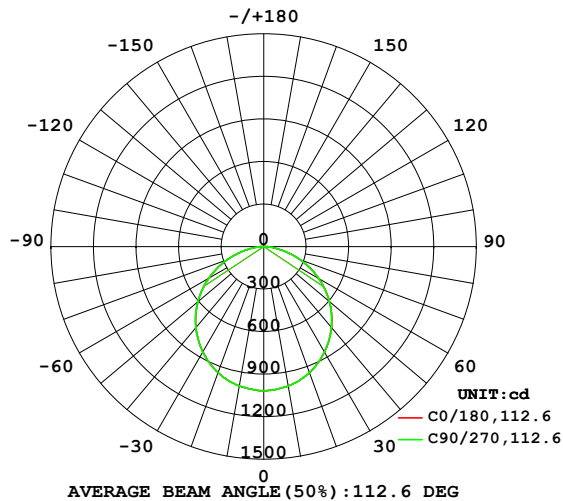


LUMINAIRE PHOTOMETRIC TEST REPORT

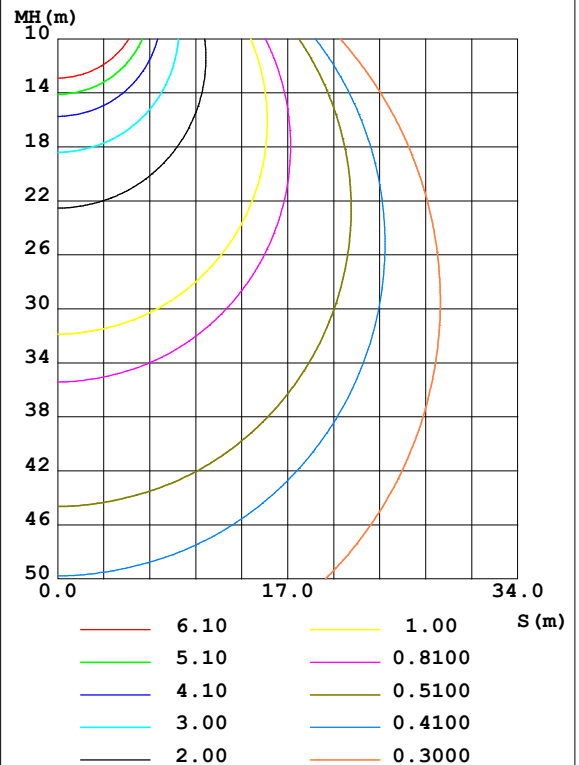
Test:U:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 86.34 lm/W			
CLE SHALIMONDE32	522mm 1750lm 930 EXC	Imax(cd)	1017	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2896.4	η UP,DN(C0-180)	0.0,49.9
NOMINAL FLUX(lm)	2896.42	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.1
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:11 June 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	1011	1011	1010	1009	1010	1011	1010	1010	0- 5	24.22	24.22	0.84,0.84
10	997.9	997.2	997.7	997.1	997.8	999.4	997.1	998.3	5- 10	71.80	96.02	3.32,3.32
15	976.4	975.3	976.4	975.9	976.3	977.4	976.6	977.0	10- 15	117.1	213.1	7.36,7.36
20	945.4	943.9	945.0	944.5	945.2	945.3	945.5	946.1	15- 20	158.4	371.5	12.8,12.8
25	905.8	904.6	904.9	905.0	905.4	906.4	907.1	906.3	20- 25	194.1	565.6	19.5,19.5
30	859.0	857.7	857.4	857.7	858.6	859.1	859.9	858.9	25- 30	223.3	788.9	27.2,27.2
35	805.1	803.5	803.0	804.1	805.3	805.7	805.9	805.2	30- 35	244.9	1034	35.7,35.7
40	744.2	742.7	742.6	743.9	745.0	745.9	745.8	744.4	35- 40	258.4	1292	44.6,44.6
45	677.9	676.2	676.5	676.9	678.5	679.2	679.7	678.5	40- 45	263.3	1556	53.7,53.7
50	605.7	604.8	604.4	605.3	607.2	608.0	607.9	606.8	45- 50	259.5	1815	62.7,62.7
55	528.5	527.4	527.7	528.4	529.7	531.0	531.2	529.8	50- 55	246.8	2062	71.2,71.2
60	447.2	446.1	445.9	447.1	448.9	449.6	449.8	448.3	55- 60	225.8	2288	79,79
65	361.9	360.7	360.6	362.1	363.6	364.9	364.7	363.2	60- 65	197.0	2485	85.8,85.8
70	274.4	273.3	273.7	274.7	276.4	277.4	277.3	275.7	65- 70	161.5	2646	91.4,91.4
75	187.1	186.3	186.8	187.6	188.9	190.5	190.3	188.6	70- 75	121.0	2767	95.5,95.5
80	106.4	106.3	106.8	106.7	107.5	109.3	109.5	107.8	75- 80	78.63	2846	98.3,98.3
85	41.95	42.04	42.13	41.65	41.80	43.67	44.33	43.09	80- 85	39.78	2886	99.6,99.6
90	0.8725	0.8392	0.8352	0.8351	0.7552	0.7549	0.7949	0.7875	85- 90	10.76	2896	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): 1555.6 lm

