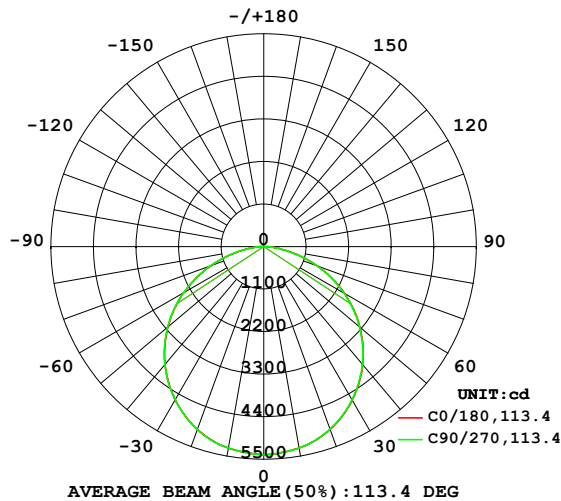


LUMINAIRE PHOTOMETRIC TEST REPORT

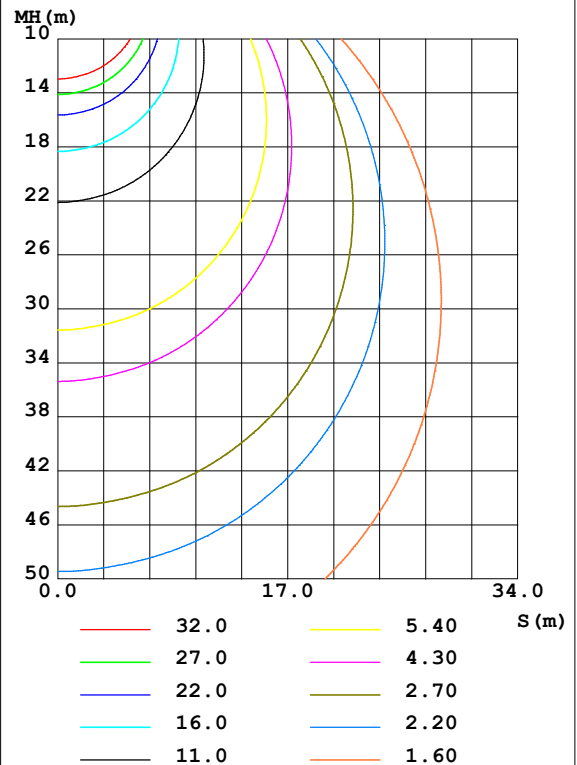
Test:U:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 88.01 lm/W			
CLE SHALIMONDE32 802mm 3800lm 930 EXC		Imax(cd)	5380	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)	15441	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	15440.6	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	5347	5348	5348	5346	5346	5348	5347	5348	0- 5	128.2	128.2	0.83,0.83
10	5287	5286	5286	5284	5288	5293	5290	5292	5- 10	380.4	508.6	3.29,3.29
15	5183	5179	5177	5176	5186	5187	5190	5194	10- 15	621.4	1130	7.32,7.32
20	5027	5024	5021	5019	5029	5028	5032	5036	15- 20	841.6	1972	12.8,12.8
25	4825	4821	4816	4817	4824	4823	4827	4832	20- 25	1033	3005	19.5,19.5
30	4581	4578	4571	4572	4577	4578	4581	4587	25- 30	1190	4195	27.2,27.2
35	4299	4296	4288	4288	4293	4295	4299	4304	30- 35	1307	5501	35.6,35.6
40	3980	3977	3968	3969	3973	3975	3979	3984	35- 40	1380	6881	44.6,44.6
45	3630	3626	3617	3617	3620	3624	3627	3633	40- 45	1407	8288	53.7,53.7
50	3249	3245	3236	3235	3238	3243	3247	3253	45- 50	1388	9676	62.7,62.7
55	2839	2836	2827	2826	2828	2834	2839	2843	50- 55	1321	10997	71.2,71.2
60	2407	2403	2394	2392	2389	2394	2400	2404	55- 60	1210	12207	79.1,79.1
65	1952	1947	1938	1937	1928	1934	1941	1944	60- 65	1054	13260	85.9,85.9
70	1484	1478	1470	1468	1460	1467	1474	1477	65- 70	863.7	14124	91.5,91.5
75	1009	1002	994.3	991.5	991.8	998.9	1007	1010	70- 75	645.8	14770	95.7,95.7
80	568.3	563.3	557.1	553.6	552.6	558.9	566.3	568.3	75- 80	415.0	15185	98.3,98.3
85	214.6	213.4	209.1	204.7	201.3	206.5	214.0	214.9	80- 85	203.4	15388	99.7,99.7
90	6.127	4.829	4.426	4.420	3.995	3.997	4.001	4.669	85- 90	52.18	15441	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): 8288.1 lm

