

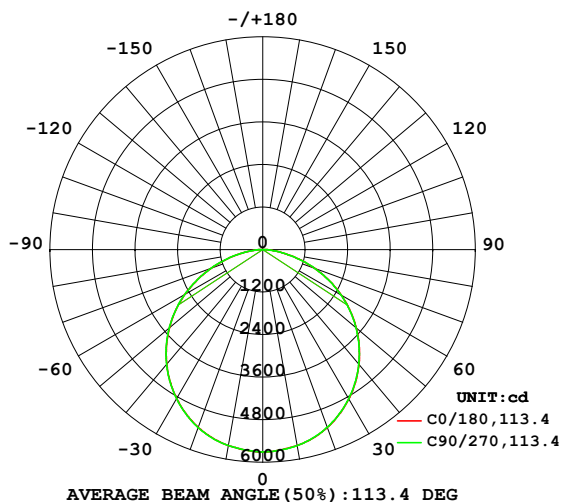
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:239.7V I:0.7418A P:173.5W PF:0.9761 Lamp Flux:16389.1x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

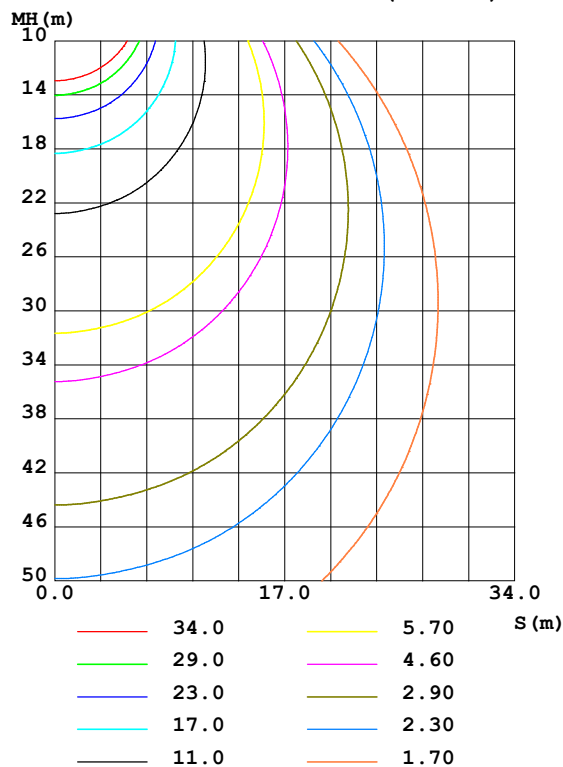
CLE SHALIMONDE

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.44 lm/W			
MODEL: 802	802mm 3800lm 940 EXC	Imax(cd)	5708	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)	16389	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	16389.1	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:23 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	5674	5676	5676	5676	5674	5672	5671	5673	0- 5	136.0	136.0	0.83,0.83
10	5610	5615	5614	5611	5612	5608	5610	5615	5- 10	403.6	539.7	3.29,3.29
15	5503	5506	5499	5498	5500	5496	5505	5507	10- 15	659.4	1199	7.32,7.32
20	5338	5339	5331	5330	5333	5328	5339	5340	15- 20	893.1	2092	12.8,12.8
25	5123	5124	5115	5116	5116	5113	5122	5122	20- 25	1096	3189	19.5,19.5
30	4864	4862	4856	4854	4855	4853	4862	4862	25- 30	1263	4451	27.2,27.2
35	4564	4562	4554	4554	4555	4552	4561	4561	30- 35	1387	5838	35.6,35.6
40	4226	4224	4216	4215	4215	4215	4223	4224	35- 40	1464	7302	44.6,44.6
45	3853	3852	3843	3844	3843	3842	3850	3849	40- 45	1494	8796	53.7,53.7
50	3447	3445	3439	3439	3438	3437	3444	3445	45- 50	1473	10268	62.7,62.7
55	3014	3011	3005	3005	3004	3004	3011	3011	50- 55	1402	11671	71.2,71.2
60	2554	2550	2545	2544	2544	2546	2552	2553	55- 60	1284	12955	79,79
65	2071	2067	2062	2061	2048	2051	2057	2058	60- 65	1119	14075	85.9,85.9
70	1575	1568	1565	1563	1552	1556	1561	1563	65- 70	916.8	14991	91.5,91.5
75	1072	1066	1063	1061	1055	1060	1065	1066	70- 75	685.8	15677	95.7,95.7
80	601.9	598.1	594.1	591.2	588.7	593.6	597.6	599.4	75- 80	440.6	16118	98.3,98.3
85	227.5	227.1	224.3	219.6	216.3	220.4	223.7	224.9	80- 85	216.0	16334	99.7,99.7
90	6.536	5.571	4.768	4.787	4.291	4.296	4.295	4.740	85- 90	55.29	16389	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): 8795.7 lm