%lum = 53.7%

%lamp = 53.7%

Conical surface Flux(120deg): 2287.7 lm

%lum = 79.0%

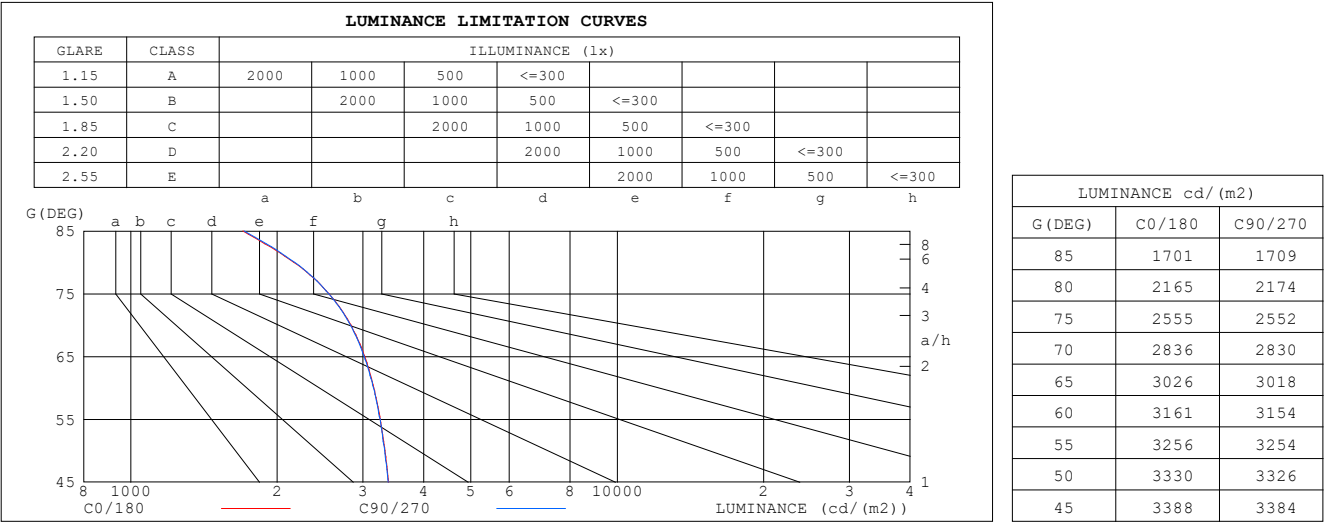
%lamp = 79.0%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