%lum = 53.7%
%lamp = 53.7%

Conical surface Flux(120deg): 12207 lm

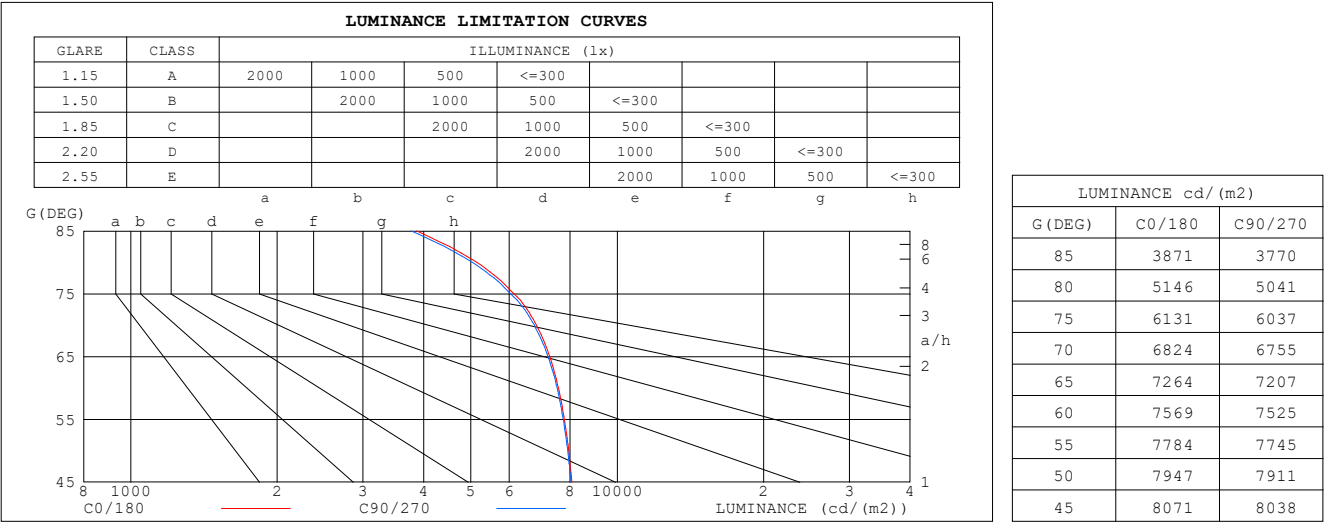
%lum = 79.1%
%lamp = 79.1%

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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