%lum = 53.7%

%lamp = 53.7%

Conical surface Flux(120deg): 12955 lm

%lum = 79.0%

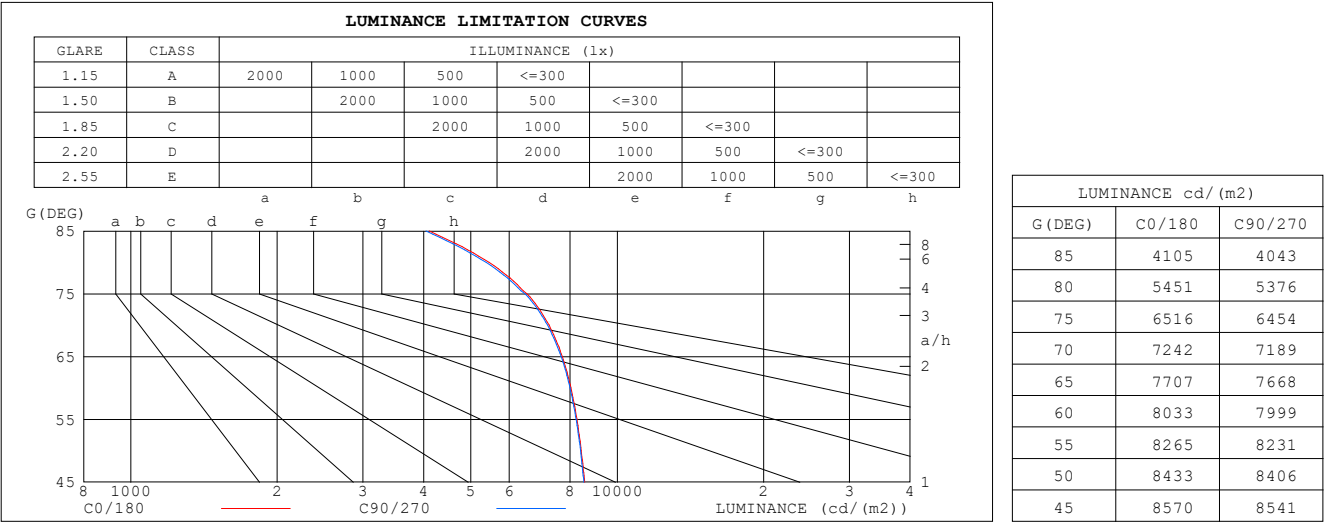
%lamp = 79.0%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:23 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:239.7V I:0.7418A P:173.5W PF:0.9761 Lamp Flux:16389.1x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



