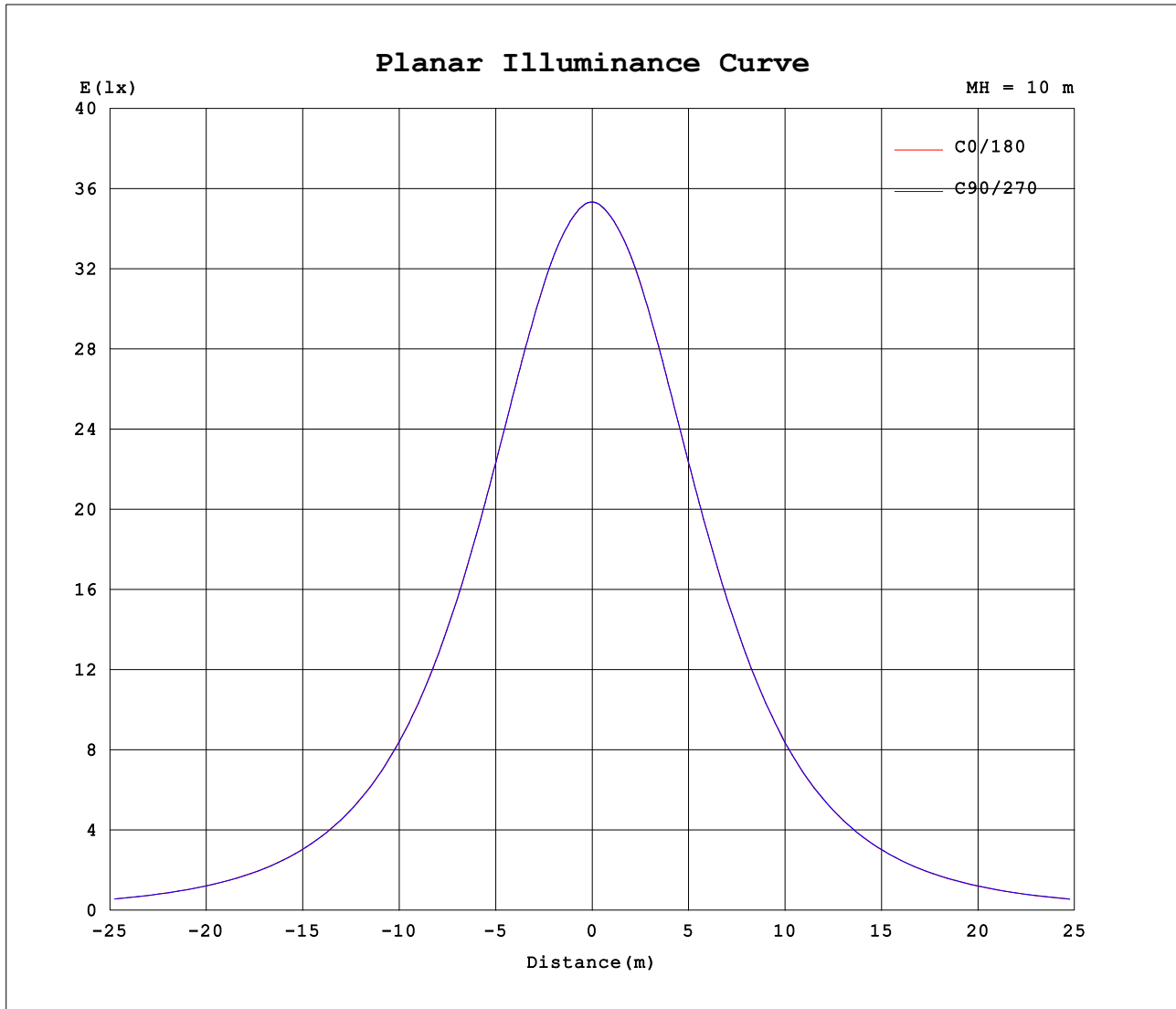
AvgL	cd/m2
L_0~180 (65) av	4744
L_0~180 (75) av	3995
L_0~180 (85) av	2466
L_90~270 (65) av	4741
L_90~270 (75) av	3993
L_90~270 (85) av	2499
L_45 (65) av	4744
L_45 (75) av	3994
L_45 (85) av	2482

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: JEFF
Test Date: 27 May 2025

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.888m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.888m [K=1.0000]
Remarks:

```