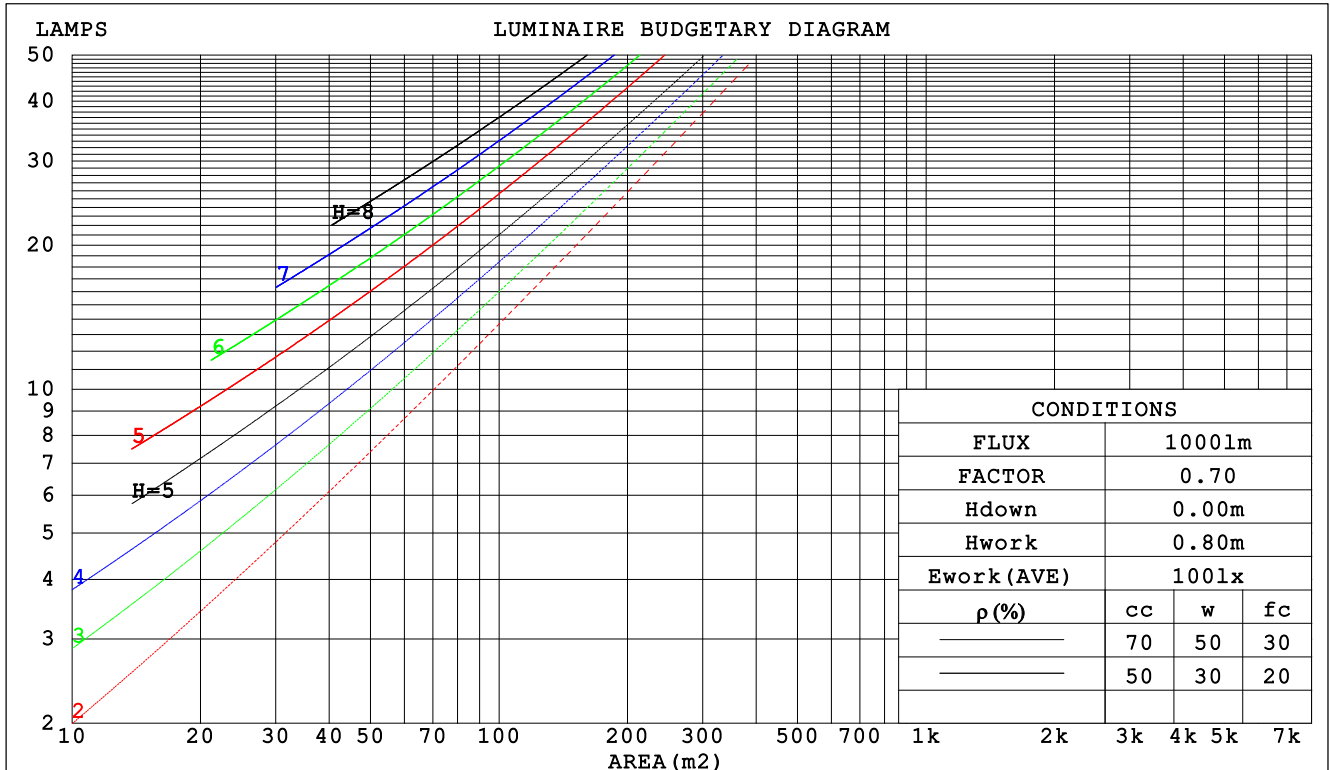
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_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	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.04	.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	.35	.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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_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	.264	.153	.049		
2.0	.291	.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	.203	.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	.020	.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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm										
NAME: MRS SPIN 900_NA_WHT_1200mA_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	20.0	21.6	20.3	21.8	22.0	20.0	21.5	20.3	21.7	22.0
3H	21.5	22.9	21.8	23.2	23.4	21.5	22.9	21.8	23.1	23.4
4H	22.1	23.4	22.4	23.7	24.0	22.1	23.4	22.4	23.7	23.9
6H	22.5	23.7	22.8	24.0	24.3	22.4	23.7	22.8	24.0	24.2
8H	22.6	23.8	22.9	24.1	24.4	22.5	23.7	22.9	24.0	24.3
12H	22.6	23.8	23.0	24.1	24.4	22.6	23.7	22.9	24.0	24.3
4H 2H	20.6	22.0	21.0	22.2	22.5	20.6	22.0	20.9	22.2	22.5
3H	22.3	23.5	22.7	23.8	24.1	22.3	23.5	22.6	23.8	24.1
4H	23.0	24.1	23.4	24.4	24.7	23.0	24.0	23.3	24.4	24.7
6H	23.5	24.4	23.9	24.8	25.2	23.4	24.4	23.8	24.7	25.1
8H	23.6	24.5	24.0	24.9	25.3	23.6	24.5	24.0	24.8	25.2
12H	23.7	24.5	24.1	24.9	25.3	23.7	24.5	24.1	24.8	25.3
8H 4H	23.2	24.1	23.7	24.5	24.9	23.2	24.1	23.6	24.5	24.9
6H	23.9	24.6	24.3	25.0	25.4	23.8	24.6	24.3	25.0	25.4
8H	24.1	24.7	24.5	25.1	25.6	24.0	24.7	24.5	25.1	25.5
12H	24.2	24.8	24.7	25.2	25.7	24.2	24.7	24.6	25.2	25.6
12H 4H	23.2	24.1	23.7	24.4	24.9	23.2	24.0	23.6	24.4	24.8
6H	23.9	24.5	24.4	25.0	25.4	23.9	24.5	24.3	24.9	25.4
8H	24.1	24.7	24.6	25.1	25.6	24.1	24.7	24.6	25.1	25.6
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 15441 lm Total Lamp Luminous Flux.(8log(F/F0) = 9.5)