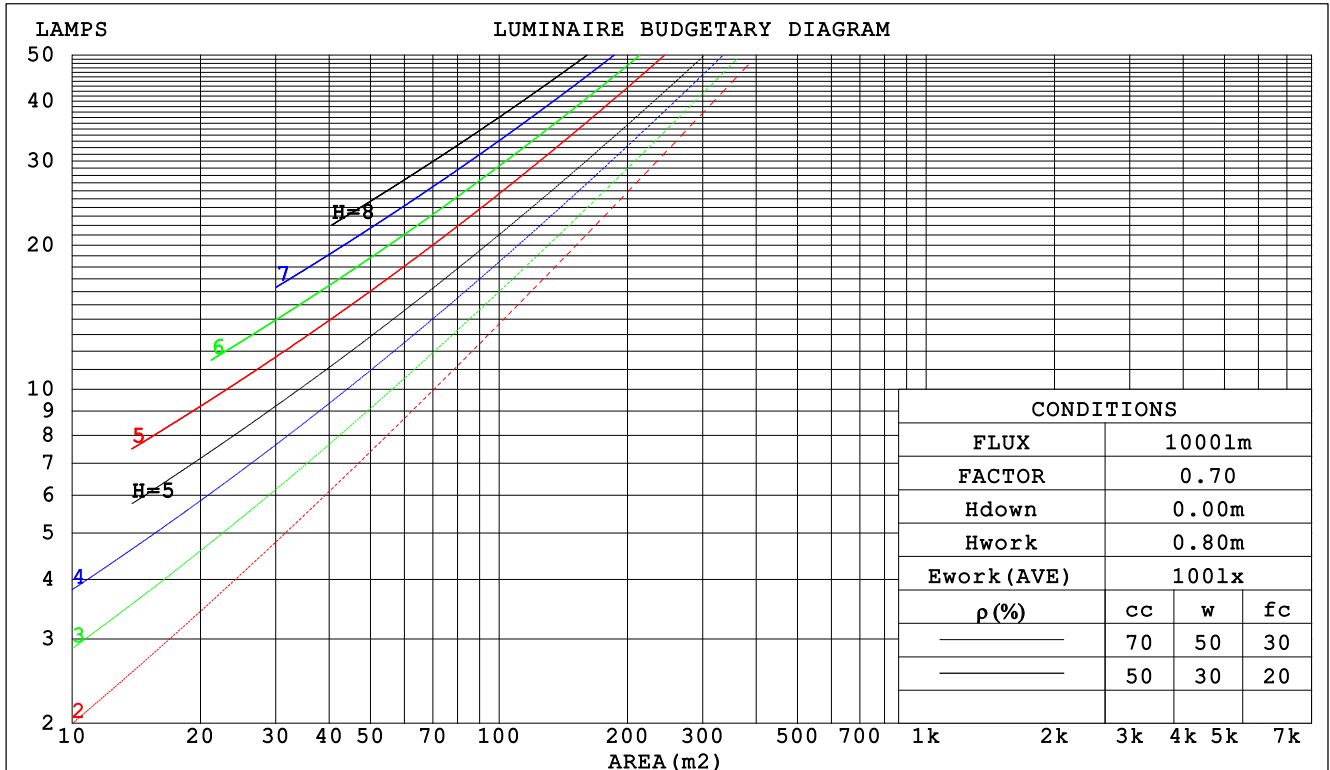
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Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.7V I:0.7418A P:173.5W PF:0.9761 Lamp Flux:16389.1x1 lm		
NAME: MRS SPIN 900_NA_WHT_1200mA_4000K 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



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 γ Interval: 0.5DEG
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Remarks:

WEC AND CCEC

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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	.159	.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	.031	.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	.117	.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
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Operators:JEFF
Test Date:23 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:239.7V I:0.7418A P:173.5W PF:0.9761 Lamp Flux:16389.1x1 lm										
NAME: MRS SPIN 900_NA_WHT_1200mA_4000K 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	20.3	21.8	20.5	22.0	22.2	20.2	21.8	20.5	22.0	22.2
3H	21.7	23.2	22.0	23.4	23.6	21.7	23.1	22.0	23.4	23.6
4H	22.3	23.7	22.6	23.9	24.2	22.3	23.6	22.6	23.9	24.1
6H	22.7	23.9	23.0	24.2	24.5	22.6	23.9	23.0	24.2	24.5
8H	22.8	24.0	23.1	24.3	24.6	22.7	24.0	23.1	24.2	24.5
12H	22.8	24.0	23.2	24.3	24.6	22.8	23.9	23.1	24.2	24.5
4H 2H	20.9	22.2	21.2	22.4	22.7	20.8	22.2	21.2	22.4	22.7
3H	22.5	23.7	22.9	24.0	24.3	22.5	23.7	22.9	24.0	24.3
4H	23.2	24.3	23.6	24.6	24.9	23.2	24.3	23.6	24.6	24.9
6H	23.7	24.6	24.1	25.0	25.4	23.7	24.6	24.1	25.0	25.3
8H	23.8	24.7	24.2	25.1	25.5	23.8	24.7	24.2	25.0	25.4
12H	23.9	24.7	24.3	25.1	25.5	23.9	24.7	24.3	25.1	25.5
8H 4H	23.5	24.3	23.9	24.7	25.1	23.4	24.3	23.8	24.7	25.1
6H	24.1	24.8	24.5	25.2	25.6	24.0	24.8	24.5	25.2	25.6
8H	24.3	24.9	24.7	25.3	25.8	24.2	24.9	24.7	25.3	25.8
12H	24.4	25.0	24.9	25.4	25.9	24.4	24.9	24.8	25.4	25.9
12H 4H	23.5	24.3	23.9	24.7	25.1	23.4	24.2	23.9	24.6	25.0
6H	24.1	24.8	24.6	25.2	25.6	24.1	24.7	24.5	25.1	25.6
8H	24.3	24.9	24.8	25.3	25.8	24.3	24.9	24.8	25.3	25.8
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 16389 lm Total Lamp Luminous Flux. (8log(F/F0) = 9.7)