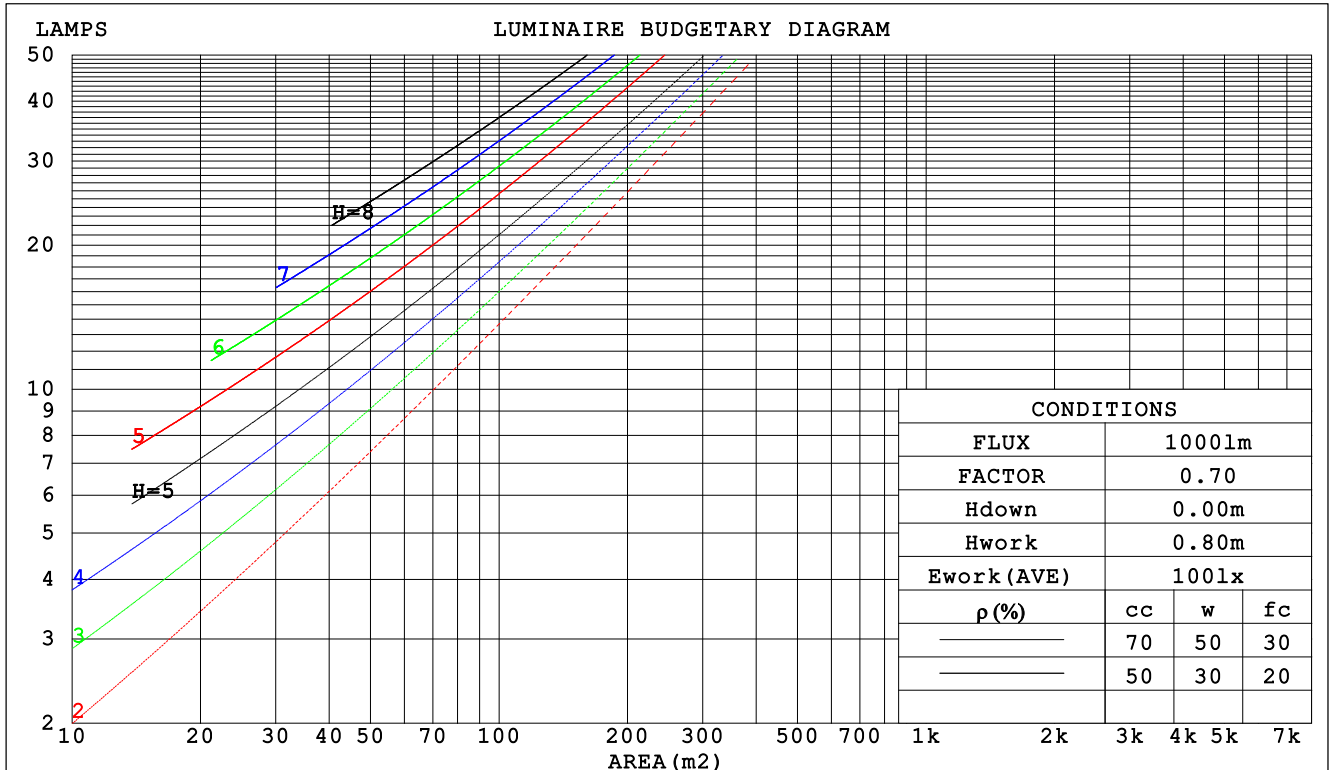
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:11 June 2025