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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

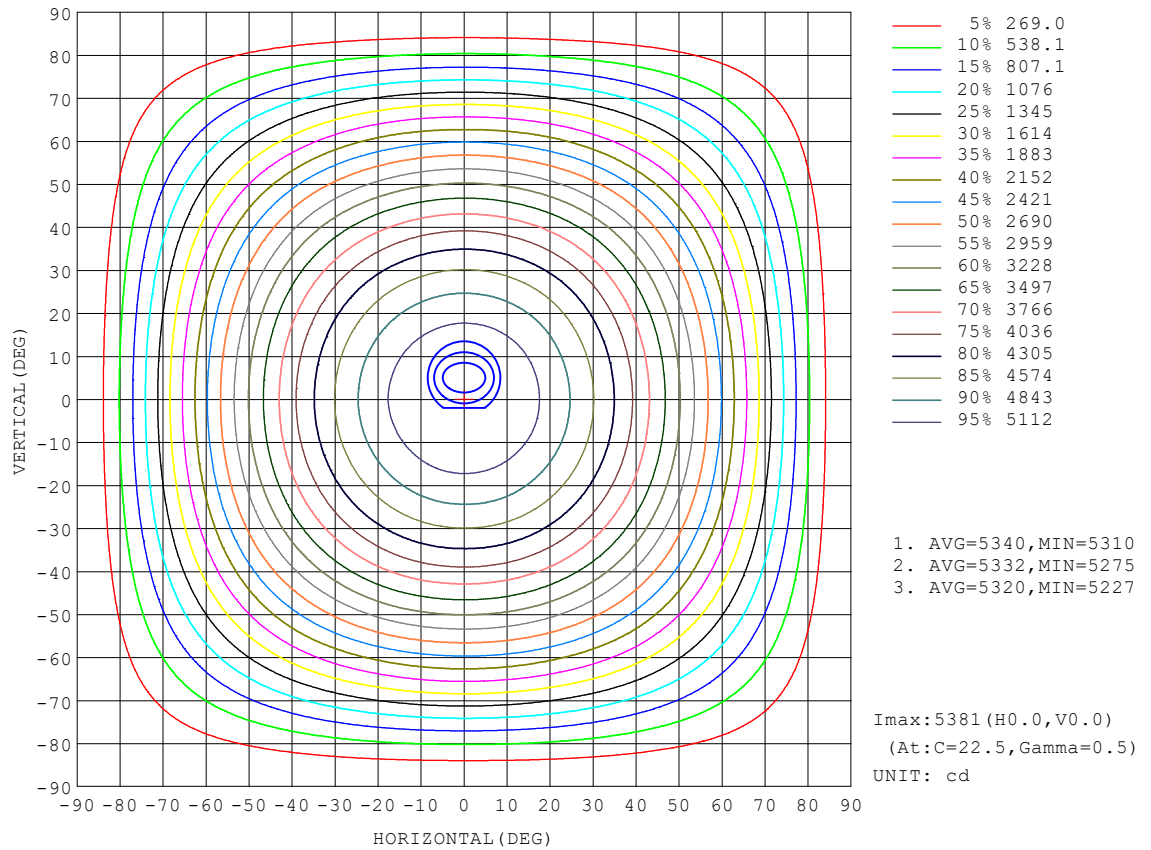
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	55	48	65	55	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	83	73	65	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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