C Range: 0 - 360DEG
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Temperature:25.3DEG
Operators:JEFF
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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:239.7V I:0.7418A P:173.5W PF:0.9761 Lamp Flux:16389.1x1 lm		
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MFR.: DARKON	SUR.:	Shielding Angle:

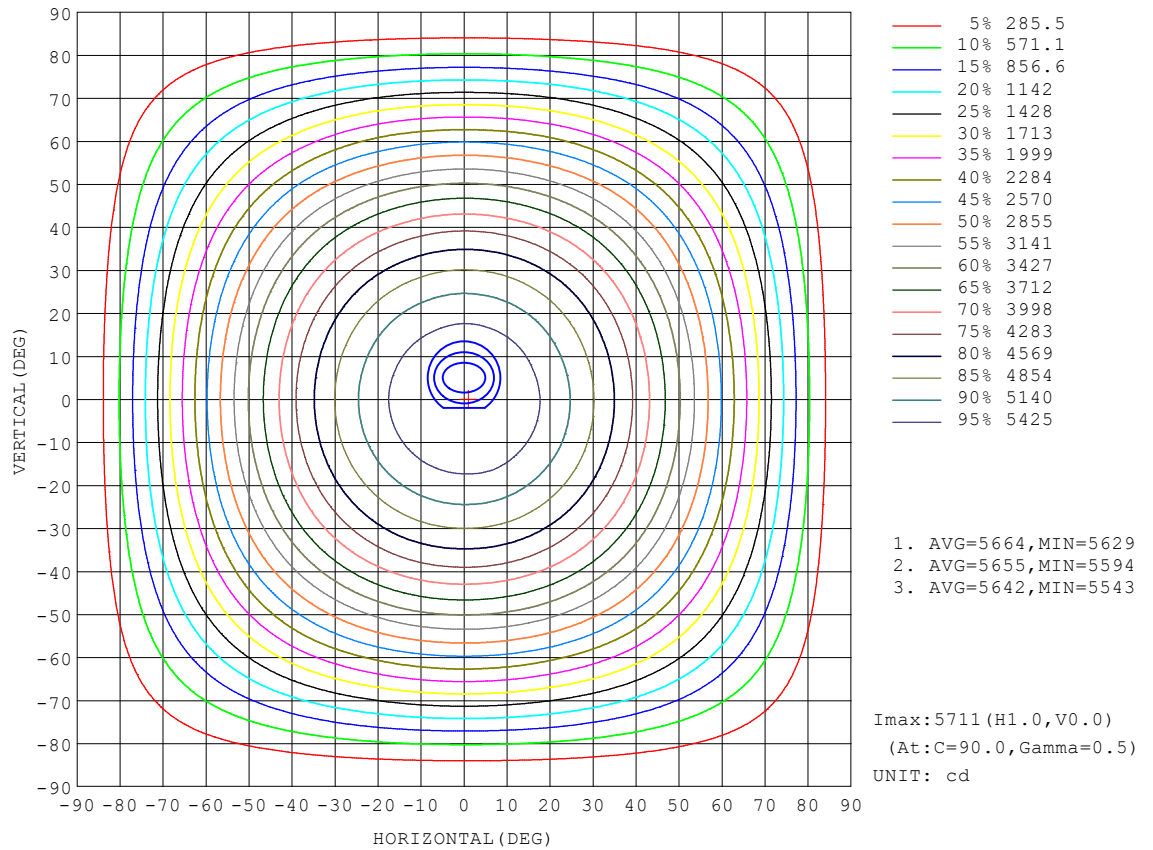
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	46	39	57	46	39	56	45	39	32
0.80	68	56	49	66	55	48	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		