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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_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	.88	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.73	.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	.40	.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:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_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	.308	.175	.055	.301	.172	.055	.288	.165	.053	.276	.159	.051	.264	.153	.049		
2.0	.291	.159	.049	.285	.157	.048	.273	.152	.047	.262	.147	.046	.252	.143	.045		
3.0	.270	.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	.083	.023	.166	.082	.023	.161	.081	.023	.157	.080	.023		
10.0	.164	.078	.022	.161	.078	.022	.156	.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:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm										
NAME: MRS SPIN 600_NA_WHT_225mA_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	17.0	18.5	17.3	18.7	18.9	17.0	18.5	17.2	18.7	18.9
3H	18.5	19.9	18.8	20.1	20.4	18.5	19.9	18.8	20.1	20.3
4H	19.0	20.4	19.4	20.6	20.9	19.0	20.4	19.3	20.6	20.9
6H	19.4	20.7	19.7	20.9	21.2	19.4	20.7	19.7	20.9	21.2
8H	19.5	20.7	19.8	21.0	21.3	19.5	20.7	19.8	21.0	21.3
12H	19.6	20.7	19.9	21.0	21.3	19.6	20.7	19.9	21.0	21.3
4H 2H	17.6	18.9	17.9	19.2	19.4	17.6	18.9	17.9	19.2	19.4
3H	19.3	20.4	19.6	20.7	21.0	19.2	20.4	19.6	20.7	21.0
4H	19.9	21.0	20.3	21.3	21.7	19.9	21.0	20.3	21.3	21.7
6H	20.4	21.4	20.8	21.7	22.1	20.4	21.4	20.8	21.7	22.1
8H	20.6	21.5	21.0	21.8	22.2	20.6	21.5	21.0	21.8	22.2
12H	20.7	21.5	21.1	21.8	22.3	20.7	21.5	21.1	21.9	22.3
8H 4H	20.2	21.1	20.6	21.4	21.8	20.2	21.1	20.6	21.4	21.8
6H	20.8	21.5	21.2	21.9	22.4	20.8	21.5	21.2	21.9	22.4
8H	21.0	21.7	21.5	22.1	22.5	21.0	21.7	21.5	22.1	22.5
12H	21.2	21.7	21.6	22.2	22.6	21.2	21.7	21.6	22.2	22.7
12H 4H	20.2	21.0	20.6	21.4	21.8	20.2	21.0	20.6	21.4	21.8
6H	20.8	21.5	21.3	21.9	22.4	20.8	21.5	21.3	21.9	22.4
8H	21.1	21.6	21.6	22.1	22.6	21.1	21.7	21.6	22.1	22.6
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 2896 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.7)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

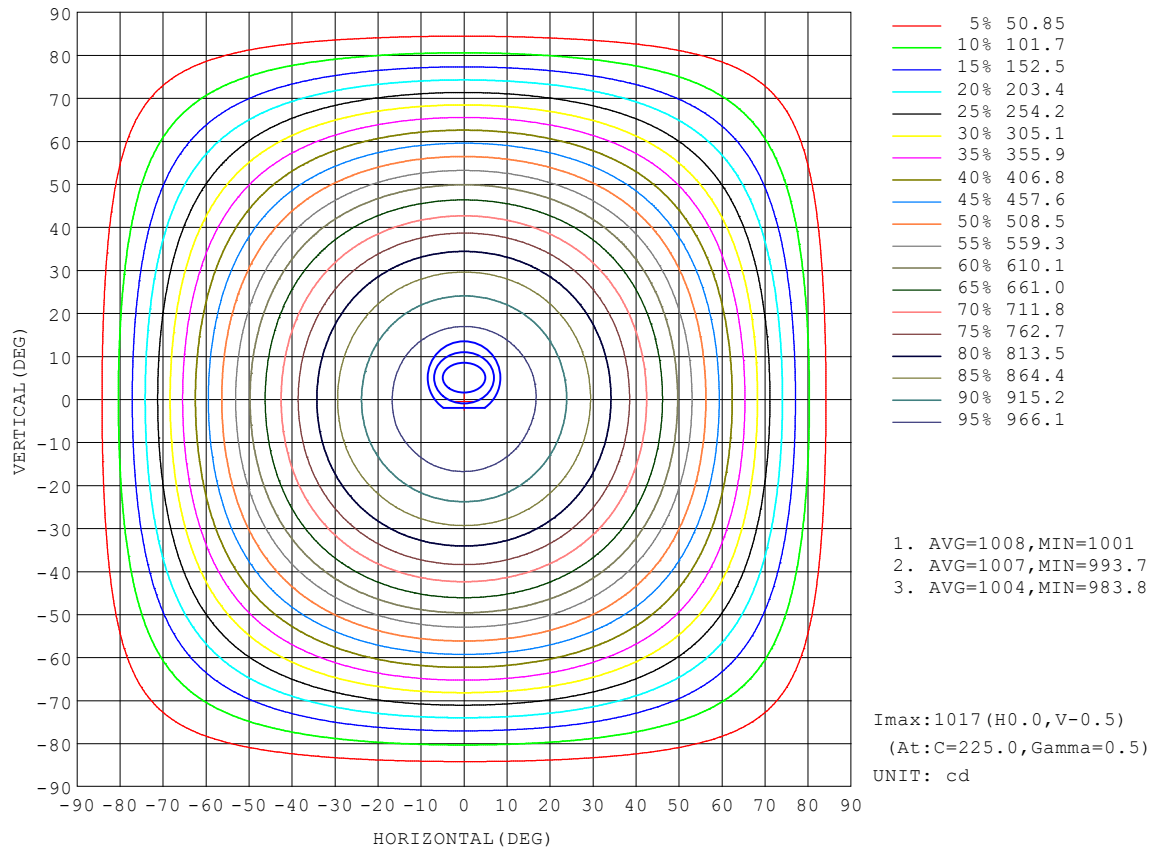
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	55	48	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	86	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	95	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:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