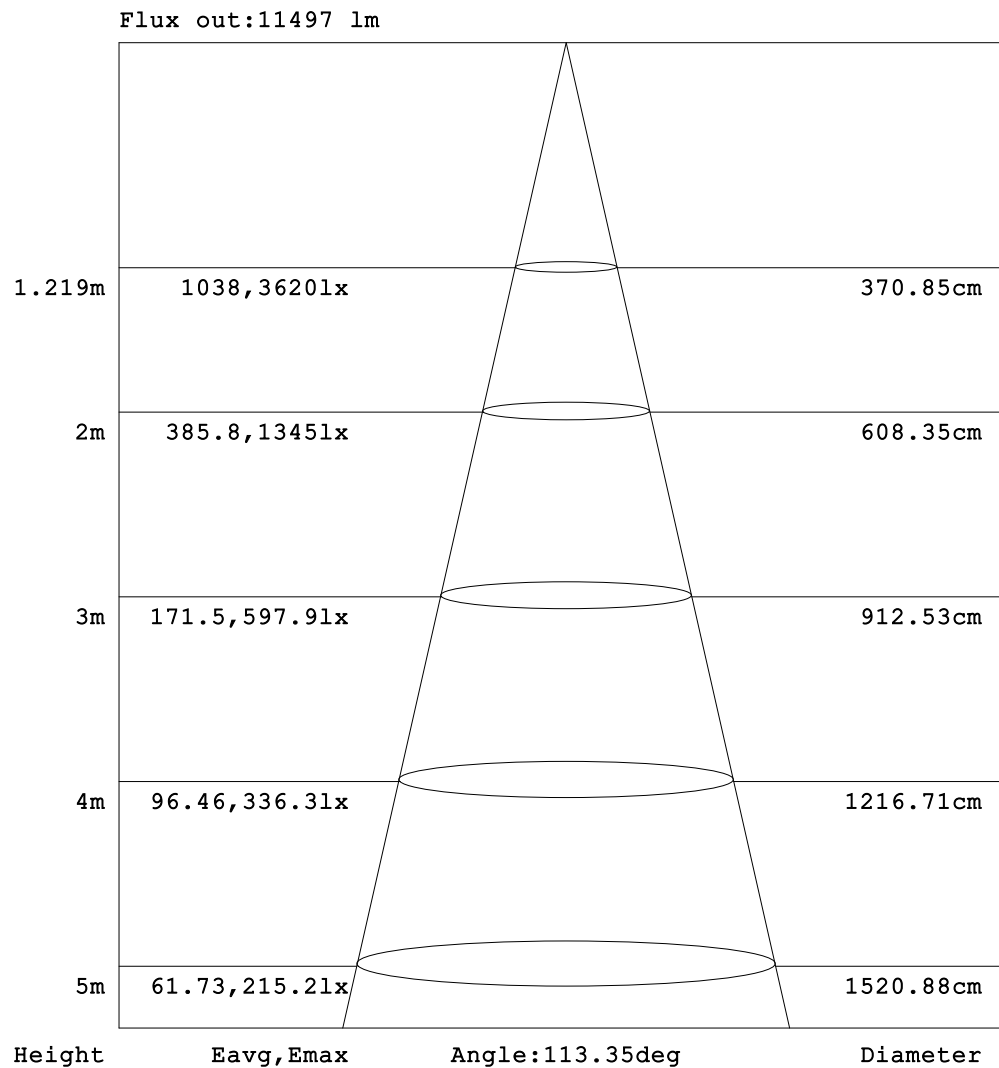


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:27 May 2025

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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