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ISOCANDELA DIAGRAM

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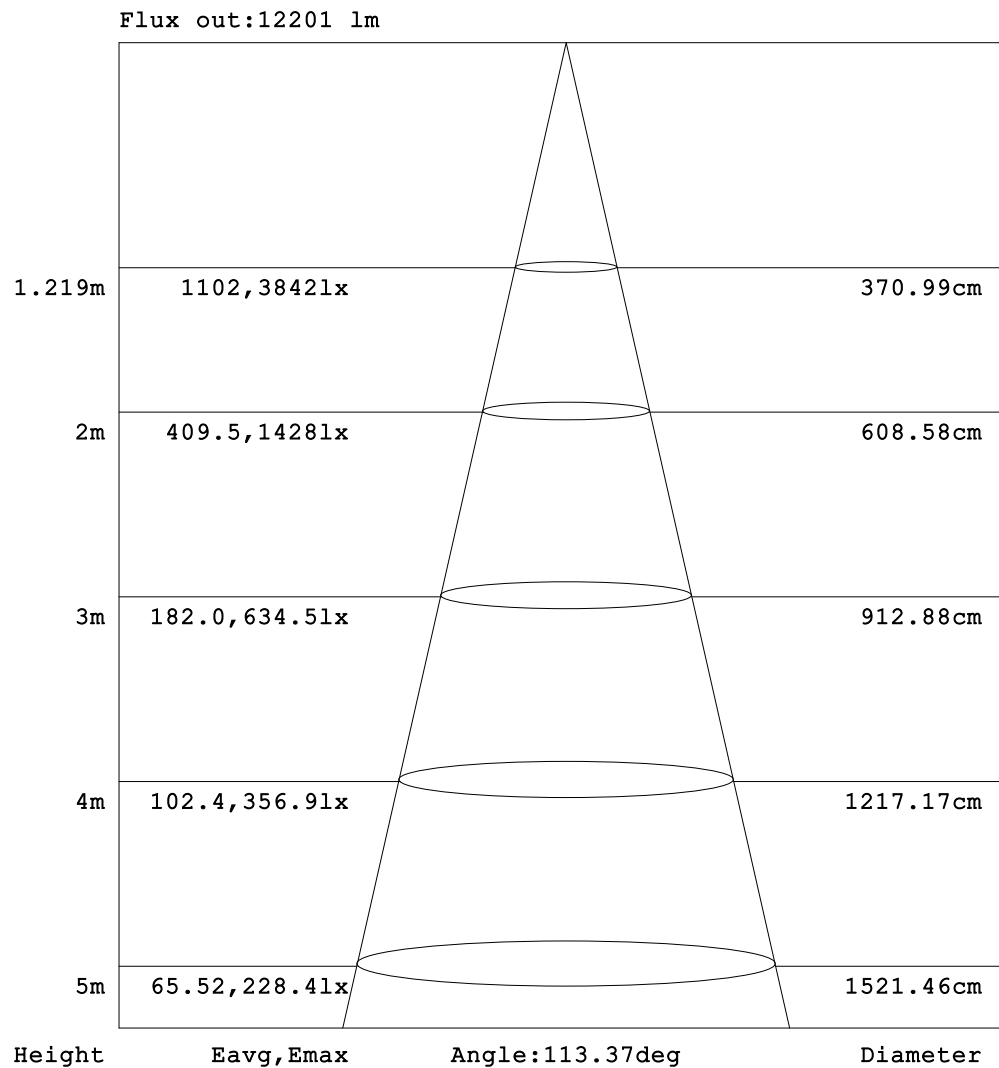