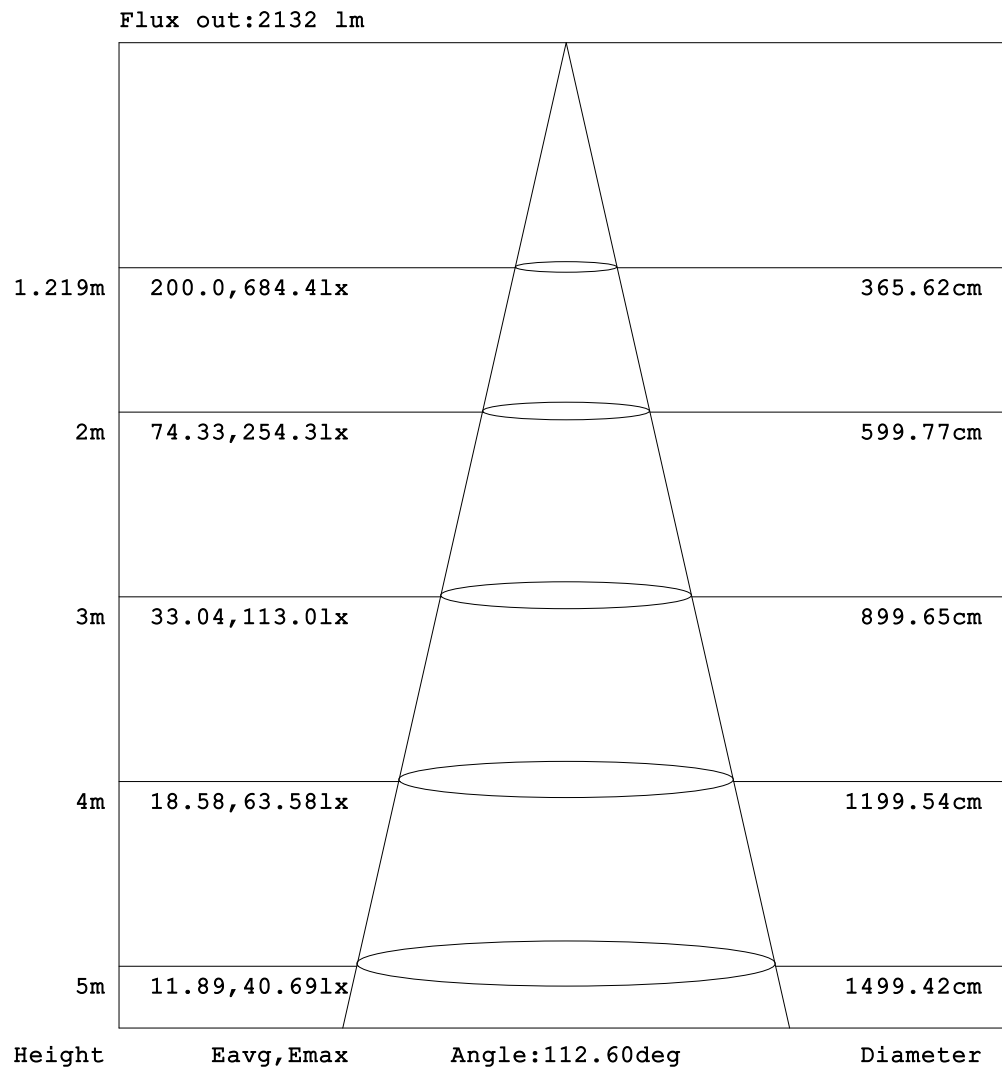


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:11 June 2025

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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