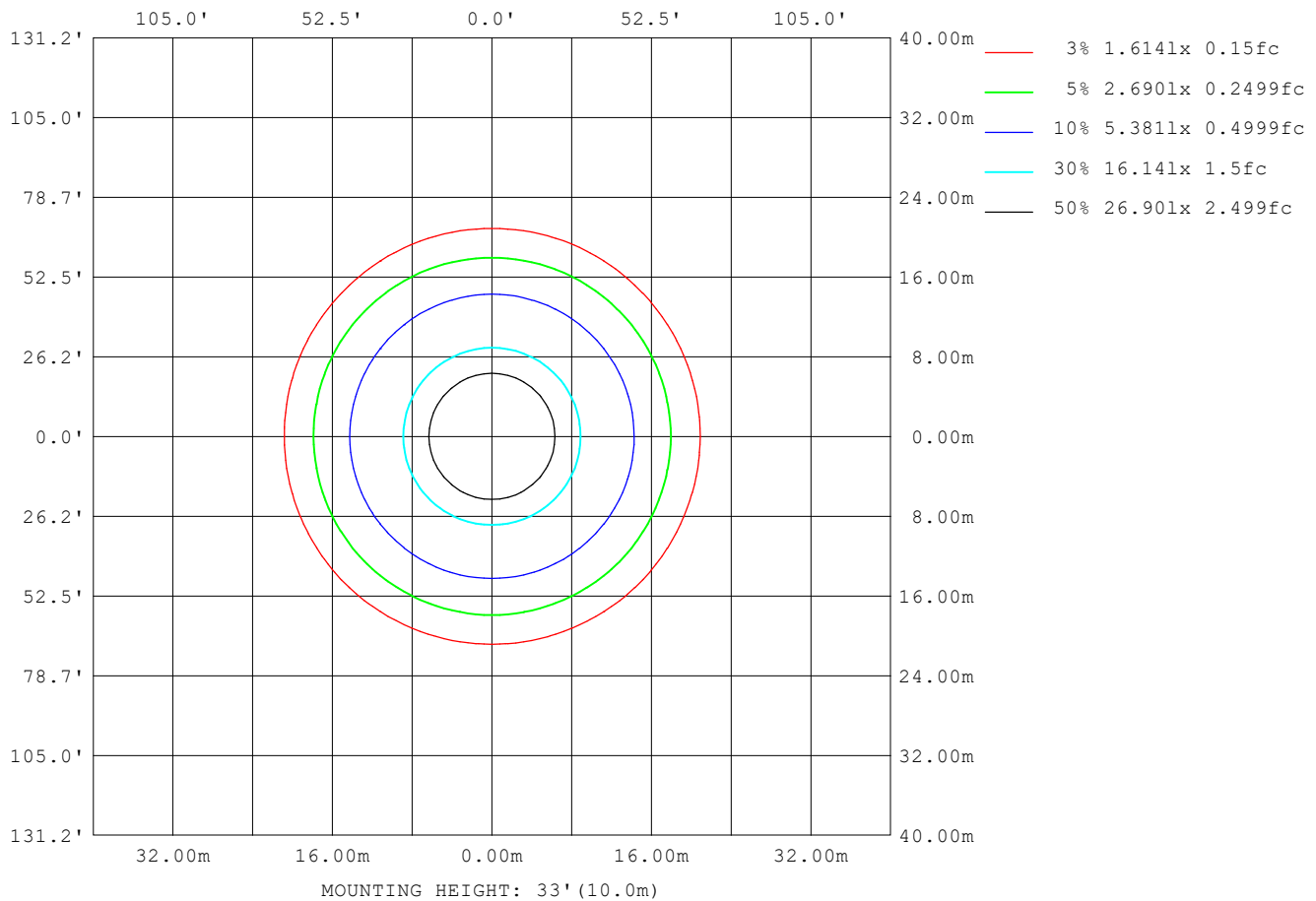
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_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:239.6V I:0.7498A P:175.4W PF:0.9766 Lamp Flux:15440.6x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