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AAI Figure

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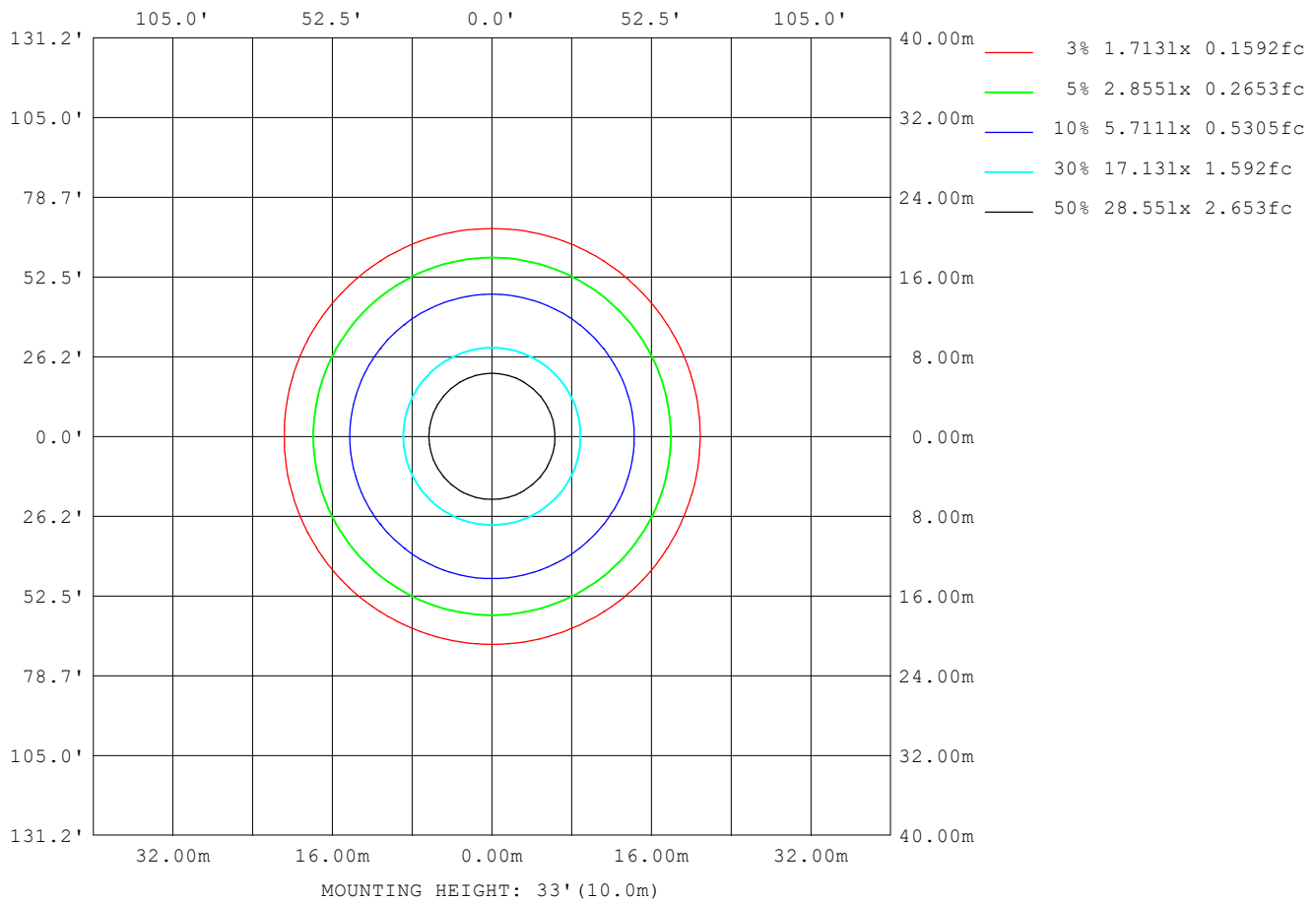
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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NAME: MRS SPIN 900_NA_WHT_1200mA_4000K CRI90	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