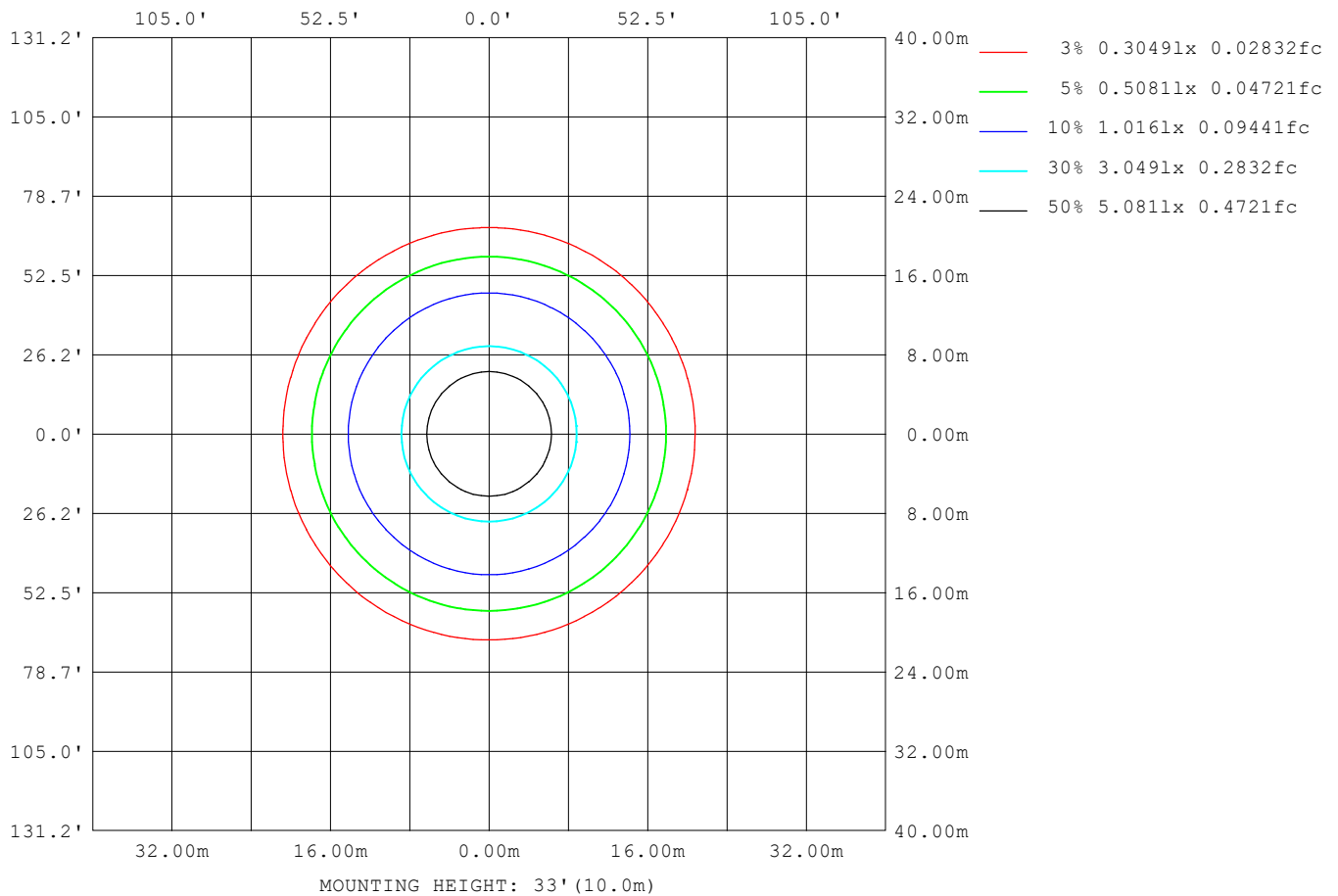
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_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:11 June 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:239.9V I:0.1521A P:33.55W PF:0.9196 Lamp Flux:2896.42x1 lm		
NAME: MRS SPIN 600_NA_WHT_225mA_3000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