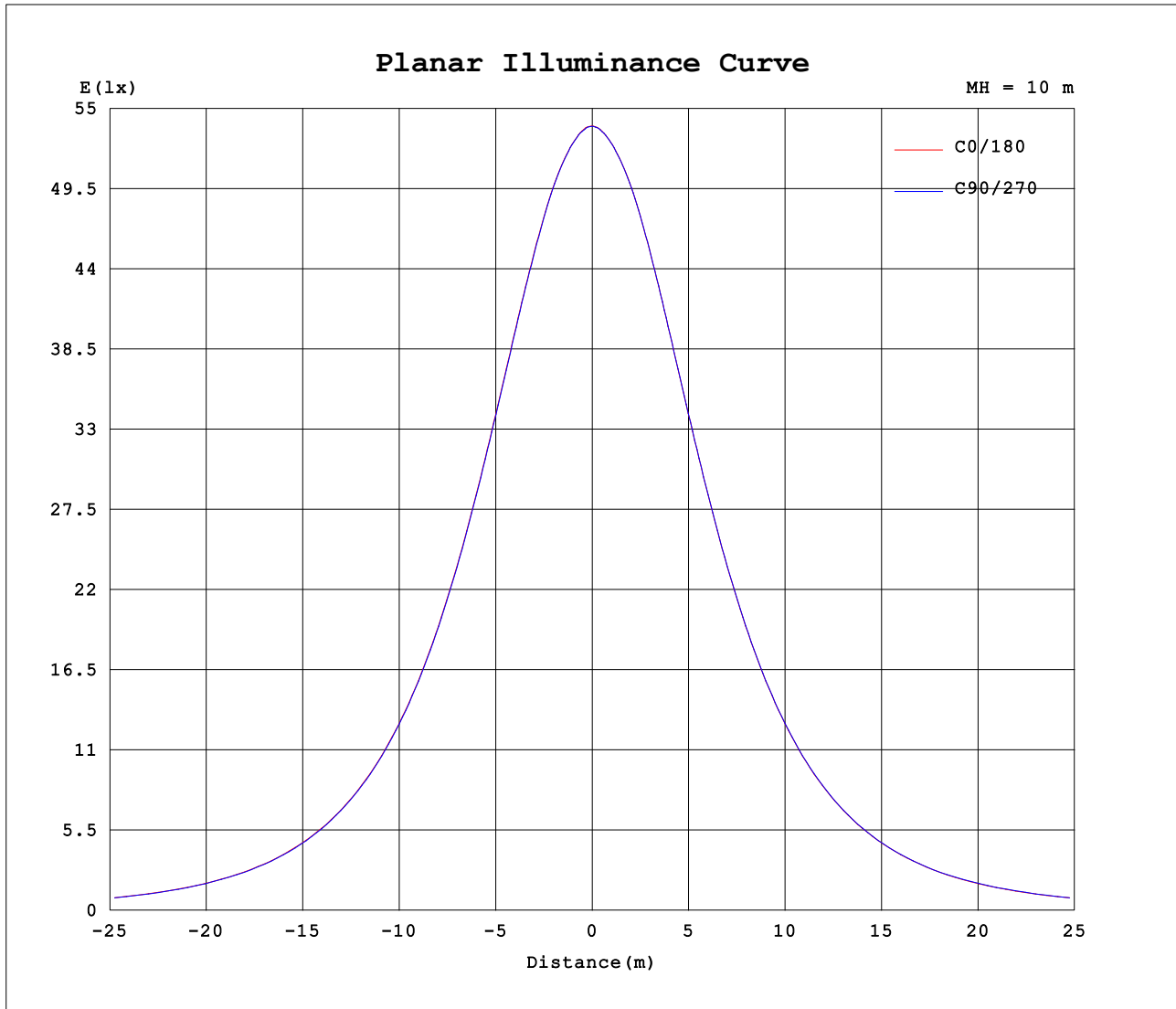
AvgL	cd/m2
L_0~180 (65) av	7215
L_0~180 (75) av	6075
L_0~180 (85) av	3750
L_90~270 (65) av	7212
L_90~270 (75) av	6076
L_90~270 (85) av	3815
L_45 (65) av	7217
L_45 (75) av	6075
L_45 (85) av	3785

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:

```