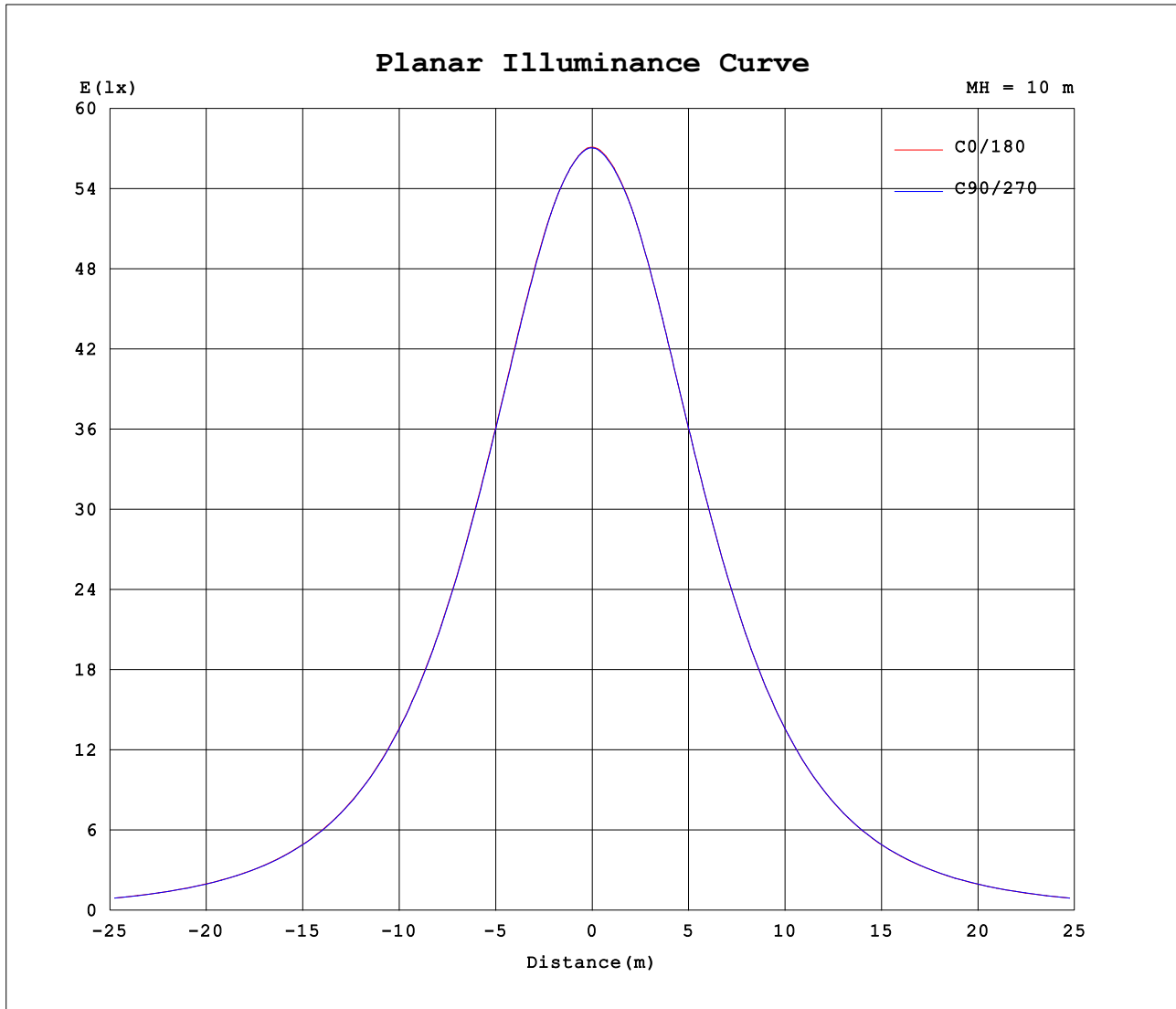
AvgL	cd/m2
L_0~180 (65) av	7659
L_0~180 (75) av	6461
L_0~180 (85) av	4001
L_90~270 (65) av	7659
L_90~270 (75) av	6460
L_90~270 (85) av	4039
L_45 (65) av	7658
L_45 (75) av	6458
L_45 (85) av	4021

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:JEFF
Test Date:23 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: 23 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:

```