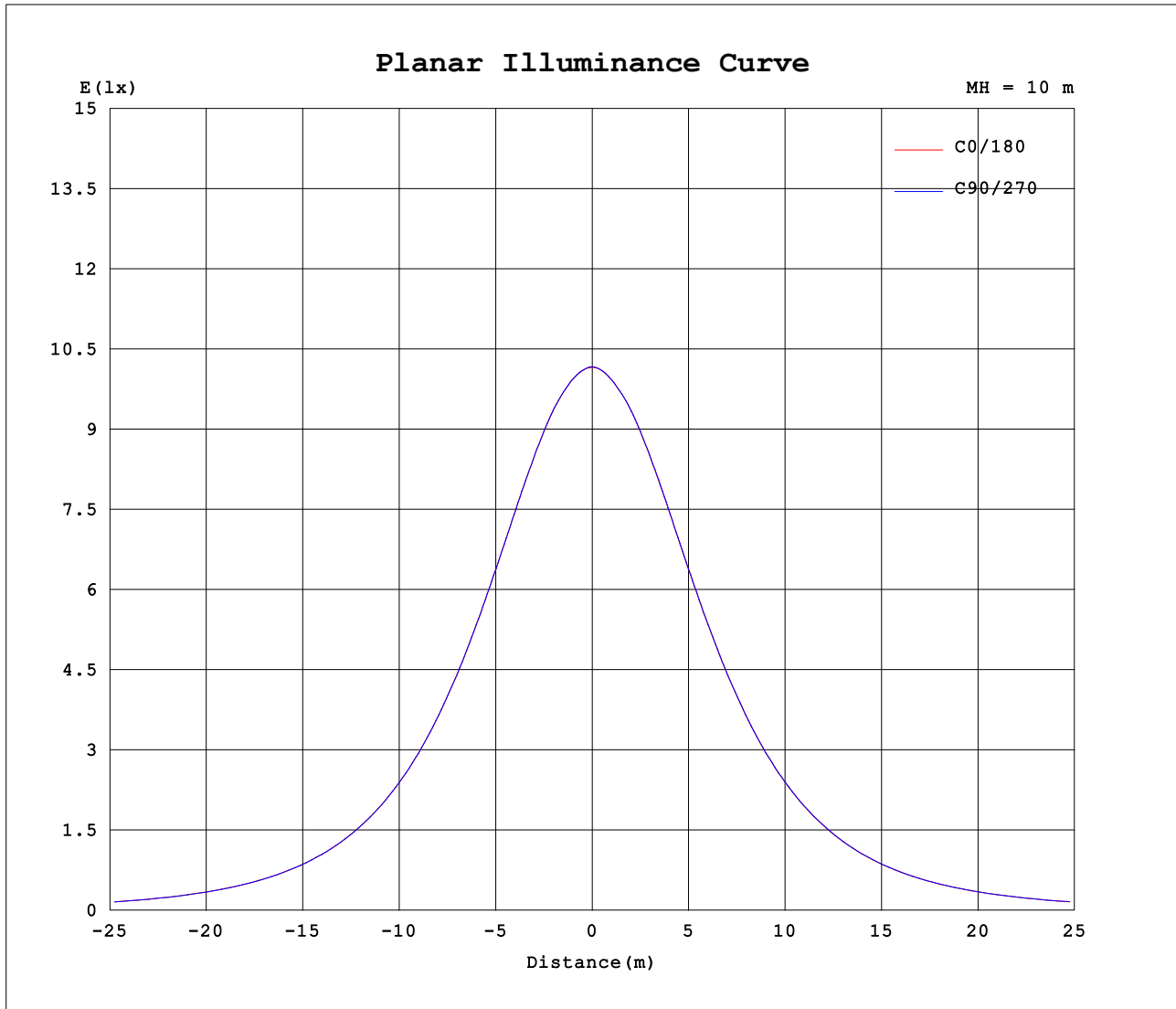
AvgL	cd/m2
L_0~180 (65) av	3035
L_0~180 (75) av	2569
L_0~180 (85) av	1699
L_90~270 (65) av	3034
L_90~270 (75) av	2576
L_90~270 (85) av	1754
L_45 (65) av	3035
L_45 (75) av	2572
L_45 (85) av	1729

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:11 June 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: 11 June 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:

```